

Unit 7

Teacher Guide

Core Knowledge Language Arts® • Skills Strand



Core Knowledge®

GRADE 3





Unit 7

Teacher Guide

Skills Strand

GRADE 3

Core Knowledge Language Arts®



Core Knowledge®

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Alignment Chart for Unit 7

The following chart demonstrates alignment between the Common Core State Standards and corresponding Core Knowledge Language Arts (CKLA) goals.

| Alignment Chart for Unit 7 | | Lesson | | | | | | | | | | | | | | | | | | | |
|--|--|--------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Reading Standards for Informational Text: Grade 3 | | | | | | | | | | | | | | | | | | | | | |
| Key Ideas and Details | | | | | | | | | | | | | | | | | | | | | |
| STD RI.3.1 | Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Ask and answer questions to demonstrate understanding of a nonfiction/informational text read independently, referring explicitly to the text as the basis for the answers | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| | Ask and answer questions (e.g., <i>who, what, where, when, why, how</i>), orally or in writing, requiring literal recall and understanding of the details of a nonfiction/informational text read independently by explicitly referring to the text | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Craft and Structure | | | | | | | | | | | | | | | | | | | | | |
| STD RI.3.4 | Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a Grade 3 topic or subject area. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Determine the meaning of general academic and domain-specific words and phrases in a nonfiction/informational text read independently relevant to a Grade 3 topic or subject area | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| STD RI.3.5 | Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently | | | | | | | | | | | | | | | | | | | ✓ | |

Alignment Chart for Unit 7

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|---|
| Integration of Knowledge and Ideas | | | | | | | | | | | | | | | | | | | | | |
| STD RI.3.7 | Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Describe images, orally or in writing, and how they contribute to what is conveyed by the words in a nonfiction/informational text read independently (e.g., where, when, why, and how key events occur) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| STD RI.3.9 | Compare and contrast the most important points and key details presented in two texts on the same topic. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Compare and contrast the most important points and key details presented in two nonfiction/informational texts read independently on the same topic | | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | | | | | | | | |
| Range of Reading and Level of Text Complexity | | | | | | | | | | | | | | | | | | | | | |
| STD RI.3.10 | By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the Grades 2–3 text complexity band independently and proficiently. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | By the end of the year, read and comprehend nonfiction/informational texts, including history/social studies and science, at the high end of the Grades 2–3 text complexity band independently and proficiently | | | | | | | | | | | | | | | | | | | |  |
| Reading Standards for Foundational Skills: Grade 3 | | | | | | | | | | | | | | | | | | | | | |
| Phonics and Word Recognition | | | | | | | | | | | | | | | | | | | | | |
| STD RF.3.3 | Know and apply grade-level phonics and word analysis skills in decoding words. | | | | | | | | | | | | | | | | | | | | |
| STD RF.3.3b | Decode words with common Latin suffixes. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Decode words with common Latin suffixes, e.g. <i>-er, -ist, -ian, -y, -al, -ous, -ive, -able, -ible, -tion</i> | | | ✓ | ✓ | | | | | ✓ | ✓ | | | | | | | | | | |
| STD RF.3.3c | Decode multisyllable words. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Decode multisyllable words | | | | | | | | | | | | | | | | | | | |  |
| STD RF.3.3d | Read grade-appropriate irregularly spelled words. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Independently read grade-appropriate irregularly spelled words | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | | | | | | | | |

Alignment Chart for Unit 7

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |
|---|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|---|
| Fluency | | | | | | | | | | | | | | | | | | | | | | |
| STD RF.3.4 | Read with sufficient accuracy and fluency to support comprehension. | | | | | | | | | | | | | | | | | | | | | |
| STD RF.3.4a | Read on-level text with purpose and understanding. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Independently read on-level text with purpose and understanding | | | | | | | | | | | | | | | | | | | | | |
| Writing Standards: Grade 3 | | | | | | | | | | | | | | | | | | | | | | |
| Text Types and Purposes: Informative/Explanatory | | | | | | | | | | | | | | | | | | | | | | |
| STD W.3.2 | Write informative/explanatory texts to examine a topic and convey ideas and information clearly. | | | | | | | | | | | | | | | | | | | | | |
| STD W.3.2c | Use linking words and phrases (e.g., <i>also, another, and, more, but</i>) to connect ideas within categories of information. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use linking words, conjunctions, and phrases (e.g., <i>also, another, and, more, but</i>) to connect ideas within categories of information | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | | |
| Production and Distribution of Writing | | | | | | | | | | | | | | | | | | | | | | |
| STD W.3.4 | With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in Standards 1–3 above.) | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose i.e., ideas and paragraphs presented clearly and in a logical order | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| STD W.3.5 | With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language Standards 1–3 up to and including Grade 3 on pages 28 and 29.) | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| STD W.3.6 | With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |

Lesson

Alignment Chart for Unit 7

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---------------------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| STD W.3.10 | With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame). | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame) | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |

Speaking and Listening Standards: Grade 3

Comprehension and Collaboration

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--|---|---|---|---|--|--|---|--|---|---|--|--|--|--|--|--|--|--|--|--|
| STD SL.3.1 | Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on Grade 3 topics and texts, building on others' ideas and expressing their own clearly. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Prior to independently reading a text, identify (orally or in writing) what they know and have learned that may be related to the specific read-aloud or topic | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | | | | | | | | | | |
| CKLA Goal(s) | Make predictions (orally or in writing) prior to and while reading a text independently, based on the title, images, and/or text heard thus far, and then compare the actual outcomes to predictions | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | |

Language Standards: Grade 3

Conventions of Standard English

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------|---|--|---|---|---|---|--|---|---|---|--|--|--|--|--|--|--|--|--|--|--|
| STD L.3.1 | Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. | | | | | | | | | | | | | | | | | | | | |
| STD L.3.1a | Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use nouns, verbs, and adjectives and explain their functions in sentences | | | ✓ | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use adverbs and explain their function in sentences | | | ✓ | | | | | | | | | | | | | | | | | |
| STD L.3.1h | Use coordinating and subordinating conjunctions. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use coordinating and subordinating conjunctions (e.g., <i>and, but, or, so, because</i>) | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | | | |
| STD L.3.1i | Produce simple, compound, and complex sentences. | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Produce compound sentences | | | ✓ | ✓ | ✓ | | ✓ | | | | | | | | | | | | | |
| CKLA Goal(s) | Produce complex sentences | | | ✓ | ✓ | | | | | | | | | | | | | | | | |

Lesson


Alignment Chart for Unit 7

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |
|---------------------------------------|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|---|
| STD L.3.2c | Use commas and quotation marks in dialogue. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use commas and quotation marks in dialogue | | | | | ✓ | | | | ✓ | ✓ | | | | | | | | | | | |
| STD L.3.2d | Form and use possessives. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Form, and use singular possessive nouns | | | | | | | | | | | | ✓ | | | | | | | | | |
| | Form, and use plural possessive nouns | | | | | | | | | | | | | | ✓ | | | | | | | |
| STD L.3.2f | Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use spelling patterns and generalizations (e.g., word families, position-based spelling, syllable patterns, ending rules, meaningful word parts) in writing words | ✓ | | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | | | | | | | | |
| STD L.3.2g | Consult reference materials, including beginning dictionaries, as needed to check correct spellings. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Consult reference materials, including beginning dictionaries, as needed to check correct spellings | | | | | | | | | | | | | | | | | | | | | ✓ |
| Vocabulary Acquisition and Use | | | | | | | | | | | | | | | | | | | | | | |
| STD L.3.4 | Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on Grade 3 reading and content, choosing flexibly from a range of strategies. | | | | | | | | | | | | | | | | | | | | | |
| STD L.3.4b | Determine the meaning of the new word formed when a known affix is added to a known word (e.g., <i>agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat</i>). | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Determine the meaning of the new word formed when a known affix is added to a known word (e.g., <i>agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat</i>) | | | ✓ | ✓ | | | | | ✓ | ✓ | | | | | | | | | | | |
| STD L.3.4d | Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases. | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Use root words, affixes, and glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | |

Alignment Chart for Unit 7

Lesson

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |
|---------------------|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|--|
| STD L.3.5b | Identify real-life connections between words and their use (e.g., describe people who are <i>friendly</i> or <i>helpful</i>). | | | | | | | | | | | | | | | | | | | | | |
| CKLA Goal(s) | Identify real-life connections between words and their use (e.g., describe people who are <i>friendly</i> or <i>helpful</i>) | | | ✓ | ✓ | | | | ✓ | ✓ | | | | | | | | | | | | |

 These goals are addressed in all lessons in this domain. Rather than repeat these goals as lesson objectives throughout the domain, they are designated here as frequently occurring goals.

Skills marked with an asterisk () in Language Standards 1–3, are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking.

Introduction to Unit 7

The content focus of this unit is astronomy. Students may recall some facts and information from the first grade Listening & Learning domain, *Astronomy*. In that unit, students heard about our solar system, the constellations, and the relationship between the sun and Earth. Students will learn about these topics in greater depth and detail as well as other topics as they read for themselves about our universe.

Writing a Research Paper: As a response to investigating what’s in our universe, students will write a research paper during the week between Unit 7 and Unit 8 (Lessons 16–20). Following the same format for writing exercises in Listening & Learning, students will plan, draft, edit, and publish a five-paragraph paper. Research will consist of listening to read-alouds again from *Tell it Again! Read Aloud Anthology: Astronomy: Our Solar System and Beyond* and rereading chapters from *What’s in Our Universe?*, as well as gathering information from Internet sources and trade books.

During this unit’s **spelling** exercises, students will review words with spelling patterns of /j/ spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ and spelling patterns of /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’. Students will also review words with the spelling patterns of /ae/, /k/, /s/, /j/, and /n/. Students should be familiar with these spelling alternatives as they were taught in Grade 2. Challenge Words have been assigned each week. Content Words will continue. Each week, students will have the option of trying to spell a content-related word on the weekly spelling assessment. In this unit, the Content Word will follow the spelling pattern for the week.

In **grammar**, students will continue their study of conjunctions as a part of speech. Students will be introduced to the meanings and usages of the conjunctions *so* and *or*. Students will practice identifying and creating compound sentences using these conjunctions. They will also be introduced to the correct punctuation needed for presenting items in a series in a sentence and will review the use of quotation marks in dialogue. Students will be introduced to singular and plural possessive nouns.

During the **morphology** portion of the lessons, students will learn about the suffixes *-ful* and *-less* as well as review the suffixes *-ous*, *-ive*, and *-ly*. Students will continue to apply knowledge of how suffixes change root words.

Unit Overview

Here is an overview of the Unit 7 schedule. Please see the *Tell It Again! Read-Aloud Anthology for Astronomy: Our Solar System and Beyond* for the corresponding Listening & Learning schedule.

| Week One | | | | | |
|----------|--|--|---|---|--|
| Min. | Day 1 (Lesson 1) | Day 2 (Lesson 2) | Day 3 (Lesson 3) | Day 4 (Lesson 4) | Day 5 (Lesson 5) |
| 25 | Chapter 1 “The Sun, Earth, and Our Solar System” | Chapter 2 “The Moon” | Chapter 3 “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” | Chapter 4 “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” | Spelling Assessment: /j/ Spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ |
| 25 | Spelling: Introduce /j/ Spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ | Grammar: Introduce Conjunction <i>so</i> | Morphology: Introduce Suffixes <i>-ful</i> and <i>-less</i> | Grammar: Introduce Conjunction <i>or</i> | Chapter 5 “Asteroids, Comets, and Meteors” |
| 15 | Due to the extended time needed to introduce the unit, there is no small group/independent work today. | Extension | Grammar: Build Sentences with Conjunction <i>so</i> | Morphology: Practice Suffixes <i>-ful</i> and <i>-less</i> | Grammar: Practice Conjunctions <i>and</i> and <i>or</i> |
| 15 | | | Spelling: Practice /j/ Spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ | Spelling: Practice /j/ Spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ | Spelling: Practice Dictionary Skills |

| Week Two | | | | | |
|----------|---|--|---|---|--|
| Min. | Day 6 (Lesson 6) | Day 7 (Lesson 7) | Day 8 (Lesson 8) | Day 9 (Lesson 9) | Day 10 (Lesson 10) |
| 25 | Chapter 6 “Galaxies and Stars” | Chapter 7 “Constellations” | Chapter 8 “Exploring Space” | Chapter 9 “A Walk on the Moon” | Spelling Assessment: /n/ Spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ |
| 25 | Spelling: Introduce /n/ Spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ | Grammar: Practice Conjunctions <i>so</i> and <i>or</i> | Morphology: Review Suffixes <i>-ous</i> , <i>-ive</i> , <i>-ly</i> , <i>-ful</i> , and <i>-less</i> | Grammar: Practice Quotation Marks and Conjunctions | Chapter 10 “What’s it Like in Space?” |
| 15 | Extension | Extension | Grammar: Practice Conjunctions | Morphology: Practice Suffixes <i>-ous</i> , <i>-ive</i> , <i>-ly</i> , <i>-ful</i> , and <i>-less</i> | Grammar: Practice Conjunctions |
| 15 | | | Spelling: Practice /n/ Spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ | Spelling: Practice /n/ Spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ | Spelling: Practice Dictionary Skills |

| Week Three | | | | | |
|------------|--|--|--------------------|--|--|
| Min. | Day 11 (Lesson 11) | Day 12 (Lesson 12) | Day 13 (Lesson 13) | Day 14 (Lesson 14) | Day 15 (Lesson 15) |
| 25 | Chapter 11 “The Space Shuttle” | Chapter 12 “The International Space Station” | Unit Assessment | Remediation & Enrichment Chapters 13–15 | Spelling Assessment: Patterns for /ae/, /k/, /s/, /j/, and /n/ |
| 25 | Spelling: Review Patterns for /ae/, /k/, /s/, /j/, and /n/ | Grammar: Introduce Singular Possessive Nouns | | Grammar: Introduce Plural Possessive Nouns | Remediation & Enrichment Chapters 13–15 |

| Week between Unit 7 and Unit 8 | | | | | |
|--------------------------------|--|--------------------------------|---------------------------------|---|-----------------------------------|
| Min. | Day 16 (Lesson 16) | Day 17 (Lesson 17) | Day 18 (Lesson 18) | Day 19 (Lesson 19) | Day 20 (Lesson 20) |
| 150 | Writing a Research Paper: Overview; Writing a Research Paper: Plan | Writing a Research Paper: Plan | Writing a Research Paper: Draft | Writing a Research Paper: Edit; Writing a Research Paper: Publish | Writing a Research Paper: Publish |

Spelling

Students will review sound-spelling patterns throughout the year. In the first two weeks of this unit, there will be follow-up classroom spelling activities two days a week. Students will review /j/ and /n/ spelling patterns. Students will also review /ae/, /k/, and /s/ spelling patterns.

In Lessons 1–5, students will review words with spelling patterns of /j/ spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’. For Lessons 6–10, students will review words with spelling patterns of /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’. Finally, in Lessons 11–15, students will review words with spelling patterns of /ae/, /k/, /s/, /j/, and /n/.

On the weekly spelling assessment, students will be asked to write the spelling words, the Challenge Words, and two dictated sentences. You should explicitly address your expectations with regard to the use of appropriate capitalization and punctuation when students write each dictated sentence. Students will have the option of writing the Content Word.

As in previous units, students will continue to correct their own spelling assessment. Some teachers find it helpful to have students write the spelling assessment with a pen. After the assessment, students turn the pen back in and use a pencil for corrections. In this way, teachers can more clearly see exactly what errors students are making. Correcting their own errors will heighten students’ awareness of specific spelling errors and will solidify their understanding of correct spelling. A classroom chart is provided for you at the end of each week so that you may analyze mistakes that students are making. The results of this chart, paired with other classroom observations, may help you identify students who would benefit from targeted, remedial instruction in certain letter-sound correspondences, using the *Assessment and Remediation Guide*.

Grammar

Grammar continues in this unit with a review of skills introduced in second grade. Students will review the conjunctions *and* and *because* and be introduced to the conjunctions *so* and *or*. Students will continue their study of cause and effect, understanding that the conjunction *because* announces the cause and the conjunction *so* announces the effect. Students will also recognize that the conjunctions *and* and *or* are opposites, as the conjunction *and* includes topics, ideas, or things in sentences, whereas the conjunction *or* excludes topics, ideas, or things

in sentences. They will also be introduced to the correct punctuation needed for presenting items in a series in a sentence and will review the use of quotation marks in dialogue. Students will be introduced to singular and plural possessive nouns.

Morphology

Throughout Grade 3, students have studied word parts, such as prefixes, suffixes, and root words, during the morphology portion of the lessons. In this unit, students will study the common suffixes *-ful* and *-less*. Students will also review the suffixes *-ous*, *-ive*, and *-ly*. Students will continue to practice using their knowledge of how these suffixes change the meaning and part of speech of these words. Students have done sufficient word work to be able to apply what they have learned as they encounter unfamiliar words in text and content.

Extension

During the first and second weeks of the unit, we have included a total of three, 30-minute periods for extension activities. Depending on students' needs, please choose from the following activities:

- Extension activities provided in specific lessons
- Extension activities provided in the Pausing Point
- Unit-specific writing prompts
- Assessment and remediation activities outlined in the *Assessment and Remediation Guide* or remediation activities you deem appropriate
- Reader's Chair
- Reader's Journal

In Lessons 2 and 6, extension options have been provided for you to choose from during that time. In Lesson 7, students will respond to a writing prompt for an excerpt from the chapter entitled "The Moon" in *What's in Our Universe?*

Additionally, extension activities found in the Pausing Point are highlighted in sidebars found in the lessons. These activities offer additional practice of skills taught.

Writing prompts that are content-related and make use of the unit's academic vocabulary are found in the Teacher Resources Section at the back of this Teacher Guide and at the end of the Skills Workbook. These

prompts can be assigned for those students who need more challenging work.

The *Assessment and Remediation Guide* offers targeted remedial instruction in certain letter-sound correspondences for students you identify as needing more support.

Reader's Chair is a way for students to practice reading with fluency and expression (prosody). Place a copy of the sign-up sheet, found in the Teacher Resources section of this Teacher Guide, in a designated location in your room. Have students volunteer to read teacher-approved texts by placing their name on the sign-up sheet. Audience guidelines should be established for all students. These are some ideas but you will want to make guidelines that work for students: Listen respectfully to your classmates; listen without talking; and have students give classmate(s) who read(s) a round of applause and sincere compliments on their reading. Model compliments by saying, "I liked it when you..."

Reader's Journal asks students to read silently for a designated amount of time and then respond to a writing prompt that you provide from the list found in the Teacher Resources section at the back of this Teacher Guide and at the end of the Skills Workbook. This exercise is an opportunity for independent reading time beyond the daily selection from the Reader. It is an excellent way to ensure that each student is engaged and responding to text, while allowing you to monitor students' silent reading. Establish Reader's Journal procedures for your class. Here are some suggested procedures you may find useful: Make sure all students have the material to be read and paper and pencil; set a timer for 10 minutes for the reading portion; when the reading is completed, read the chosen writing prompt to students; set a timer again for 12 minutes for the writing portion; and expect students to stay in their seats and work for the duration. You may wish to conference with students during this time as the rest of the class will be engaged in an independent activity. A Reader's Journal conference sheet can be found at the end of the Skills Workbook.

Reader: *What's in Our Universe?*

The nonfiction Reader for Unit 7, entitled *What's in Our Universe?*, consists of selections that explain the sun, the eight planets, our moon, asteroids, comets, meteors, galaxies, and stars in addition to traveling in space. Students will explore what it is like in space and will also read about the first moon walk. Additional chapters include information about Dr. Mae Jemison, Nicolaus Copernicus, and the Big Bang Theory.

In this unit, students will focus on four academic vocabulary words: *choose*, *select*, *determine*, and *arrange*. By academic vocabulary, we mean words that support reading comprehension and may appear across a variety of materials, in language arts and in content areas. These words can be found in textbooks, assignment directions, and assessments. Understanding academic vocabulary may contribute to improved performance on assignments and assessments, as these words often appear in directions to students. These words may appear on end-of-year assessments that third graders might take. Where applicable, we use the words throughout the unit, not just as they might refer to reading selections, but also with regard to spelling, grammar, morphology, and comprehension. They may also appear in directions, assessments, spelling lists, and discussion questions, among other places.

- We define *choose* as meaning to select or to pick one.
- To *select* means to choose or to pick one.
- To *determine* means to find out or to decide.
- To *arrange* means to put things in order.

We encourage you to define these words for students and use all four of these words throughout the school day so that students may experience multiple uses of them.

We recommend that teachers study the core content objectives related to astronomy listed in the *Tell It Again! Read-Aloud Anthology* for this domain-based unit. The selections that students will read in *What's in Our Universe?* will reinforce and solidify the overall acquisition of knowledge related to this domain.

Fluency Packet

A fluency packet consisting of poetry, folklore, and fables is provided online at <http://www.coreknowledge.org/G3-FP>. These additional text selections provide opportunities for students to practice reading with fluency and expression (prosody). The selections can be used in any order. At the beginning of the week, the teacher should make sufficient copies of the week's selection for each student. The teacher should take time to read the selection aloud to all students. Then, students take the selection home to practice reading aloud throughout the week. The expectation for all students should be that they are prepared to read the selection fluently and with prosody by Friday. At the end of the week, the

teacher should select a few students to individually read the selection aloud. Teachers may also wish to have a few students choral read the selection. Be sure to provide opportunities for different students to read aloud each week.

You will want to establish audience guidelines for all students. These are some ideas but you will want to make guidelines that work for your students:

- Listen respectfully to your classmates.
- Listen without talking.
- Ask students to give their classmate(s) a round of applause and sincere compliments on their reading. Model compliments by saying, “I liked it when you...”

Vocabulary Cards

Vocabulary Cards will be used again to reinforce the vocabulary listed in the glossary for *What’s in Our Universe?*. We highly encourage you to display either side of the Vocabulary Cards in your classroom, in addition to hanging the corresponding image from the chapter above the list of Vocabulary Cards.

Skills Workbook

The Skills Workbook contains worksheets that accompany the lessons from the Teacher Guide. Each worksheet is identified by its lesson number and where it is intended to be used. For example, if there are two worksheets for Lesson 8, the first will be numbered 8.1 and the second 8.2. The Skills Workbook is a student component, which means each student should have a Skills Workbook.

A copy of the glossary is included at the end of the Workbook, so students can take it home to use when reading text copies of the chapters of the Reader.

Student Performance Task Assessments

There are many opportunities for informal assessment throughout each Skills unit. Careful analysis of student performance on the weekly spelling assessments may provide insight as to specific gaps in student code knowledge. In addition, you may choose to assign a given Workbook page for individual, independent completion to use as an assessment. It may be helpful to use the Tens Conversion Chart and the Tens Recording

Chart found in the Teacher Resource section at the back of this Teacher Guide to collect and analyze all assessment data.

A unit assessment of the morphology, dictionary, and grammar skills taught is included in Lesson 13, along with an assessment of silent reading comprehension using “All Things Tidal” and “The Great Red Spot,” two nonfiction selections, and “Stargirl,” a fiction selection.

You may also want to take periodic measurements of students’ fluency levels. You may use either “The Hoba Meteorite,” the selection included for fluency assessment, or any of the additional chapters in the Reader for this purpose. Recording and scoring sheets for “The Hoba Meteorite” have been included in the Skills Workbook. Assessing fluency requires that you listen to students read orally one-on-one and can be time consuming. You may want to focus on assessing those students whom you believe may be at highest risk.

Note: Students’ mastery of the domain content, astronomy, is assessed using the Listening & Learning Domain Assessment(s).

Pausing Point

Resources are provided in the Pausing Point for additional practice on the specific grammar and morphology skills taught in this unit. Teachers should select exercises and worksheets based on student performance on the unit assessment.

In addition, directions are also included for introducing and discussing each of the additional chapters in the reader.

Teacher Resources

At the back of this Teacher Guide, you will find a section titled, “Teacher Resources.” In this section, we have included assorted forms and charts which may be useful.

Assessment and Remediation Guide

A separate publication, the *Assessment and Remediation Guide*, provides further guidance in assessing, analyzing, and remediating specific skills. This guide can be found online at <http://www.coreknowledge.org/AR-G3>. Refer to this URL for additional resources, mini-lessons, and activities to assist students who experience difficulty with the skills presented in this unit.

Lesson 1

Spelling

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “The Sun, Earth, and Our Solar System,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “The Sun, Earth, and Our Solar System” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to the sun, Earth, and our solar system in “The Sun, Earth, and Our Solar System” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “The Sun, Earth, and Our Solar System” (RI.3.7)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “The Sun, Earth, and Our Solar System” with purpose and understanding (RF.3.4a)
- ✓ Prior to independently reading “The Sun, Earth, and Our Solar System,” identify what they know and have learned related to the sun, Earth, and our solar system (SL.3.1a)
- ✓ Make predictions prior to reading *What’s in Our Universe?* based on title and images (SL.3.1a)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /j/ spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ (L.3.2f)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|--|---------|
| Reading Time | Whole Group: “The Sun, Earth, and Our Solar System” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 1.1 | 45 |
| Spelling | Introduce Spelling Words | board; Worksheet 1.2 | 35 |
| Take-Home Material | Family Letter; “The Sun, Earth, and Our Solar System”; <i>What’s in Our Universe?</i> Glossary | Worksheets 1.2, 1.3, PP14 | * |

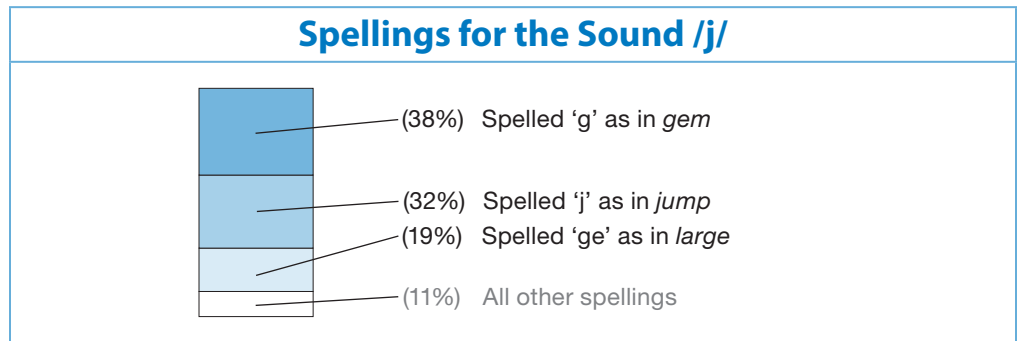
Advance Preparation

You may wish to draw the spelling table on the board or chart paper before you begin this lesson.

| 'g' > /j/ | 'j' > /j/ | 'ge' > /j/ | 'dge' > /j/ | 'dg' > /j/ |
|-----------|-----------|------------|-------------|------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

During this week, students will review spellings of /j/ spelled 'g', 'j', 'ge', 'dge', and 'dg'. Students should be familiar with all of these spellings as they were taught in Grades 1 and 2.

The following chart is provided for your review:



Here are some patterns for you to be aware of:

- The 'g' and 'j' spellings are used for the /j/ sound at the beginning of words and syllables, but generally not at the end.
- 'g' is more common than 'j' for the /j/ sound at the beginning of words and syllables (*gem, general, giant, gist, gym*).
- When used as an initial spelling for the /j/ sound, 'g' is used mainly when the /j/ sound is followed by 'e', 'i', or 'y', such as *ge-*, *gi-*, and *gy-* (*gem, ginger, gypsy*). However, as noted above, 'j' is often also used as an initial spelling.
- 'g' (never 'j') is used for the /j/ sound with separated vowel digraphs (*age, huge*).
- 'g' is used in place of 'ge' for the /j/ sound when suffixes are added, e.g., *barge > barging* and *large > largest*.
- 'ge' is used for the /j/ sound at the end of words, after r-controlled vowel sounds (*large, urge*), and in consonant clusters (*plunge, bulge*).

- ‘**dg**’ and ‘**dge**’ rarely occur for the /j/ sound; when they do, it is never at the beginning of a word.

Note to Teacher

In this unit, students will focus on four academic vocabulary words, two of which are *choose* and *select*. By academic vocabulary, we mean words that support reading comprehension and may appear across a variety of materials, in language arts and in content areas. These words can be found in textbooks, assignment directions, and assessments. Understanding academic vocabulary may contribute to improved performance on assignments and assessments, as these words often appear in directions to students. These words may appear on end-of-year assessments that third graders might take. Where applicable, we use the words throughout the unit, not just as they might refer to reading selections but also with regard to spelling, grammar, morphology, and comprehension. They may also appear in directions, assessments, spelling lists, and discussion questions, among other places.

- To *choose* means to select or to pick one.
- To *select* means to choose or to pick one.

We encourage you to define these words for students and use both of these words throughout the school day so that students may experience multiple uses of them.

Reading Time

45 minutes

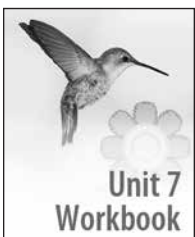
Whole Group: “The Sun, Earth, and Our Solar System”

Introducing the Reader

- Make sure that each student has a copy of the Reader, *What’s in Our Universe?*
- Read the title of the Reader to students and discuss the meaning of the word *universe*.
- Ask students to predict what this Reader might be about.
- Ask students to relate memories of their study of astronomy from first grade.
- Have students turn to the Table of Contents.
- Either read several titles from the Table of Contents aloud to students or have students read them.



Chapter 1



Worksheet 1.1

Remember to use academic vocabulary when appropriate: *choose* and *select*.

- Again, ask students if they have any predictions about what the Reader might be about.
- Give students a few moments to flip through the Reader and comment on the images they see.

Introducing the Chapter

- Tell students that the title of today’s chapter is “The Sun, Earth, and Our Solar System.”
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Ask students to share any information they may know about the sun, Earth, and our solar system.

Previewing the Vocabulary

- As in previous units, we recommend the use of the provided Vocabulary Cards. Preview specific Vocabulary Cards immediately before students are asked to read the page(s) on which they appear. The page number where the word first appears in “The Sun, Earth, and Our Solar System” is listed in bold print after the definition. A word in parentheses after the definition is another form of the vocabulary word that appears in the chapter. An asterisk after a word indicates the word is also taught in Listening & Learning.
- If needed, assist students in decoding these words using the established procedures described in detail in the earlier third grade units.

Vocabulary for “The Sun, Earth, and Our Solar System”

1. **planet**—a round object in space that orbits a star (**planets**) (10)
2. **orbit***—the curved path something in space takes around another object in space; Planets move in an orbit around the sun. (**orbiting**) (10)
3. **solar system***—the sun, other bodies like asteroids and meteors, and the planets that orbit the sun (10)
4. **rotate**—to turn about an axis or a center (**rotating, rotates, rotation**) (12)
5. **axis***—an imaginary straight line through the middle of an object, around which that object spins (12)
6. **tilted***—slanted or tipped to one side (14)

Guided Reading Supports and Purpose for Reading

- Remind students that if they are confused or forget a word meaning as they read, they know how to look up a word in the glossary and find the definition. Also, remind students about the different forms of words in parentheses after some words in the glossary.

Pages 6–11

- Follow your established procedures to display the image for this chapter and preview the Vocabulary Cards for *planet*, *orbit*, and *solar system*. Note for students that the words *planets* and *orbiting* are used in this chapter.
- Direct students' attention to the image on **page 7** and read the caption aloud as a class. Ask students to predict how the sun gives us light and heat energy.
- Tell students to read **pages 6–9** to themselves to find the answer to the question: "What is the sun made up of and how does that keep us warm?"
- When students have finished reading, restate the question and ask students to answer. (The sun is made up of different, hot gases that create the light and heat energy it gives off.)
- Also, ask students, "Does the sun move around Earth or does Earth move around the sun?" (Earth moves around the sun.) Ask students to read the sentence or sentences from the text that provide this information.
- Point students' attention to the images on **pages 9** and **11**. Read the captions together as a class or have a student read them to the class.
- Say to students, "I wonder why we would have a picture of the sun and planets circling it. Let's read **page 10** to find out."
- When students have finished reading, restate the question and ask students to answer. (The sun is in the center of a group of eight planets that orbit it.)

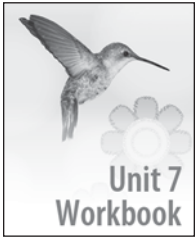
Pages 12–15

- Following your established procedures, preview the Vocabulary Cards for *rotate*, *axis*, and *tilted*. Note for students that the words *rotating*, *rotates*, and *rotation* are used in this chapter.
- Turn to **page 13** and point out the image on that page showing Earth moving.

- Ask students to read **page 12** to themselves to find the answer to the question: “What are the two ways Earth moves?”
- When students have finished reading, restate the question and ask students to answer. (It circles around the sun and it spins on its axis.) Ask students, “How do you know your answer is correct?” (Students should be able to read the sentences that reference the answer.)
- Also, ask students, “How does the rotation of Earth relate to day and night?” (When the part of Earth facing the sun gets sunlight, it is daytime and when the part of Earth facing away from the sun gets no sunlight, it’s nighttime.)
- Ask students to answer the question in their own words and then read the portion of the text that provides this information.
- Turn to **page 15** and point out the image on that page showing Earth moving, which shows summer and winter. Make sure to explicitly point out to students the tilt of Earth toward the sun that causes summer and winter in the image.
- Ask students to read **page 14** to themselves to find the answer to the question: “How does Earth’s tilt produce seasons?”
- When students have finished reading, restate the question and ask students to answer. (When one part of Earth is tilted toward the sun, the sunlight is more direct and feels hotter; it is summer. When a part of Earth is tilted away from the sun, the sunlight is less direct; it is winter.) Ask students, “How do you know your answer is correct?” (Students should be able to read the sentences that prove the answer.)

Wrap-Up

- Have students turn to Worksheet 1.1 and complete it independently.



Worksheet 1.2

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

Introduce Spelling Words

- Tell students that this week, they will review the spellings of /j/.
- As you introduce each of the spelling words, write it on the board, pronouncing each word as you write it.

- | | |
|---------------|-----------------------------------|
| 1. jellyfish | 12. jewel |
| 2. germy | 13. bridging |
| 3. digest | 14. dodge |
| 4. fringe | 15. average |
| 5. nudging | 16. fudge |
| 6. ridge | 17. giraffe |
| 7. exchange | 18. Challenge Word: answer |
| 8. eject | 19. Challenge Word: great |
| 9. budget | 20. Challenge Word: grate |
| 10. lodging | Content Word: Jupiter |
| 11. gymnasium | |

- Go back through the list of words, having students read the words and tell you what letters to circle for /j/.

- | | |
|-----------------------|--|
| 1. j ellyfish | 12. j ewel |
| 2. g ermy | 13. b ridging |
| 3. d igest | 14. d odge |
| 4. f ringe | 15. a verage |
| 5. n udging | 16. f udge |
| 6. r idge | 17. g iraffe |
| 7. e xchange | 18. C hallenge W ord: answer |
| 8. e ject | 19. C hallenge W ord: great |
| 9. b udget | 20. C hallenge W ord: grate |
| 10. l odging | C ontent W ord: Jupiter |
| 11. g ymnasium | |

- Point to the Challenge Words on the board. Explain to students that the Challenge Words, *answer* and *great/grate*, are also part of the spelling list and are words used very often. None of the Challenge Words follow the spelling patterns for this week.
- Explain to students that *great* and *grate* are homophones. Homophones sound alike but have different meanings. Homophones may or may not be spelled the same. *Great* and *grate* have the same sound /æ/ and have different meanings. *Great* means terrific and *grate* means to shred.
- Use the Challenge Words in sentences as examples for students: “Please *answer* my question.” “It would be *great* if you would *grate* the cheese for me.”
- Remind students that this week, they once again have a Content Word. Review with them that the Content Word is a little harder than the other words. (If students try to spell the Content Word on the assessment and do not get it right, they will not be penalized. Simply correct it as you do the other words and applaud their effort. There should not be a penalty for not trying or misspelling the Content Word. The important thing is they tried something that was a stretch for them academically.)
- Tell students that the Content Word, *Jupiter*, does follow the spelling patterns for this week as the ‘j’ is pronounced /j/. *Jupiter* is a content-related word because it is the name of the fifth planet in our solar system.
- Now, draw the following table on the board:

| ‘g’ > /j/ | ‘j’ > /j/ | ‘ge’ > /j/ | ‘dge’ > /j/ | ‘dg’ > /j/ |
|-----------|-----------|------------|-------------|------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

- Ask students to refer to the spellings for /j/ on the **Individual Code Chart page 1**. Point out that there are five spellings for /j/.
- Ask students which spelling is most frequently used. (‘g’ > /j/)
- Ask students to tell you which words to list under the ‘g’ > /j/ header. Briefly explain the meaning of each word.
- Continue through the columns until all words have been listed under the appropriate /j/ header. Briefly explain the meaning of each word.

| 'g' > /j/ | 'j' > /j/ | 'ge' > /j/ | 'dge' > /j/ | 'dg' > /j/ |
|-----------|-----------|------------|-------------|------------|
| germy | jellyfish | fringe | ridge | nudging |
| digest | eject | exchange | dodge | budget |
| gymnasium | jewel | average | fudge | lodging |
| giraffe | Jupiter | | | bridging |

- Practice the words as follows during the remaining time. Call on a student to read any word on the table. Then, have the student use the word in a meaningful sentence. After the student says the sentence, have him/her ask the class: “Does the sentence make sense?” If the class says, “Yes,” then the student puts a check mark in front of the word and calls on another student to come to the front and take a turn. If the class says, “No,” have the student try again or call on another student to come to the front and use the word in a meaningful sentence. This continues until all of the words are used or time has run out.
- Tell students this table will remain on display until the assessment so that students may refer to it during the week.
- Tell students they will take home Worksheet 1.2 with this week’s spelling words to share with a family member.

Take-Home Material

Family Letter; “The Sun, Earth, and Our Solar System”; *What’s in Our Universe?* Glossary

- Have students take home Worksheet 1.2 to share with a family member, Worksheet 1.3 to read to a family member, and Worksheet PP14 to use as a reference during this unit.

Lesson 2

Grammar

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “The Moon,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “The Moon” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to the moon in “The Moon” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “The Moon” (RI.3.7)
- ✓ Independently read “The Moon” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *so*) to connect ideas within categories of information (W.3.2c)
- ✓ Prior to independently reading “The Moon,” identify what they know and have learned related to the moon (SL.3.1a)
- ✓ Make predictions based on text heard thus far as to why the moon is only visible on most clear nights (SL.3.1a)
- ✓ Use coordinating and subordinating conjunctions (e.g., *so*) (L.3.1h)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|--|---------|
| Reading Time | Small Group: “The Moon” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 2.1 | 25 |
| Grammar | Introduce the Conjunction <i>so</i> | board or chart paper; prepared index cards; Worksheet 2.2 | 25 |
| Extension | Extend Student Knowledge | choice of material | 30 |
| Take-Home Material | “The Moon”; Practice Conjunction <i>so</i> | Worksheets 2.3, 2.4 | * |

Advance Preparation

Add the fourth bullet to the conjunctions poster:

Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.

Write the following sentences on the board or chart paper to be used in the Grammar lesson:

1. Because it was snowing, school was cancelled.
2. It was snowing so school was cancelled.

Write the following sentences on index cards or sentence strips for use in the Grammar lesson:

- #1 Ron loves strawberries.
- #1 He eats them whenever he can.
- #2 Dan read the story three times.
- #2 He remembered all the details.
- #3 Molly’s brother jumped out and scared her.
- #3 She screamed, “Help!”
- #4 My dad got a new job.
- #4 We had to move to a new city.
- #5 My older sister got married.
- #5 She changed her last name.
- #6 The knives in the drawer were sharp.
- #6 I didn’t play with them.

Small Group: “The Moon”

Introducing the Chapter

- Tell students that the title of today’s chapter (Chapter 2) is “The Moon.” Ask students to share what they know about the moon.
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter. When discussing the Reader, remember to use academic vocabulary when appropriate: *choose* and *select*.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “The Moon”

1. **eclipse***—the blocking of the light from the sun by another heavenly body (**eclipses**) (20)

Purpose for Reading

- Tell students that today, they will read independently or in small groups.
- Next, go through the chapter, looking at the images and reading the captions.

Note to Teacher

The Guided Reading Supports that follow are intended for use while you work with students in **Small Group 1**.

- ★ **Small Group 1:** Ask these students to assemble as a group and read the chapter with you. Have students complete Worksheet 2.1 as they read. For **question 4**, model how to answer a compare and contrast question for students. This is an excellent time for you to make notes in your anecdotal records.
- ★ **Small Group 2:** Ask these students to read the chapter independently. If you feel that these students have mastered the chapter on the moon, you may have them read a selection in the Additional Chapters section. Have students in **Small Group 2** turn to Worksheet 2.1 and complete it independently. Have students write their answers with their Reader closed. Students should then verify their answers by finding the text that answers the questions and write the page number.

Guided Reading Supports

Pages 16–19

- Read the title of the chapter together as a group, “The Moon.”
- Point students’ attention to the image on **page 17** and read the caption aloud as a group.
- Ask students to predict why the moon is only visible on most clear nights.
- Tell students to read **pages 16–19** to themselves to find the answer to these questions: “How can we see the moon at night? Does the moon give off its own light?”
- When students have finished reading, restate the questions and ask students to answer. (It is a ball of rock that gives off no light of its own, but rather reflects light from the sun.)
- Have students turn to the image on **page 19** and brainstorm why the moon looks as though it’s changing size and shape.
- Then, ask students, “Why does the moon seem to change in size and shape as a month goes by?” (It looks different at different times of the month because of the way the light from the sun is reflected and how much we can see from Earth.) Ask students to read the sentence or sentences that provide(s) this answer.

Pages 20–23

- Follow your established procedures to display the image for this chapter and preview the Vocabulary Card for *eclipse* or write the word on the board. Note for students that the word *eclipses* is used in this chapter.
- Point students’ attention to the image on **page 21**. Read the caption together as a group or have a student read it to the group.
- Say to students, “I wonder why the moon looks like it has a halo around it. Let’s read **page 20** to find out.”
- When students have finished reading, restate the question and ask students to answer. (The moon is in between the sun and Earth so we can only see the part of the sun that the moon hasn’t blocked out.)
- Ask students, “Why is it unsafe to look at a solar eclipse?” (The sun is very bright and could burn the eyes.) Ask students, “How do you know your answer is correct?” (Students should be able to read the sentences that prove the answer.)
- Turn to **page 23** and point out the image showing a lunar eclipse.
- Ask students to read **page 22** to themselves to find the answer to the question: “Why does part of the moon have a shadow on it?”
- When students have finished reading, restate the question and ask students to answer. (It is an image of a lunar eclipse, which means that the moon passed behind Earth into its shadow.) Ask students, “How do you know your answer is correct?” (Students should be able to read the sentences that prove the answer.)

Wrap-Up

- Review with students what they learned about the moon from reading this chapter by going over Worksheet 2.1.

Grammar

25 minutes

Introduce the Conjunction *so*

- Draw students' attention to the conjunctions poster and read it with them.

Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- Remind students that conjunctions join words or groups of words.
- Review the meaning of the conjunction *because*.
- Remind students that in sentences that show *cause* and *effect*, the *cause* is signaled by the conjunction *because*.
- Point to the sentences you wrote on the board in advance and read the first sentence.

1. Because it was snowing, school was cancelled.

- Remind students that the *cause* is the event that happens first in time regardless of its order in a sentence. The *cause* is signaled by the word *because*. The *effect* is the event that happens second.
- Remind students that we mark a word as a conjunction by drawing two lines under it.
- Ask students which simple sentence (It was snowing. School was cancelled.) is the *cause* and which is the *effect*.
- Write *Cause* and *Effect* over top of the two parts of the sentence on the board.

Cause

Effect

1. Because it was snowing, school was cancelled.

- Tell students that today, they will learn a new conjunction that signals the effect.
- Tell students that the new conjunction is *so*.
- Read the sentence on the Conjunctions poster about the conjunction *so*. (The conjunction *so* is used to signal “then this happened” or the effect.)
- Read the second sentence you wrote on the board in advance.

2. It was snowing so school was cancelled.

- Orally replace the word *so* with “then this happened.” [It was snowing (then this happened) school was cancelled.]
- Ask students which simple sentence (It was snowing. School was cancelled.) is the *cause* and which is the *effect*.
- Write *Cause* and *Effect* over top of the two parts of the sentence on the board.

Cause

Effect

2. It was snowing so school was cancelled.

- Point out to students that it had to be snowing first for school to be cancelled. Note that this part of the sentence is the cause even though the conjunction *because* is not used.
- Point out that the conjunction *so* signals the *effect*.
- Ask students, “What is the *effect* of it snowing?” Have them answer in a complete sentence. (It was snowing so school was cancelled.)
- Divide the class into six teams.
- Pass out the index cards you prepared in advance.
- Tell students that each team has two sentences. All students are to vote as to which sentence is the *cause* (by holding up one finger) and which is the *effect* (by holding up two fingers).

- Call the first team up to the front of the class and have them read their index cards with students listening.
- Have them read the sentences a second time, pausing after each one so the class can vote. An example is provided for you in the following box:

Ron loves strawberries. (one finger) He eats them whenever he can. (two fingers)

- Ask students which conjunction could be added between the sentences to make one compound sentence with two independent clauses. (the conjunction so)
- Now, have the teams read the sentences again, pausing after the first, so students can all say the word so in between the two sentences.
- Continue in this manner with the other five teams.
- Turn to Worksheet 2.2 and complete it as a teacher-guided activity.
- For additional practice, see Pausing Point Worksheet PP7.

Extension

30 minutes

Extend Student Knowledge

- Depending on students' needs, please choose from the following activities during this time:
 - Extension activities provided in the Pausing Point
 - Unit-specific writing prompts
 - Assessment and remediation activities outlined in the *Assessment and Remediation Guide* or remediation activities you deem appropriate
 - Reader's Chair, using Readers from previous units
 - Reader's Journal, using Readers from previous units

Take-Home Material

“The Moon”; Practice Conjunction so

- Ask students to take home Worksheet 2.3 to read to a family member and Worksheet 2.4 to complete.

Lesson 3

Morphology

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to the first four planets in “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” (RI.3.7)
- ✓ Decode words with common Latin suffixes *-ful* and *-less* (RF.3.3b)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *so*) to connect ideas within categories of information (W.3.2c)
- ✓ Prior to independently reading “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars,” identify what they know and have learned related to the first four planets (SL.3.1a)
- ✓ Use adjectives and explain their function in sentences (L.3.1a)
- ✓ Use adverbs and explain their function in sentences (L.3.1a)
- ✓ Use coordinating and subordinating conjunctions (e.g., *so*) (L.3.1h)
- ✓ Produce compound sentences (L.3.1i)
- ✓ Produce complex sentences (L.3.1i)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /j/ spelled ‘g,’ ‘j,’ ‘ge,’ ‘dge,’ and ‘dg’ (L.3.2f)
- ✓ Determine the meaning of the new word formed when *-ful* or *-less* is added to a known word (L.3.4b)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)
- ✓ Identify real-life connections between words and their use (e.g., people who are *hopeful*, *hopeless*) (L.3.5)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|---|---------|
| Reading Time | Whole Group: “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” | <i>What’s in Our Universe?;</i> Vocabulary Cards; Worksheet 3.1 | 25 |
| Morphology | Introduce Suffixes –ful and –less | board or chart paper; Worksheets 3.2–3.5 | 25 |
| Grammar | Build Sentences with the Conjunction so | Worksheet 3.6 | 15 |
| Spelling | Blank Busters | Worksheet 3.7 | 15 |
| Take-Home Material | “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars” | Worksheet 3.8 | * |

Reading Time

25 minutes

Whole Group: “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars”

Introducing the Chapter

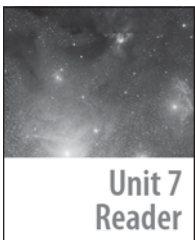
- Tell students that the title of today’s chapter is “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars.”
- Ask students to share what they know about the first four planets.
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.

Previewing the Vocabulary

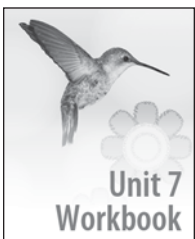
- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars

1. **naked eye**—your eye (24)
2. **probe**—a tool used to explore something, such as outer space (**probes**) (30)



Chapter 3



Worksheet 3.1

Remember to use academic vocabulary when appropriate: *choose* and *select*.

Guided Reading Supports and Purpose for Reading

Pages 24–27

- Read the title of the chapter together as a class, “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars.”
- Follow your established procedures to display the image for this chapter and preview the Vocabulary Card for *naked eye*.
- Point students’ attention to the image on **page 25** and read the caption aloud as a class.
- Ask students to predict what they think they might learn about things they could see with a telescope.
- Tell students to read **pages 24–27** to themselves to find the answer to the question: “How did people look at the planets a long time ago compared to now?”
- When students have finished reading, restate the question and ask students to answer. (They used their naked eye a long time ago but today they use telescopes and other tools to get a better look.)
- Say, “Contrast the length of time it takes for the three planets closest to the sun to orbit the sun.” (Mercury takes 88 days, Venus takes 225 days, and Earth takes 365 days.)
- Direct students’ attention to the image and caption on **page 27**.

Pages 28–31

- Follow your established procedures to preview the Vocabulary Card for *probe*. Note for students that the word *probes* is used in this chapter.
- Point students’ attention to the image on **page 29**. Read the caption together as a class or have a student read it to the class.
- Say to students, “I wonder where these planets got their names and how they compare to Earth. Let’s read **page 28** to find out.”
- When students have finished reading, restate the question and ask students to answer. (from Roman gods and goddesses; Mercury is much smaller than Earth. Venus and Earth are close to each other, about the same size, and both covered with clouds.)
- Point students’ attention to the image of Mars on **page 31**.
- Ask students to read **page 30** to themselves to find the answer to the question: “What could the discovery of ice on Mars mean?”

- When students have finished reading, restate the question and ask students to answer. (Ice is frozen water so if there is water on Mars, there might be life on Mars.) Ask students, “How do you know your answer is correct?” (Students should be able to read the sentences that provide the answer.)
- Ask students, “Why does Mars look red when you see it in the night sky?” (The rocks on Mars contain rust, making it appear red.)

Wrap-Up

- Have students turn to Worksheet 3.1. Complete this as a teacher-guided activity. Explicitly model for students how to answer each question as a complete sentence. For **question 6**, model how to answer a compare and contrast question for students.
- Have students write their answers with their reader closed. Students should then verify their answers by finding the text that answers the question and write the page number.

Morphology

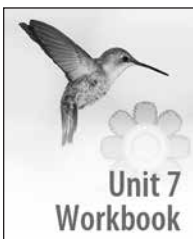
25 minutes

Introduce Suffixes *-ful* and *-less*

- Remind students that suffixes are added to the end of a root word.
- Tell students that the two suffixes they will study this week are *-ful* and *-less*.
- Also, tell students that the root words this week are nouns and adding each suffix, *-ful* and *-less*, changes the words to adjectives.
- Write the suffixes on the board and point out that the suffix *-ful* is pronounced /fəl/ and the suffix *-less* is pronounced /les/.

Adding Suffix *-ful*

- Explain to students that *-ful* means “full of.”
- Ask students if they recall what suffix they learned in an earlier unit that also means “full of.” (*-ous*)
- Point out that the suffix *-ful* only has one letter ‘l’, while the word *full* has a double ‘l’.
- Again, tell students that when the suffix *-ful* is added to a noun, the new word is an adjective.



Worksheets 3.2–3.5

For additional practice, see
Pausing Point Worksheet
PP12.

- Write *care* on the board. Briefly discuss the meaning of the word and then use it in a sentence. (effort to do something correctly or safely; I handled the vase with *care* when I took it out of the box.)
- Add the suffix *-ful* to *care* and have students read the suffix, read the new word, and then discuss the meaning of the new word. (full of effort to do something correctly or safely)
- Ask students to provide sentences using the word *careful*. (Answers may vary.)
- Ask students for synonyms of *careful*. (cautious, attentive)
- Continue in this manner for the remaining *-ful* words, using the following chart as a guide.

Note: You will not write the information in the shaded columns on the board as that information is intended for use during oral instruction.

| Root Word | Meaning | Affixed Word | Meaning and Synonyms | Sentence |
|-----------|--|--------------|---|---|
| hope | (noun) the feeling of wanting something to happen and thinking it will | hopeful | (adjective) full of the feeling of wanting something to happen and thinking it will Synonyms: optimistic, positive, encouraged | I gave my mother a <u>hopeful</u> look after asking if I could go to the fair with my friend. |
| fear | (noun) the feeling that something bad will happen | fearful | (adjective) full of the feeling that something bad will happen Synonyms: scared, dreadful | She felt <u>fearful</u> that she would miss her flight and cause a delay at the conference. |
| pain | (noun) suffering caused by injury, illness, or sadness | painful | (adjective) full of suffering caused by injury, illness, or sadness Synonyms: sore, hurting, aching | I had a <u>painful</u> bruise on my leg from accidentally running into the table. |
| power | (noun) the strength or authority to do something | powerful | (adjective) full of the strength or authority to do something Synonyms: strong, capable | David used his <u>powerful</u> arms to help row the canoe across the lake. |

Adding Suffix *-less*

- Explain to students that *-less* means “lacking.”
- Also, explain that words with the suffix *-less* mean the opposite of words with the suffix *-ful* when they have the same root word.
- Again, tell students that when the suffix *-less* is added to a noun, the word becomes an adjective.
- Write *care* on the board. Review the meaning and remind students of its use in a sentence. (effort to do something correctly or safely; I handled the vase with *care* when I took it out of the box.)
- Add the suffix *-less* to *care* and have students read the suffix, read the new word, and then discuss the meaning of the new word. (lacking effort to do something correctly or safely)
- Ask students to provide sentences using the word *careless*. (Answers may vary.)
- Ask students for synonyms of *careless*. (inconsiderate, insensitive, thoughtless)
- Continue in this manner for the remaining *-less* words, using the following chart as a guide.

Note: You will not write the information in the shaded columns on the board as that information is intended for use during oral instruction.

| Root Word | Meaning | Affixed Word | Meaning and Synonyms | Sentence |
|-----------|--|--------------|---|--|
| hope | (noun) the feeling of wanting something to happen and thinking it will | hopeless | (adjective) lacking the feeling of wanting something to happen and thinking it will Synonyms: downhearted, depressed | It was <i>hopeless</i> to think she would finish all of her homework before her favorite show came on. |
| fear | (noun) the feeling that something bad will happen | fearless | (adjective) lacking the feeling that something bad will happen Synonyms: bold, daring, courageous | Very young children can be <i>fearless</i> and try anything new. |
| pain | (noun) suffering caused by injury, illness, or sadness | painless | (adjective) lacking suffering caused by injury, illness, or sadness Synonyms: easy, effortless, simple | Going to the dentist was <i>painless</i> compared to going to the doctor to get all those shots last week. |
| power | (noun) the strength or authority to do something | powerless | (adjective) lacking the strength or authority to do something Synonyms: weak, incapable, helpless | He was <i>powerless</i> to help move furniture because he hurt his back. |

Review

- Remind students that words with the suffix *-ful* are opposites of words with the suffix *-less* when they have the same root word.
- Tell students that you will give them two word choices. The words will have either the suffix *-ful* or the suffix *-less*. Then, you will read a sentence and students must decide which of the word choices is demonstrated by the sentence.

Careful or careless? A boy scribbles groups of letters on his spelling assessment. (*careless*)

Painful or painless? A child falls off a swing and lands on her back. (*painful*)

Hopeful or hopeless? “Oh, I just can’t do this! It’s too hard!” (*hopeless*)

Fearful or not fearless? “Oh my! That’s a big dog staring at me and growling!” (*fearful*)

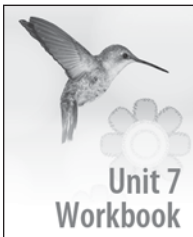
Powerful or powerless? Even though I was tired, I finished the race strong and beat my personal time goal. (*powerful*)

- Have students turn to Worksheets 3.2–3.5 and complete them as a teacher-guided activity.

Grammar

15 minutes

Build Sentences with the Conjunction so



Worksheet 3.6

- Tell students that in their writing, their sentences should be detailed enough to be interesting to readers. Interesting and informative sentences include descriptive words and phrases.
- Remind them they have practiced writing, or building, more interesting and informative sentences by including adjectives, adverbs, and other interesting words in sentences.
- Remind students that adjectives describe nouns and adverbs describe verbs.
- Write the following sentence on chart paper or the board, asking students to read the sentence aloud:

The fish swam.

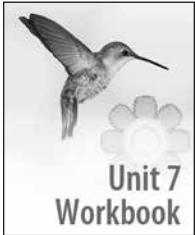
- Tell students that while this sentence is a complete sentence, it is not a very interesting sentence and does not provide much information.
- Continue by saying that you will show them how they can make a more interesting sentence by adding adjectives and adverbs.

- One way to make the sentence more interesting would be to add an adjective or two to describe the fish. Ask students to brainstorm words that could be used to describe the fish, prompting them to think of words to answer the question, “What did the fish look like?” Write down the suggested adjectives in a list on the board or chart paper. (Examples could be: colorful, excited, dizzy)
- Another way to improve this sentence would be to add adverbs to describe the verb. Ask students to brainstorm words that could be used to answer the question. “How did the fish swim?” Write these adverbs in a separate list. (Examples could be: in circles, slowly, quickly)
- Now, ask students to brainstorm words that could be used to answer the question, “When did the fish swim?” Write these adverbs and/or phrases in a separate list. (Examples could be: in the afternoon, as we watched her, always)
- Now, ask students to brainstorm words that could be used to answer the question, “Where did the fish swim?” Write these adverbs and/or phrases in a separate list. (Examples could be: in her bowl, at school, in the fish tank)
- Finally, ask students to brainstorm words that could be used to answer the question, “What happened because the fish swam?” (Examples could be: she could be noticed, air from the water could enter her gills, she could explore the tank, children could watch her)
- Remind students of *cause* and *effect* and the usage of the conjunction *so*. (The *cause* is the event that happens first and the *effect* is the event that happens second in time. The conjunction *so* precedes the *effect*.) Write their ideas for how to use *so* on a separate list.
- Remind students that a simple sentence is needed to show the *effect* of an event.
- Examples of more interesting sentences could be:
 - The colorful, silly fish swam in circles so she could be noticed.
 - The dizzy, blue fish swam slowly in her bowl at school so children could watch her.
 - The excited, multi-colored fish swam in the afternoon so air from the water could enter her gills and she could breathe.

- Ask students to turn to Worksheet 3.6, explaining that they are to use the same process to make more interesting sentences with adjectives, adverbs, and the conjunction *so* on the worksheet.

Spelling

15 minutes



Worksheet 3.7

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

Blank Busters

- Tell students that they will practice writing their spelling words for the week.
- Tell students to turn to Worksheet 3.7. Note for students that some sentences have two blanks.
- Point out to students that the spelling words are listed in the box on the worksheet and on the board. Students may also have to add an appropriate suffix to have the sentence make sense: *-s*, *-ed*, *-ly*, or *-ing*.
- Ask students to read the statement in **number 1** silently and fill in the blank. When students have completed **number 1**, call on one student to read **number 1** aloud with the spelling word in the blank.
- Ask students if anyone had a different answer. Discuss the correct answer to be sure students understand why it is correct.
- Discuss the proper spelling of the word in the blank, referencing the table of this week's spelling words. Have students compare their spelling with the spelling in the table.
- Have students move to **number 2** and fill in the blank on their own.
- Follow the previous steps to discuss the correct answers for the remaining items on the worksheet.
- Remind students that on the spelling assessment, they will have to write the spelling words and the Challenge Words. Students are encouraged to try spelling the Content Word, but if they try and don't get it right, they will not be penalized.

Take-Home Material

"The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars"

- Have students take home Worksheet 3.8 to read to a family member.

Lesson 4

Grammar

Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to the four outer planets in “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” (RI.3.7)
- ✓ Compare and contrast the inner and outer planets (RI.3.9)
- ✓ Decode words with common Latin suffixes *-ful* and *-less* (RF.3.3b)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *or*) to connect ideas within categories of information (W.3.2c)
- ✓ Prior to independently reading “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune,” identify what they know and have learned related to the four outer planets (SL.3.1a)
- ✓ Use coordinating and subordinating conjunctions (e.g., *or*) (L.3.1h)
- ✓ Produce compound sentences (L.3.1i)
- ✓ Produce complex sentences (L.3.1i)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /j/ spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’ (L.3.2f)
- ✓ Determine the meaning of the new word formed when *-ful* or *-less* is added to a known word (L.3.4b)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)
- ✓ Identify real-life connections between words and their use (e.g., people who are *careful*, *careless*) (L.3.5)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|--|---------|
| Reading Time | Whole Group: “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 4.1 | 25 |
| Grammar | Introduce the Conjunction <i>or</i> | board; prepared index cards; Worksheet 4.2 | 25 |
| Morphology | Practice Suffixes <i>-ful</i> and <i>-less</i> | board or chart paper; Worksheet 4.3 | 15 |
| Spelling | Word Sort | Worksheet 4.4 | 15 |
| Take-Home Material | “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune” | Worksheet 4.5 | * |

Advance Preparation

Add the fifth bullet to the conjunctions poster:

Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction *or*** signals a choice, possibility, or alternative.

Write the following sentences on the board or chart paper to be used in the Grammar lesson:

1. I will have carrots for a snack and I will eat a sandwich for lunch.
2. I will have carrots for a snack or I will eat a sandwich for lunch.
3. Uncle Fred watches TV on Sunday afternoons and he reads the newspaper.
4. Uncle Fred watches TV on Sunday afternoons or he reads the newspaper.

Write the following activities (or other ones that you think of) on index cards to be used in the Grammar lesson. Place them in a box or hat that students can reach in and draw from.

visit the zoo, go to the park, visit grandma’s house, go to a museum, walk to the library, write a letter, clean the kitchen, play games with friends, etc.

Write the following sentences on the board or chart paper for use during the Morphology lesson. You may choose to write them on sentence strips instead.

1. The young child was off to the barber shop for the first time and was very afraid that his first haircut would be pain _____.
2. I made a care _____ mistake and spilled grape juice on my favorite white shirt.
3. The power _____ storm included strong winds that knocked trees and power lines down.

Reading Time

25 minutes

Whole Group: “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune”

Introducing the Chapter

- Tell students that the title of today’s chapter (Chapter 4) is called “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune.”
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Ask students what they know about the four outer planets in our universe.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune”

1. **gas giant**—one of the large outer planets, Jupiter, Saturn, Uranus, and Neptune, that is composed of mainly hydrogen gas (**gas giants**) (34)
2. **hydrogen**—the most common gas in the universe, which is lighter than air and easily catches fire (34)

Guided Reading Supports and Purpose for Reading

Pages 32–35

- Read the title of the chapter together as a class, “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune.”

- Follow established procedures to display the image for this chapter and the Vocabulary Cards for *gas giant and hydrogen* or write the words on the board. Note for students that *gas giants* is used in this chapter.
- Point students' attention to the image on **page 33** and read the caption aloud as a class.
- Ask students to predict if the four outer planets differ from the first four planets.
- Tell students to read **pages 32–35** to themselves to find out how the four outer planets differ from the first four planets.
- When students have finished reading, restate the question and ask students to answer. (Answers may vary.)
- Ask students, "Why are the outer planets called gas giants?" (They are made up of gas and are very large.)
- Direct students' attention to the image and caption on **page 35**.

Pages 36–39

- Point students' attention to the image on **page 37**. Read the caption together as a class or have a student read it to the class.
- Say to students, "I wonder what the rings around Saturn are made of. Let's read **page 36** to find out."
- When students have finished reading, restate the question and ask students to answer. (The rings are made of ice and dust.)
- Tell students to read **page 38**.
- Ask students, "Why isn't Pluto considered a planet any longer?" (Scientists decided that Pluto didn't have all the characteristics needed to be classified as a planet.)
- Direct students' attention to the image and caption on **page 39**.

Wrap-Up

- Have students turn to Worksheet 4.1 and complete it independently.

Grammar

25 minutes

Introducing the Conjunction *or*

- Draw students' attention to the Conjunctions poster and read it with them.

Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that "something different," such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean "for this reason" and signals the answer to a

“why” question. It signals the cause of something.

- The **conjunction so** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction or** signals a choice, possibility, or alternative.
- Remind students the conjunction *and* means plus, along with, or also.
- Tell students that today, they will learn a new conjunction that signals a choice, possibility, or alternative. This conjunction is *or*.
- Read the first two sentences you wrote on the board in advance.

1. I will have carrots for a snack and I will eat a sandwich for lunch.
2. I will have carrots for a snack or I will eat a sandwich for lunch.

- Point out that in these sentences, the words that are being joined are independent clauses, forming compound sentences.
- Point out that the difference between the two sentences is the conjunction, which changes the meaning of the entire sentence.
- Point out that in the first sentence, I will have carrots and a sandwich, but in the second sentence, I will have one but not both.
- Draw students’ attention to the next set of sentences you wrote on the board in advance.

3. Uncle Fred watches TV on Sunday afternoons and he reads the newspaper.
4. Uncle Fred watches TV on Sunday afternoons or he reads the newspaper.

- Point out that in these sentences, the words that are being joined are independent clauses, forming compound sentences.
- Point out that the conjunctions change the meanings of the sentences.
- In the first sentence, the conjunction *and* shows that Uncle Fred does both things.
- In the second sentence, Uncle Fred either watches TV on Sunday afternoons *or* he reads the newspaper. Both events do not happen, only one.
- Call on pairs of students to come up and draw two index cards that you prepared in advance out of the box or hat.
- Have them read the cards silently.
- Have them create a compound sentence using the words on the cards with the conjunction *and* or *or* and say it out loud. Remind students that a compound sentence has two independent clauses, each with its own subject and predicate.

Lisa will visit the zoo or she will go to a museum tomorrow.

- Have that pair of students put the index cards back in the box or hat, shake it up, and call up another pair of students.
- Continue in this fashion until time is up.
- Turn to Worksheet 4.2 and complete it as a teacher-guided activity.
- For additional practice, see Pausing Point Worksheet PP8.

Morphology

25 minutes

Practice Suffixes *-ful* and *-less*

- Remind students that the suffix *-ful* means “full of” and the suffix *-less* means “lacking.” When these suffixes are added to nouns, the new words are adjectives.
- Also, remind students that when these suffixes are added to the same root word, the words have opposite meanings. (Example: *careless* and *careful* are opposites)
- Read aloud the first sentence that you prepared in advance:

1. The young child was off to the barber shop for the first time and was very afraid that his first haircut would be pain _____.

- Ask students, “Which word correctly completes the sentence, *painful* or *painless*?” (*painful*)
- Once students have given the correct answer, ask “Why wouldn’t the word *painless* make sense in this sentence?” (*Painless* means lacking pain and a young child likely wouldn’t be afraid of something without pain.)
- Read aloud the second sentence that you prepared in advance:

2. I made a care _____ mistake and spilled my grape juice on my favorite white shirt.

- Ask students, “Which word correctly completes the sentence, *careful* or *careless*?” (*careless*)
- Once students have given the correct answer, ask “Why wouldn’t the word *careful* make sense in this sentence?” (*Careful* means full of effort to do something correctly and safely and a person would likely not make the mistake of spilling grape juice on a favorite shirt by doing something correctly and safely.)

- Read aloud the second sentence that you prepared in advance:

3. The power _____ storm included strong winds that knocked trees and power lines down.

- Ask students, “Which word correctly completes the sentence, *powerful* or *powerless*?” (*powerful*)
- Once students have given the correct answer, ask “Why wouldn’t the word *powerless* make sense in this sentence?” (*Powerless* means the strength or authority to do something and a storm that knocks down trees and power lines is not lacking strength.)
- Have students turn to Worksheet 4.3 and complete it as a teacher-guided activity.

Spelling

15 minutes

Word Sort

- Tell students they will sort words using /j/ spelled ‘g’, ‘j’, ‘ge’, ‘dge’, and ‘dg’.
- Have students turn to Worksheet 4.4.
- Ask students to identify the vowel patterns. (‘j’ > /j/, ‘dge’ > /j/, ‘g’ > /j/, ‘dg’ > /j/, and ‘ge’ > /j/)
- Have students independently read the words in the box below the headers and circle the vowels that have the /j/ sound.
- Then, have students independently write the words that match the various spellings below the appropriate headers.
Note: You may wish to circulate around the room offering assistance where needed.
- For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*, which can be found online at <http://ckla.amplify.com>.

Take-Home Material

“The Outer Planets: Jupiter, Saturn, Uranus, and Neptune”

- Have students take home Worksheet 4.5 to read to a family member.

Lesson 5

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “Asteroids, Comets, and Meteors,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “Asteroids, Comets, and Meteors” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to asteroids, comets, and meteors in “Asteroids, Comets, and Meteors” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “Asteroids, Comets, and Meteors” (RI.3.7)
- ✓ Compare and contrast comets and asteroids (RI.3.9)
- ✓ Compare and contrast asteroids and planets (RI.3.9)
- ✓ Independently read “Asteroids, Comets, and Meteors” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *and, or*) to connect ideas within categories of information (W.3.2c)
- ✓ Use coordinating and subordinating conjunctions (e.g., *and, or*) (L.3.1h)
- ✓ Produce compound sentences (L.3.1i)
- ✓ Use commas and quotation marks in dialogue (L.3.2c)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)
- ✓ Use a beginning dictionary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------|---|--|---------|
| Spelling | Spelling Assessment | Worksheet 5.1; optional pens | 25 |
| Reading Time | Whole Group: “Asteroids, Comets, and Meteors” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 5.2 | 25 |
| Grammar | Practice Conjunctions <i>and</i> and <i>or</i> | board | 15 |
| Spelling | Practice Dictionary Skills | Worksheet 5.3 | 15 |

Advance Preparation

Make sure to erase the spelling table from the board and/or turn the table over so that students cannot refer to it during the assessment.

Make sure the conjunctions poster is displayed.

Conjunctions

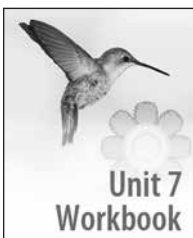
Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction *or*** signals a choice, possibility, or alternative.

Spelling

25 minutes

10 Spelling Assessment



Worksheet 5.1

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

- Have students turn to Worksheet 5.1 for the spelling assessment.
- If you would like for students to have pens, this is the time to pass them out.
- Tell students that for this assessment, they will write their words under the header to which they belong. For example, if you call out the word *jack*, they would write that word under the header ‘j’ > /j/.
- Tell students that should a spelling word fit under more than one header, they should only write the word under one.
- Tell students that they may not have to use all the lines under each header.

- Using the chart below, call out the words using the following format: say the word, use it in a sentence, and say the word once more.

| | |
|---------------|-----------------------------------|
| 1. gymnasium | 12. jewel |
| 2. germy | 13. bridging |
| 3. digest | 14. ridges |
| 4. nudging | 15. dodge |
| 5. giraffe | 16. fringe |
| 6. exchange | 17. fudge |
| 7. eject | 18. Challenge Word: answer |
| 8. average | 19. Challenge Word: great |
| 9. budget | 20. Challenge Word: grate |
| 10. lodging | Content Word: Jupiter |
| 11. jellyfish | |

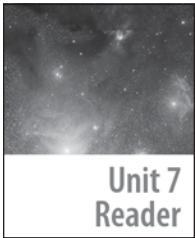
- After you have called out all of the words including the Challenge Words and the Content Word, go back through the list slowly, reading each word just once more.
- Ask students to write the following sentences as you dictate them:

1. Joan spilled cabbage stew on her new jacket.
2. Jane planted a hedge around her garden.

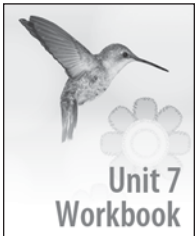
- After students have finished, collect pens, if used.
- Follow your established procedures to correct the spelling words and the dictated sentences.

Note to Teacher

At a later time today, you may find it helpful to use the template provided at the end of this lesson to analyze students' mistakes. This will help you understand any patterns that are beginning to develop, or that are persistent among individual students.



Chapter 5



Worksheet 5.2

Whole Group: “Asteroids, Comets, and Meteors”

Introducing the Chapter

- Tell students that the title of today’s chapter is “Asteroids, Comets, and Meteors.”
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “Asteroids, Comets, and Meteors”

1. **asteroid***—a space rock, smaller than a planet, that orbits the sun (**asteroids**) (40)
2. **comet***—a frozen ball of dust and ice that travels through outer space (**comets**) (40)
3. **meteor**—a piece of rock that burns very brightly when it enters Earth’s atmosphere from space, also called a shooting star (**meteors**) (40)
4. **asteroid belt**—an area between Mars and Jupiter where thousands of asteroids orbit around the sun in a shape like a belt (40)
5. **Halley’s Comet**—a famous comet named for British scientist Edmund Halley that is visible from Earth with the naked eye every 76 years (42)
6. **meteoroid***—a space rock, smaller than an asteroid, that orbits the sun (**meteoroids**) (44)
7. **atmosphere**—an invisible, protective blanket of air around Earth and other heavenly bodies (44)
8. **meteorite**—a meteor that does not fully burn up in Earth’s atmosphere and falls to Earth (44)

Guided Reading Supports and Purpose for Reading

Pages 40–43

- Read the title of the chapter together as a class, “Asteroids, Comets, and Meteors.”
- Follow established procedures to display the image for this chapter and the Vocabulary Cards for *asteroid*, *comet*, *meteor*, *asteroid belt*, and *Halley’s Comet*. Note for students that *asteroids*, *comets*, and *meteors* are used in this chapter.
- Point students’ attention to the image on **page 41** and read the caption aloud as a class.
- Ask students to predict what an asteroid is made of.
- Tell students to read **pages 40–41** to themselves to see if their prediction is correct. (Asteroids are made of rock, metal, and sometimes ice.)
- Ask, “What is the large group of asteroids called that is between Mars and Jupiter and why is it called that?” (an asteroid belt because they cluster together in a shape like a belt)
- Point students’ attention to the image on **page 43**. Read the caption together as a class or have a student read it to the class.
- Ask students to read **pages 42–43** to themselves to find the answer to the question: “What is a comet and what is it made of?”
- When students have finished reading, restate the question and ask students to answer. (A comet is a ball made of ice and dust that streams gas off the end when it gets close to the sun.)
- Ask students, “How often can we see Halley’s Comet?” (every 76 years)
- Have students figure out the answer to the question on **page 42**. (2061)

Pages 44–45

- Follow established procedures to preview Vocabulary Cards for *meteoroid*, *atmosphere*, and *meteorite*. Note for students that *meteoroids* is used in this chapter.
- Turn to **page 45** and point out the images on the page showing a meteor shower and a crater.

- Ask students to read **page 44** to themselves to find the answer to the question: “What is a meteor and how can it create a crater?”
- When students have finished reading, restate the question and ask students to answer. (A meteor is a space rock that falls to Earth. Pieces of a meteor that hit Earth are called meteorites. Some are large enough that if they hit Earth, they can make a large hole, or crater.)

Wrap-Up

- Have students turn to Worksheet 5.2 and complete it independently.

Grammar

15 minutes

Practice Conjunctions *and* and *or*

- Draw students’ attention to the conjunctions poster you prepared in advance.

Conjunctions

Conjunctions are words that connect other words or groups of words.

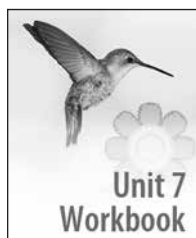
- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction *or*** signals a choice, possibility, or alternative.
- Specifically point out the definitions for the conjunction *and* and the conjunction *or*.
- Ask students to contrast the two conjunctions. (The conjunction *and* is inclusive, meaning it joins words, while the conjunction *or* requires a choice to be made.)

- Tell students they will collectively write dialogue between two fictional characters, Miss And and Mr. Or, as they determine what to order from a menu in a restaurant.
- Ask students how the two characters might differ in their choices regarding what they would order. (Answers may vary but should include that Miss And would order many items while Mr. Or would order only a few.)
- Write sentences on the board that students generate, asking students to tell you where to place quotation marks, commas, and end punctuation.
- An example of the beginning of the dialogue could be:
 - “I like this restaurant,” said Miss And, “because it has so many choices and I’m hungry!”
 - Mr. Or retorted, “Well, I wish we had chosen another restaurant because there are too many choices.”
- Once finished, have students read the parts of the dialogue to one another.

Spelling

15 minutes

Practice Dictionary Skills



Worksheet 5.3

- Remind students that in a previous lesson, they learned about many different parts of a dictionary.
- Review the various components of the dictionary such as entry words, numbers of word meanings, and parts of speech.
- Ask students to complete Worksheet 5.3 independently or as a teacher-guided activity.

Spelling Analysis Chart

| Name | |
|------|-----------------------------------|
| 1 | 1. gymnasium |
| 2 | 2. germ |
| 3 | 3. digest |
| 4 | 4. nudging |
| 5 | 5. giraffe |
| 6 | 6. exchange |
| 7 | 7. eject |
| 8 | 8. average |
| 9 | 9. budget |
| 10 | 10. lodging |
| 11 | 11. jellyfish |
| 12 | 12. jewel |
| 13 | 13. bridging |
| 14 | 14. ridge |
| 15 | 15. dodge |
| 16 | 16. fringe |
| 17 | 17. fudge |
| 18 | 18. Challenge Word: answer |
| 19 | 19. Challenge Word: great |
| 20 | 20. Challenge Word: grate |
| | Content Word: Jupiter |

Spelling Analysis Directions

Unit 7, Lesson 5

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

- Students are likely to make the following errors:
 - For ‘g’, students may write ‘j’, ‘ge’, ‘dge’, or ‘dg’
 - For ‘j’, students may write ‘g’, ‘ge’, ‘dge’, or ‘dg’
 - For ‘ge’, students may write ‘g’, ‘j’, ‘dge’, or ‘dg’
 - For ‘dge’, students may write ‘g’, ‘j’, ‘ge’, or ‘dg’
 - For ‘dg’, students may write ‘g’, ‘j’, ‘ge’, or ‘dge’
- While the above student-error scenarios may occur, you should be aware that misspellings may be due to many other factors. You may find it helpful to record the actual spelling errors that the student makes in the analysis chart. For example:
 - Is the student consistently making errors on specific vowels?
Which ones?
 - Is the student consistently making errors at the end of the words?
 - Is the student consistently making errors on particular beginning consonants?
- Did the student write words for each feature correctly?
- Also, examine the dictated sentences for errors in capitalization and punctuation.

Lesson 6

Spelling

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “Galaxies and Stars,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “Galaxies and Stars” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to galaxies and stars in “Galaxies and Stars” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “Galaxies and Stars” (RI.3.7)
- ✓ Compare and contrast solar systems and galaxies (RI.3.9)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “Galaxies and Stars” with purpose and understanding (RF.3.4a)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ (L.3.2f)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|--|--|---------|
| Reading Time | Small Group: “Galaxies and Stars” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 6.1 | 25 |
| Spelling | Introduce Spelling Words | board; Worksheet 6.2 | 25 |
| Extension | Extend Student Knowledge | choice of material | 30 |
| Take-Home Material | Family Letter; “Asteroids, Comets, and Meteors”; “Galaxies and Stars” | Worksheets 6.2–6.4 | * |

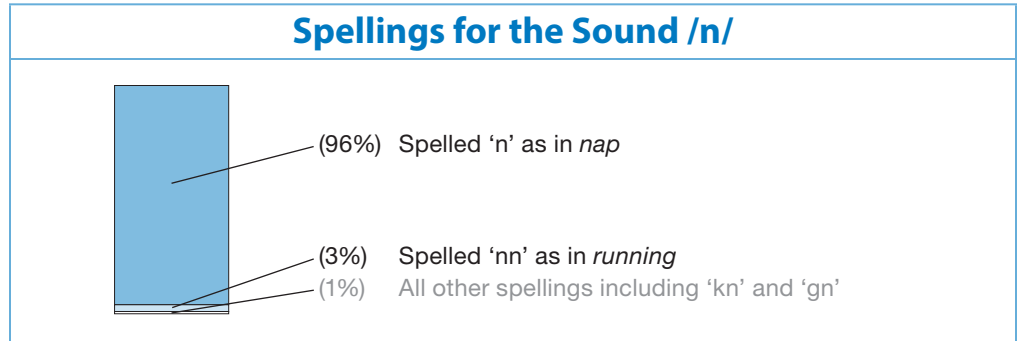
Advance Preparation

You may wish to draw the spelling table on the board or chart paper before you begin this lesson.

Note to Teacher

For Lessons 6–10, you will review spellings for the sound of /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’. Students should be familiar with all of these spellings as they were taught in Grades 1 and 2.

The following chart is provided for your review:



Here are some patterns for you to be aware of:

- ‘n’ is the most common spelling. It is used in most situations, including in the initial position (*nice, nose*), in the initial cluster *sn-* (*snip*), with separated digraphs (*fine*), in the final clusters *-nch, -nd, -nt, -nth, -nge* (*lunch, sand, hint, tenth, hinge*), and in the final position (*run, fan*).
- ‘nn’ follows the same basic patterns as ‘bb’, ‘pp’, ‘mm’, etc. It is rare in one-syllable words and never occurs at the beginning of a word. It is used mostly in doubling situations (*tan > tanning, spin > spinner*).
- ‘kn’ occurs only at the beginning of words and syllables.
- The spelling ‘gn’ as in *gnat* or *sign* is very rare.

Note to Teacher

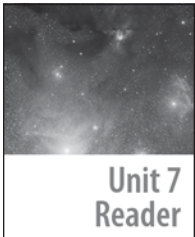
In this unit, students will focus on four academic vocabulary words, two of which are *determine* and *arrange*. By academic vocabulary, we mean words that support reading comprehension and may appear across a variety of materials, in language arts and in content areas. These words can be found in textbooks, assignment directions, and assessments. Understanding academic vocabulary may contribute to improved performance on assignments and assessments, as these words often appear in directions to students. These words may appear on end-of-year assessments that third graders might take. Where applicable, we use the words throughout the unit, not just as they might refer to reading selections but also with regard to spelling, grammar, morphology, and comprehension. They may also appear in directions, assessments, spelling lists, and discussion questions, among other places.

- To *determine* means to find out or to decide.
- To *arrange* means to put things in order.

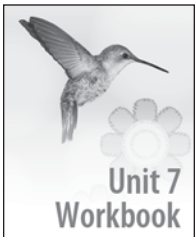
We encourage you to define these words for students and use both of these words throughout the school day so that students may experience multiple uses of them.

Reading Time

25 minutes



Chapter 6



Worksheet 6.1

Remember to use academic vocabulary when appropriate: *determine* and *arrange*.

Small Group: “Galaxies and Stars”

Introducing the Chapter

- Tell students that the title of today’s chapter is “Galaxies and Stars.”
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Have students brainstorm anything they already know about the stars and galaxies.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “Galaxies and Stars”

1. **galaxy**—a very large cluster of billions of stars, dust, and gas held together by gravity and separated from other star systems by a large amount of space (**galaxies**) (46)
2. **astronomer**—a scientist who studies stars, planets, and outer space (**astronomers**) (48)
3. **billion**—a very large number (**billions**) (50)
4. **Milky Way Galaxy**—the galaxy that contains Earth and the solar system in which it lies (50)
5. **Andromeda Galaxy**—the spiral galaxy that is closest to the Milky Way Galaxy (52)

Purpose for Reading

- Remind students that if they are confused or forget a word meaning as they read, they know how to look up a word in the glossary and find the definition. Also, remind students about the different forms of words in parentheses after some words in the glossary.
- Tell students that today, they will read independently or in small groups.
- Next, go through the chapter, looking at the images and reading the captions.

Note: The Guided Reading Supports that follow are intended for use while you work with students in **Small Group 1**.

- ★ **Small Group 1:** Ask these students to assemble as a group and read the chapter with you. Have students complete Worksheet 6.1 as they read. This is an excellent time for you to make notes in your anecdotal records.
- ★ **Small Group 2:** Ask these students to read the chapter independently. If you feel that these students have mastered the chapter on galaxies and stars, you may have them read a selection in the Additional Chapters section.

Guided Reading Supports

Pages 46–49

- Read the title of the chapter together as a group, “Galaxies and Stars.”
- Follow established procedures to display the image for this chapter and the Vocabulary Cards for *galaxy* and *astronomer*. Note for students that *galaxies* and *astronomers* are used in this chapter.
- Point students’ attention to the image on **page 47** and read the caption aloud as a group.
- Ask students to predict what they think the difference is between galaxies and stars.
- Tell students to read **pages 46–49** to themselves to find the answer to the question: “Our sun is a star, so why do the stars in the night sky look different from the sun?”
- When students have finished reading, restate the question and ask students to answer. (The night stars are much, much farther away from Earth than the sun. If we could get close to the stars, they would look bigger, brighter, and more like the sun.)

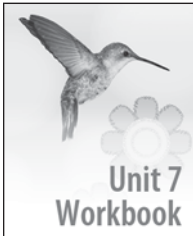
- Ask, “What have astronomers discovered about how stars differ from each other?” (They can be different sizes and colors. Some are closer to Earth than others. Some are hotter than others. The hottest stars and stars that are closest to Earth appear brighter.)
- Direct students’ attention to the image and caption on **page 49**.

Pages 50–53

- Follow established procedures to preview Vocabulary Cards for *billion*, *Milky Way Galaxy*, and *Andromeda Galaxy*. Note for students that *billions* is used in this chapter.
- Say, “I wonder what the Milky Way Galaxy is.” Tell students that the Milky Way Galaxy is the galaxy that contains Earth and the solar system in which it lies. Then say, “Let’s read **page 50** to find out more about the Milky Way Galaxy.”
- When students have finished reading, restate the question and ask students to share what they learned about the Milky Way Galaxy. (It is the galaxy to which our sun and solar system belong. It looks like a ‘milky’ band of white light when viewed from Earth and a spiral shape when viewed from space.)
- Tell students to read **page 52**.
- Say, “List facts about the Andromeda Galaxy.” (It is the nearest spiral galaxy to the Milky Way Galaxy. It is billions of miles away but still possible to see at night sometimes.)
- Ask students, “Why is the word *billions* used to describe stars and galaxies?” (Billions is a very large number and there are almost more stars and galaxies in the universe than we can think about.)
- Direct students’ attention to the images and captions on **pages 51** and **53**.

Wrap-Up

- Have students in **Small Group 2** turn to Worksheet 6.1 and complete it independently.
- Have students write their answers with their reader closed. Students should then verify their answers by finding the text that answers the questions and write the page number.



Worksheet 6.2

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

Introduce Spelling Words

- Tell students that this week, they will review the spellings of /n/.
- As you introduce each of the spelling words, write it on the board, pronouncing each word as you write it.

- | | |
|---------------|-----------------------------------|
| 1. gnat | 12. knowledge |
| 2. skinny | 13. channel |
| 3. knotted | 14. annoy |
| 4. recently | 15. gnarly |
| 5. flannel | 16. knuckle |
| 6. knighted | 17. campaign |
| 7. nearby | 18. Challenge Word: very |
| 8. understand | 19. Challenge Word: vary |
| 9. design | 20. Challenge Word: enough |
| 10. knobby | Content Word: astronomer |
| 11. manned | |

Go back through the list of words, having students read the words and tell you what letters to circle for /n/.

- | | |
|----------------------|-----------------------------------|
| 1. gnat | 12. knowledge |
| 2. skinny | 13. channel |
| 3. knotted | 14. annoy |
| 4. recently | 15. gnarly |
| 5. flannel | 16. knuckle |
| 6. knighted | 17. campaign |
| 7. nearby | 18. Challenge Word: very |
| 8. understand | 19. Challenge Word: vary |
| 9. design | 20. Challenge Word: enough |
| 10. knobby | Content Word: astronomer |
| 11. manned | |

- Point to the Challenge Words on the board. Explain to students that the Challenge Words, *very/vary* and *enough*, are also part of the spelling list and are words used very often. *Very/vary* do not follow the spelling patterns for this week while *enough* does as the ‘n’ is pronounced /n/.
- Explain to students that *very* and *vary* are homophones. Homophones sound alike but have different meanings. Homophones may or may not be spelled the same. *Very* and *vary* have the same sound /air/ and have different meanings. *Very* means much or a lot and *vary* means to change something.
- Use the Challenge Words in sentences as examples for students: “It would help me *very* much if you would *vary* our camp activities today.” “We have *enough* ice cream for everyone here to have a bowlful.”
- Remind students that this week, they once again have a Content Word. Review with them that the Content Word is a little harder than the other words. (If students try to spell the Content Word on the assessment and do not get it right, they will not be penalized. Simply correct it as you do the other words and applaud their effort. There should not be a penalty for not trying or misspelling the Content Word. The important thing is they tried something that was a stretch for them academically.)
- Tell students that the Content Word, *astronomer*, does follow the spelling patterns for this week as the ‘n’ is pronounced /n/. *Astronomer* is a content-related word that is defined as a scientist who studies the universe and all that is in it.
- Now, draw the following table on the board:

| ‘n’ > /n/ | ‘nn’ > /n/ | ‘kn’ > /n/ | ‘gn’ > /n/ |
|-----------|------------|------------|------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

- Ask students to refer to the spellings for /n/ on the **Individual Code Chart page 2**. Point out that there are four spellings for /n/.
- Ask students which spelling is most frequently used. (‘n’ > /n/)
- Ask students to tell you which words to list under the ‘n’ > /n/ header. Briefly explain the meaning of each word.

- Continue through the columns until all words have been listed under the appropriate /n/ header. Briefly explain the meaning of each word.

| 'n' > /n/ | 'nn' > /n/ | 'kn' > /n/ | 'gn' > /n/ |
|------------|------------|------------|------------|
| recently | skinny | knotted | gnat |
| nearby | flannel | knighted | design |
| understand | manned | knobby | gnarly |
| enough | channel | knowledge | campaign |
| astronomer | annoy | knuckle | |

- Practice the words as follows during the remaining time. Call on a student to read any word on the table. Then, have the student use the word in a meaningful sentence. After the student says the sentence, have him/her ask the class: “Does the sentence make sense?” If the class says, “Yes,” then the student puts a check mark in front of the word and calls on another student to come to the front and take a turn. If the class says, “No,” have the student try again or call on another student to come to the front and use the word in a meaningful sentence. This continues until all of the words are used or time has run out.
- Tell students this table will remain on display until the assessment so that students may refer to it during the week.
- Tell students they will take home Worksheet 6.2 with this week’s spelling words to share with a family member.

Extension

30 minutes

Extend Student Knowledge

- Depending on students’ needs, please choose from the following activities during this time:
 - Extension activities provided in the Pausing Point
 - Unit-specific writing prompts
 - Assessment and remediation activities outlined in the *Assessment and Remediation Guide* or remediation activities you deem appropriate
 - Reader’s Chair, using Readers from previous units
 - Reader’s Journal, using Readers from previous units

Take-Home Material

Family Letter; “Asteroids, Comets, and Meteors”; “Galaxies and Stars”

- Have students take home Worksheet 6.2 to share with a family member and Worksheets 6.3 and 6.4 to read to a family member.

Lesson 7

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “Constellations,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “Constellations” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to constellations in “Constellations” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “Constellations” (RI.3.7)
- ✓ Compare and contrast solar and lunar eclipses (RI.3.9)
- ✓ Independently read “Constellations” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *because, so, and, and or*) to connect ideas within categories of information (W.3.2c)
- ✓ Prior to independently reading “Constellations,” identify what they know and have learned related to constellations (SL.3.1a)
- ✓ Use coordinating and subordinating conjunctions (e.g., *because, so, and, and or*) (L.3.1h)
- ✓ Produce compound sentences (L.3.1i)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|--|---------|
| Reading Time | Whole Group: “Constellations” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 7.1 | 25 |
| Grammar | Review Conjunction so | Worksheet 7.2 | 25 |
| Extension | Respond to Excerpt from “The Moon” | board or chart paper; Worksheet 7.3 | 30 |
| Take-Home Material | “Constellations” | Worksheet 7.4 | * |

Advance Preparation

Prepare sentence strips with the following for use in the Grammar lesson:

1. The forecast said rain today.
2. Father took his umbrella with him.
3. Sam's favorite sandwich is peanut butter and jelly.
4. His mother packs it in his lunch almost every day.
5. The kitten is hungry.
6. She sits by her bowl and mews.
7. Because
8. so

Make sure the conjunctions poster is still on display.

Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction *or*** signals a choice, possibility, or alternative.

Write the following sentences on the board or chart paper to be used in the Extension lesson:

Because Earth rotates on its axis, we have day and night.
Earth rotates on its axis so we have day and night.

Reading Time

25 minutes

Whole Group: “Constellations”

Introducing the Chapter

- Tell students that the title of today’s chapter (Chapter 7) is “Constellations.” Tell them that today’s chapter is about groups of stars that look as if they are forming a pattern or picture in the night sky.

- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter. When discussing the Reader, remember to use academic vocabulary when appropriate: *determine* and *arrange*.
- Have students brainstorm anything they already know about constellations.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “Constellations”

1. **constellation***—stars that form a pattern or shape that looks like such things as a person, an object, or an animal as seen from Earth (**constellations**) (54)
1. **Ursa Major**—the constellation named by Ptolemy that is also called Big Bear; It includes the Big Dipper. (56)
1. **imagine**—to pretend (56)
1. **Ursa Minor**—the constellation made of seven stars named by Ptolemy that is also called Little Bear; It is the Little Dipper. (58)
1. **Polaris**—the North Star; the brightest star at the end of the handle of the Ursa Minor/Little Dipper that stays in the same place in the night sky all year long (60)

Guided Reading Supports and Purpose for Reading

Pages 54–57

- Read the title of the chapter together as a class, “Constellations.”
- Follow established procedures to display the image for this chapter and preview the Vocabulary Cards for *constellation*, *Ursa Major*, and *imagine* or write the words on the board. Note for students that *constellations* is used in this chapter.
- Point students’ attention to the image on **page 55** and read the caption aloud as a class.
- Tell students to read **pages 54–55** to themselves to find the answer to the question: “How were constellations discovered?”
- When students have finished reading, restate the question and ask students to answer. (People drew lines between bright stars to form shapes or patterns.)
- Point students’ attention to the image on **page 57**. Read the caption together as a class or have a student read it to the class.
- Say to students, “I wonder what the caption means and what the image is. Let’s read **page 56** to find out.”
- When students have finished reading, restate the question and ask students to answer. (Ursa Major is a constellation of a big bear.)

- Ask, “Who was Ptolemy?” (He was one of the first people to describe star patterns called constellations.) Ask students, “How do you know your answer is correct?” (Students should be able to read the sentences from the Reader that answer the question.)
- Ask, “How many constellations can be seen in the night sky today?” (88) Have a student read the sentence that contains the answer from the Reader.

Pages 58–61

- Have students quickly scan **page 58** for any new bolded words. (Students should find *Ursa Minor*.)
- Follow established procedures to preview the Vocabulary Cards for *Ursa Minor* and *Polaris* or write the words on the board.
- Turn to **page 59** and point out the images on that page showing the Big Dipper and Ursa Minor.
- Ask students to read **page 58** silently to find the answer to the question: “What is Ursa Minor and why is it named that?”
- When students have finished reading, restate the question and ask students to answer. (It is a constellation that is shaped like a dipper but also shaped like a bear.) Have a student read the sentence or sentences from the Reader that answer(s) the question.
- Ask students to read **page 60** to themselves to find out the answer to these questions: “What is Polaris? What constellation will help me find Polaris in the night sky?”
- When students have finished reading, restate the questions and ask students to answer. (Polaris is a star that does not move in the sky and is directly over the North Pole. You can find it by pretending there is a long arrow from the two pointer stars at the edge of the Big Dipper’s scoop.)
- Direct students’ attention to the image and caption on **page 61**.

Wrap-Up

- Have students turn to Worksheet 7.1 and complete it independently.

Grammar

25 minutes

Review Conjunction so

- Draw students’ attention to the conjunctions poster and reread it with them.

Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.

- The **conjunction so** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction or** signals a choice, possibility, or alternative.
- Remind students of the difference between the conjunction *because* and the conjunction *so*. (*Because* signals the *cause* while *so* signals the *effect*.)
- Divide the class into six teams and give each team one of the sentence strips you prepared in advance. Do not pass out the strips with *Because* and *so* written on them.
- Have teams stand around the classroom all facing toward the center, displaying their sentence strips.
- Ask one member of each team to read their sentence aloud, until all sentences have been read. Tell students to listen carefully as each sentence is read to identify a sentence that might make sense combined with their own sentence to create a new compound sentence.
- Have one team at a time move next to its related sentence, until all sentences have been paired, i.e. there are now three teams.
- Ask one team at a time to display their two sentences with the *cause* first and the *effect* second.
- Now, take the sentence strip you prepared that says *Because* and hold it in front of the first sentence. Have the class choral read the new sentence.

Note to Teacher: Sentences with the conjunction *because* are complex sentences. Sentences with the conjunction *so* are compound sentences. Students do not need to recognize complex sentences at this time. However, students should be familiar with compound sentences.

- Ask, “Why did I place the conjunction *Because* at the beginning of the sentence?” (The conjunction *because* signals the *cause*.)

Because the forecast said rain today, Father took his umbrella with him.

- Next, remove the sentence strip that says *Because* and insert the sentence strip that says *so* in between the two sentences and have the class choral read the new compound sentence.

The forecast said rain today, so Father took his umbrella with him.

- Ask, “Why did I place the conjunction *so* before the second sentence?” (The conjunction *so* signals the *effect*.)
- Repeat the process with the other two teams.

- Remind students that the conjunction *and* connects words or groups of words. It means plus, along with, or also.
- Remind students the conjunction *or* signals a choice, possibility, or alternative.
- Tell students you will read some sentences, leaving out the conjunction but humming in the place where a conjunction should be inserted.
- Have students give a thumbs up if they would personally choose the conjunction *and* to be inserted where you hum or pause and a thumbs down if they would personally choose the conjunction *or*.
- Give an example first: “I want cookies (HUM) I want chocolate ice cream.” Students may choose either *and* (a thumbs up) or *or* (a thumbs down), depending on their preference. As both choices are correct, you may wish to hear why students chose one conjunction over the other.
- Examples for sentences to read could be:

I like going to movies (HUM) I like reading books.

My father plays board games (HUM) he watches TV on weekends.

Do you want a new bicycle (HUM) would you prefer a new wagon?

- You may wish for students to make up their own sentences to share with the class, using the format listed above.
- Have students turn to Worksheet 7.2 and complete it independently.

Extension

30 minutes

Respond to Excerpt from “The Moon”

- Ask students to recall facts they have learned about the moon. Answers may include:
 - The moon reflects light from the sun and does not give off its own light.
 - The moon orbits Earth.
 - It may look like the moon changes size and shape in the night sky during the month, but really the only thing changing is how much of the moon we can see from Earth at a particular time.
 - The moon plays a role in eclipses.
 - Tell students that in today’s lesson, they will read an excerpt from “The Moon” and respond to a writing prompt related to the excerpt.
- Tell students that in writing a response, they may need to use the conjunctions *because* and *so*.

- Ask, “What is a conjunction?” (words that connect words or groups of words)
- Ask, “What is the conjunction *because* used for?” (It means “for this reason” and signals the answer to a “why” question. It signals the cause of something.)
- Ask, “What is the conjunction *so* used for?” (It means “then this happened” and signals the effect in a cause and effect sentence.)
- Remind students that in compound sentences that show *cause* and *effect*, the *cause* is signaled by the conjunction *because* and the *effect* is signaled by the conjunction *so*.
- Also, remind students that the *cause* is the event that happens first regardless of its order in a sentence. The *effect* is the event that happens second.
- Point to the first sentence you wrote on the board earlier and read it aloud.

Because Earth rotates on its axis, we have day and night.

- Ask students which event is the *cause* in this sentence and which event is the *effect*. (cause = Because Earth rotates on its axis; effect = we have day and night).
- Write *Cause* and *Effect* over the appropriate parts of the sentence.

| | |
|--|---------------|
| <i>Cause</i> | <i>Effect</i> |
| <u>Because</u> Earth rotates on its axis, we have day and night. | |

Follow the same steps to mark the second sentence: (cause = Earth rotates on its axis; effect = so we have day and night)

| | |
|--|---------------|
| <i>Cause</i> | <i>Effect</i> |
| Earth rotates on its axis <u>so</u> we have day and night. | |

- Ask students to provide several oral sentences using the conjunctions *because* and *so* to demonstrate *cause* and *effect*.
- Ask students to turn to Worksheet 7.3 and look only at the front of the worksheet.
- Read the excerpt from “The Moon” that is printed on the front of the worksheet with students.
- Tell students that after a few oral questions, they will write a response to a writing prompt that is printed on the back of Worksheet 7.3.
- Tell students that when they write, they should skip lines and keep writing until told to stop. Students will have 12 minutes and should write the whole time to try to fill the page.

- Ask, “What is a conjunction?” (words that connect words or groups of words)
- Ask, “What is the conjunction *because* used for?” (It means “for this reason” and signals the answer to a “why” question. It signals the cause of something.)
- Ask, “What is the conjunction *so* used for?” (It means “then this happened” and signals the effect in a cause and effect sentence.)
- Remind students that in compound sentences that show *cause* and *effect*, the *cause* is signaled by the conjunction *because* and the *effect* is signaled by the conjunction *so*.
- Also, remind students that the *cause* is the event that happens first regardless of its order in a sentence. The *effect* is the event that happens second.
- Point to the first sentence you wrote on the board earlier and read it aloud.

Because Earth rotates on its axis, we have day and night.

- Ask students which event is the *cause* in this sentence and which event is the *effect*. (cause = Because Earth rotates on its axis; effect = we have day and night).
- Write *Cause* and *Effect* over the appropriate parts of the sentence.

Cause

Effect

Because Earth rotates on its axis, we have day and night.

Follow the same steps to mark the second sentence: (cause = Earth rotates on its axis; effect = so we have day and night)

Cause

Effect

Earth rotates on its axis so we have day and night.

- Ask students to provide several oral sentences using the conjunctions *because* and *so* to demonstrate *cause* and *effect*.

- Ask students to turn to Worksheet 7.3 and look only at the front of the worksheet.
- Read the excerpt from “The Moon” that is printed on the front of the worksheet with students.
- Tell students that after a few oral questions, they will write a response to a writing prompt that is printed on the back of Worksheet 7.3.
- Tell students that when they write, they should skip lines and keep writing until told to stop. Students will have 12 minutes and should write the whole time to try to fill the page.
- Tell students that at the end of 12 minutes, you will ask them to stop. It is acceptable to stop wherever they may be in their writing, even if it is mid-sentence.
- Ask the following verbal warm-up questions and have students raise their hand to answer:
 - Raise your hand if you can remember what the moon orbits.
 - Raise your hand if you can remember why the moon looks like it is lit up.
 - Raise your hand if you can remember why the moon looks like it changes size and shape during the month.
- Now, have students turn their worksheet over and read the writing prompt aloud with them.
- Then, have students write for 12 minutes on the lines provided on the worksheet.
- While students write, walk around the room encouraging individual students, pointing out sentences or thoughts students have written that answer the prompt well (have precise details, are on topic by describing how the eclipses are the same and how they are different, or include the conjunctions *because* and *so*). Spend less than a minute with any individual student. Try to speak quietly to as many students as you can in the 12 minutes.
- After 12 minutes, ask students to stop where they are.
- Ask volunteers to share their writing. After a student has shared, listeners should raise their hands to give a positive compliment to the sharer.

- Tell students that at the end of 12 minutes, you will ask them to stop. It is acceptable to stop wherever they may be in their writing, even if it is mid-sentence.
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 - Raise your hand if you can remember what the moon orbits.
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- While students write, walk around the room encouraging individual students, pointing out sentences or thoughts students have written that answer the prompt well (have precise details, are on topic by describing how the eclipses are the same and how they are different, or include the conjunctions *because* and *so*). Spend less than a minute with any individual student. Try to speak quietly to as many students as you can in the 12 minutes.
- After 12 minutes, ask students to stop where they are.
- Ask volunteers to share their writing. After a student has shared, listeners should raise their hands to give a positive compliment to the sharer.
- As a closing, point out writing that included many details using the conjunctions *because* and *so* that you noticed while providing students with positive feedback.

Take-Home Material

“Constellations”

- Ask students to take home Worksheet 7.4 to read to a family member.

Lesson 8

Morphology

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “Exploring Space,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “Exploring Space” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to space travel in “Exploring Space” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “Exploring Space” (RI.3.7)
- ✓ Decode words with common Latin suffixes *-ous, -ive, -ly, -ful, and -less* (RF.3.3b)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “Exploring Space” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *because, and, or, and so*) to connect ideas within categories of information (W.3.2c)
- ✓ Make predictions based on text read thus far as to what people might learn when they explore space (SL.3.1a)
- ✓ Use coordinating and subordinating conjunctions (e.g., *because, and, or, and so*) (L.3.1h)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ (L.3.2f)
- ✓ Determine the meaning of the new word formed when *-ous, -ive, -ly, -ful, or -less* is added to a known word (L.3.4b)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)
- ✓ Identify real-life connections between words and their use (e.g., people who are *mysterious, powerful*) (L.3.5)

| <i>At a Glance</i> | Exercise | Materials | Minutes |
|---------------------------|---|--|----------------|
| Reading Time | Whole Group: “Exploring Space” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 8.1 | 25 |
| Morphology | Review Suffixes –ous, –ive, –ly, –ful, and –less | board or chart paper; Worksheets 8.2, 8.3 | 25 |
| Grammar | Review Conjunctions | Worksheet 8.4 | 15 |
| Spelling | Blank Busters | Worksheet 8.5 | 15 |
| Take-Home Material | “Exploring Space” | Worksheet 8.6 | * |

Advance Preparation

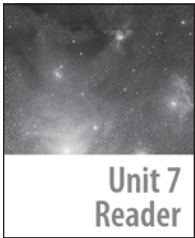
Make sure the conjunctions poster is still on display.

Conjunctions

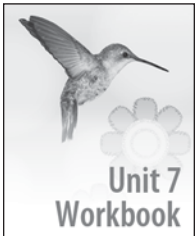
Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction *or*** signals a choice, possibility, or alternative.

Have dice (one die is needed for each pair of students) and game markers ready for Frisky Beavers to be played during the Morphology lesson. Markers can be beans, buttons, or cut squares of construction paper.



Chapter 8



Worksheet 8.1

Remember to use academic vocabulary when appropriate: *determine* and *arrange*.

Whole Group: “Exploring Space”

Introducing the Chapter

- Tell students that today’s chapter is entitled “Exploring Space.”
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “Exploring Space”

1. **observatory***—a place used to observe the sun, moon, stars, and outer space (**observatories**) (64)
2. **launch**—to send a rocket into outer space (**launched**) (66)
3. **Hubble Telescope**—a large telescope that collects information in space; It was carried into space in 1990 and will be there until 2014. (66)
4. **NASA***—National Aeronautics and Space Administration; an organization in the United States that directs space travel and research (66)
5. **astronaut**—a person who travels into outer space (68)
6. **manned**—carrying and operated by people (70)
7. **Apollo 11**—a rocket ship that took three American astronauts to the moon in 1969 (70)
8. **gravity***—a force that pulls things toward one another (72)
9. **attraction**—when things are drawn to move closer together (72)

Guided Reading Supports and Purpose for Reading

Pages 62–65

- Read the title of the chapter together as a class, “Exploring Space.”
- Follow established procedures to display the image for this chapter and preview the Vocabulary Card for *observatory*. Note for students that *observatories* is used in this chapter.

- Point students' attention to the image on **page 63** and read the caption aloud as a class.
- Ask students to predict what they think it means to explore space and what they think people might learn when they explore space.
- Tell students to read **pages 62–65** to themselves to find the answer to the question: "What tool did Galileo use to observe the night sky that we still use today, and how does his tool compare to the ones we use now?"
- When students have finished reading, restate the question and ask students to answer. (telescope; Galileo's telescope made things appear three times larger, and now our telescopes are more powerful and housed in observatories.)
- Ask, "Why are telescopes housed in observatories?" (They are on top of mountains, far away from cities or lights, which allows astronomers to clearly see the stars and planets.)
- Direct students' attention to the image and caption on **page 65**.

Pages 66–69

- Follow established procedures to preview the Vocabulary Cards for *launch*, *Hubble Telescope*, *NASA*, and *astronaut*. Note for students that *launched* is used in this chapter.
- Point students' attention to the image on **page 67**. Read the caption together as a class or have a student read it to the class.
- Say to students, "I wonder what the Hubble Telescope is and why it orbits the Earth. Let's read **page 66** to find out."
- When students have finished reading, restate the question and ask students to answer. (It is a telescope that was launched into space to help scientists study outer space. It has sent back thousands of photos, which have led to new discoveries about the universe.)
- Point students' attention to the images on **page 69**.
- Ask students to read **page 68** to themselves to find the answer to the question: "Why were apes launched into space?"
- When students have finished reading, restate the question and ask students to answer. (At one time, scientists thought it was too dangerous for humans to travel into space and did not know what effects space travel might have on humans, so apes were sent since

they are similar to humans. This allowed scientists to study how space travel might affect humans.)

Pages 70–73

- Follow established procedures to preview the Vocabulary Cards for *manned*, *Apollo 11*, *gravity*, and *attraction*.
- Have students read **pages 70–73** to themselves to find the answer to the question: “What did the first manned flights do when they were launched into space?”
- When students have finished reading, restate the question and ask students to answer. (They orbited the Earth but did not stop or land anywhere.)
- Point students’ attention to the images and captions on **pages 71 and 73**.
- Ask, “Why is Earth’s gravity a challenge for rocket ships like Apollo 11?” (In order to fly into outer space, a rocket ship has to push up with a lot of force so that gravity cannot pull it back down.)

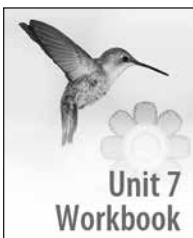
Wrap-Up

- Have students complete Worksheet 8.1 independently.

Morphology

25 minutes

Review Suffixes *-ous*, *-ive*, *-ly*, *-ful*, and *-less*



Worksheets 8.2, 8.3

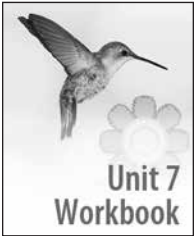
For additional practice, see Pausing Point Worksheet PP13.

- Tell students that this week, they will review some of the suffixes they have learned, specifically *-ous*, *-ive*, *-ly*, *-ful*, and *-less*.
- Write the word *danger* on the board.
- Ask students to read the word. Discuss its meaning and ask students to name the part of speech. (the chance that something bad will happen; noun)
- Add the suffix *-ous* to *danger* and have students read the new word.
- Ask students what *dangerous* means and what part of speech it is. (full of the chance that something bad will happen; adjective)
- Ask students what adjectives are. (words that describe nouns)
- Follow the same procedures for the following words: *poison*, *mystery*.

- Now, remind students that the suffix *-ly* can be added to some words with the suffix *-ous*.
- Add the suffix *-ly* to *mysterious* and have students read the new word.
- Ask students what *mysteriously* means and what part of speech it is. (in a mysterious way; adverb)
- Ask students what adverbs describe. (verbs)
- Follow the same procedures for the following words: *humorous*, *furious*.
- Write the word *act* on the board.
- Ask students to read the word. Discuss its meaning and ask students to name the part of speech. (to do or behave; verb)
- Add the suffix *-ive* to *act* and have students read the new word.
- Ask students what *active* means and what part of speech it is. (relating to doing or behaving; adjective)
- Follow the same procedures for the following words: *create*, *cooperate*.
- Remind students that the suffix *-ly* can also be added to some words with the suffix *-ive*.
- Add the suffix *-ly* to *cooperatively* and have students read the new word.
- Ask students what *cooperatively* means and what part of speech it is. (in a cooperative way; adverb)
- Follow the same procedures for the following words: *appreciative*, *decorative*.
- Write the word *care* on the board.
- Ask students to read the word. Discuss its meaning and ask students to name the part of speech. (effort to do something correctly or safely; noun)
- Add the suffix *-ful* to *care* and have students read the new word.
- Ask students what *careful* means and what part of speech it is. (full of effort to do something correctly or safely; adjective)
- Now, remove the suffix *-ful* from *care* and add the suffix *-less*.

- Ask students to read the new word, discuss its meaning, and name the part of speech. (lacking effort to do something correctly or safely; adjective)
- Follow the same procedures for the following words: *hope*, *power*.
- Ask students to turn to Worksheets 8.2 and 8.3.
- Divide students into partners.
- Remind students that they played Frisky Beavers in second grade.
- Explain the rules needed to play Frisky Beavers:
 1. Roll the die.
 2. Move the number of spaces on the die.
 3. Read the word on the space.
 4. Use the word in a sentence. (If students don't know the meaning of the word, advise them to look it up in one of the classroom dictionaries.)
 5. Write the word on the chart.
 6. Write the part of speech for the word in the sentence they created on the chart.
- Also, remind students of good sportsmanship rules:
 - Take turns.
 - Speak politely.
 - Be a good winner or loser.
 - Give your classmate help if needed.

10 Review Conjunctions



Worksheet 8.4

- Draw students' attention to the conjunctions poster and reread it with them.

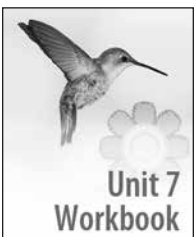
Conjunctions

Conjunctions are words that connect other words or groups of words.

- The **conjunction *and*** connects words or groups of words. It means plus, along with, or also.
- The **conjunction *but*** is used to connect groups of words. It signals that “something different,” such as a different idea, will come after *but*.
- The **conjunction *because*** is used to mean “for this reason” and signals the answer to a “why” question. It signals the cause of something.
- The **conjunction *so*** means “then this happened” and signals the effect in a cause and effect sentence.
- The **conjunction *or*** signals a choice, possibility, or alternative.
- Have students turn to Worksheet 8.4 and complete it independently. You may wish to use this as an informal assessment.

Spelling

Blank Busters



Worksheet 8.5

- Tell students that they will practice writing their spelling words for the week.
- Tell students to turn to Worksheet 8.5. Note for students that some sentences have two blanks.
- Point out to students that the spelling words are listed in the box on the worksheet and on the board. Students may also have to add an appropriate suffix to have the sentence make sense: *-s*, *-ed*, *-ly*, or *-ing*.

For additional practice, see worksheets in Section II-E of the *Assesment and Remediation Guide*.

- Ask students to read the statement in **number 1** silently and fill in the blanks. When students have completed **number 1**, call on one student to read **number 1** aloud with the spelling word in the blanks
- Ask students if anyone had a different answer. Discuss the correct answer to be sure students understand why it is correct.
- Discuss the proper spelling of the word in the blank, referencing the table of this week’s spelling words. Have students compare their spelling with the spelling in the table.
- Have students move to **number 2** and fill in the blanks on their own.
- Follow the previous steps to discuss the correct answers for the remaining items on the worksheet.
- Remind students that on the spelling assessment, they will have to write the spelling words and the Challenge Words. Students are encouraged to try spelling the Content Word but if they try and don’t get it right, they will not be penalized.

Take-Home Material

“Exploring Space”

- Have students take home Worksheet 8.6 to read to a family member.

Lesson 9

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “A Walk on the Moon,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “A Walk on the Moon” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to walking on the moon in “A Walk on the Moon” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “A Walk on the Moon” (RI.3.7)
- ✓ Decode words with common Latin suffixes *-ous, -ive, -ly, -ful, and -less* (RF.3.3b)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “A Walk on the Moon” with purpose and understanding (RF.3.4a)
- ✓ Use conjunctions (e.g., *and*) to connect ideas within categories of information (W.3.2c)
- ✓ Make predictions prior to reading “A Walk on the Moon” and then compare the actual outcomes to predictions (SL.3.1a)
- ✓ Use coordinating and subordinating conjunctions (e.g., *and*) (L.3.1h)
- ✓ Use commas and quotation marks in dialogue (L.3.2c)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’ (L.3.2f)
- ✓ Determine the meaning of the new word formed when *-ous, -ive, -ly, -ful, or -less* is added to a known word (L.3.4b)
- ✓ Identify real-life connections between words and their use (e.g., people who are *mysterious, active*) (L.3.5b)

| <i>At a Glance</i> | Exercise | Materials | Minutes |
|---------------------------|---|--|----------------|
| Reading Time | Small Group Partner Reading: “A Walk on the Moon” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 9.1 | 25 |
| Grammar | Review Quotation Marks and Conjunctions | board or chart paper; Worksheets 9.2, 10.4 | 25 |
| Morphology | Practice Suffixes –ous, –ive, –ly, –ful, and –less | Worksheet 9.3 | 15 |
| Spelling | Word Sort | Worksheet 9.4 | 15 |
| Take-Home Material | “A Walk on the Moon” | Worksheet 9.5 | * |

Advance Preparation

Write these sentences on the board or chart paper to be used in the Grammar lesson:

Bob said, “He eats bananas every day.”
 “He eats bananas every day,” said Bob.
 “That building is on fire!” exclaimed Mrs. White.
 “Should we call the fire department?” she asked.
 Mrs. White exclaimed, “That building is on fire!”
 She asked, “Should we call the fire department?”

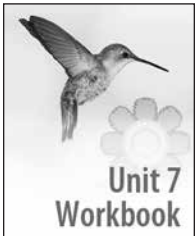
Make sure the quotation marks poster is on display.

Quotation Marks

Quotation Marks are punctuation marks used to show exactly what a person says or has said.



Chapter 9



Worksheet 9.1

Small Group Partner Reading: “A Walk on the Moon”

Introducing the Chapter

- Tell students that today, they will partner read the chapter called “A Walk on the Moon.”
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Ask students to make predictions about what they think astronauts found on the moon and/or what it was like.

Note to Teacher

Assign partners and have students turn to Worksheet 9.1 to complete as they take turns reading the chapter.

Previewing the Vocabulary

- There is no vocabulary to preview for this chapter.

Guided Reading Supports and Purpose for Reading

Note: The Guided Reading Supports are provided for use at your discretion with students who need more support.

Pages 74–77

- Read the title of the chapter together as a group, “A Walk on the Moon.”
- Remind students about the chapter they previously read called “The Moon” and ask students to predict what they think the experience of walking on the moon might be like.
- Point students’ attention to the image on **page 75** and read the caption aloud as a group.
- Tell students to read **pages 74–77** to themselves to find the answer to the question: “What were the astronauts’ jobs on Apollo 11 and what did two of them have to do to get their landing craft on the moon?”
- When students have finished reading, restate the question and ask students to answer. (One was in charge of flying the spaceship. The other two were in charge of getting into the landing craft and landing it on the moon. They had to find a good, flat spot to land and set it down gently.)

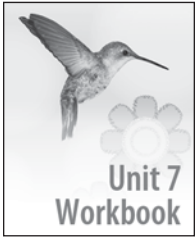
- Ask students, “Why did the people who were watching on TV go wild when Armstrong said, ‘The Eagle has landed!’?” (This was the first time humans had landed on the moon.)
- Direct students’ attention to the image and caption on **page 77**.

Pages 78–81

- Point students’ attention to the image on **page 79**. Read the caption together as a group or have a student read it to the group.
- Say, “I wonder why the astronaut has to wear that space suit. Let’s read **page 78** to find out.”
- When students have finished reading, restate the question and ask students to answer. (There is no air for breathing on the moon and it is very cold, so astronauts had to put on space suits, wear masks, and carry tanks full of air for breathing.)
- Point students’ attention to the images on **page 81**.
- Ask students to read **page 80** to themselves to find the answer to the question: “What did Armstrong and Aldrin do on the moon?”
- When students have finished reading, restate the question and ask students to answer (They moved around easier than on Earth. They used different tools to explore the moon. They dug up samples of moon rocks to take back to Earth.)

Wrap-Up

- Ask students to comment on the predictions they made about the chapter before they read it.
- Review answers to Worksheet 9.1 with students.



Worksheets 9.2, 10.4

For additional practice, see
Pausing Point Worksheet
PP9.

Review Quotation Marks and Conjunctions

- Draw students' attention to the quotation marks poster you displayed in advance.

Quotation Marks

Quotation Marks are punctuation marks used to show exactly what person says or has said.

- Have a student read it aloud to the class.
- Read and review the first two sentences you wrote on the board in advance, pointing out quotation marks, commas, capital letters, and end punctuation.

Bob said, "He eats bananas every day."

"He eats bananas every day," said Bob.

- Remind students that the comma separates the spoken sentence from the name of the speaker. If the speaker's name is first, it is followed by a comma, which separates it from the spoken sentence. If the speaker's name comes after what is said, a comma is needed after what is said aloud, just before the quotation marks.
- Read and review the next two sentences you wrote on the board in advance.

"That building is on fire!" exclaimed Mrs. White.

"Should we call the fire department?" she asked.

- Tell students that if the spoken sentence ends with a question mark or exclamation point, the spoken sentence or question always ends with that punctuation mark instead of a comma.
- Remind students that if you turn those sentences around and name the speaker first and the spoken sentence second, the sentence ends with the question mark or exclamation point, as follows:

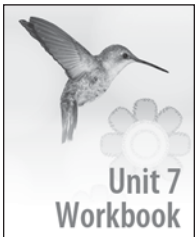
Mrs. White exclaimed, “That building is on fire!”
She asked, “Should we call the fire department?”

- Turn to Worksheet 9.2, review the directions with students, and have them complete it independently.
- If there is time, have students tear out Worksheet 10.4 and cut the cards apart for Match Me if You Can, which they will play during Lesson 10. Have students carefully tuck the cards inside their workbook for safekeeping.

Morphology

15 minutes

Practice Suffixes *-ous, -ive, -ly, -ful, and -less*



Worksheet 9.3

- Review the meaning of the following suffixes:
 - *-ous* means “full of”
 - *-ive* means “relating to”
 - *-ly* means “in a _____ way”
 - *-ful* means “full of”
 - *-less* means “lacking”
- Tell students you will read a sentence that uses a word with one of the suffixes they are reviewing. Students must determine if the sentence demonstrates an example of the correct meaning of the word. If the sentence demonstrates an example of the correct meaning of the word, students should say, “Yes.” If not, students should say, “No.”
- Tell students the target word is *careful* and then read the following sentence aloud:

I rushed through my spelling assessment and made a careful mistake on one word.

- Ask students, “Does this sentence demonstrate an example of the correct meaning of the word *careful*?” (No)

- After students have correctly answered, ask, “Why not?” (To be careful means you are full of effort to do something correctly and in this sentence, the effort to do something correctly is not there.)
- Follow the same procedures for the following sentences:

The clicking sound coming from the front of the car mysteriously disappeared after she turned the corner. (Yes)

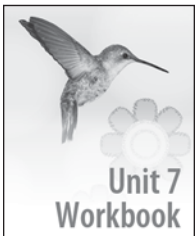
Grandpa leads an active life, never leaving his house and not getting outside to get exercise and fresh air. (No; To be active means you are doing something in a certain way and never leaving the house is not doing something.)

- Have students complete Worksheet 9.3 independently.

Spelling

15 minutes

Word Sort



Worksheet 9.4

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

- Tell students they will sort words using /n/ spelled ‘n’, ‘nn’, ‘kn’, and ‘gn’.
- Have students turn to Worksheet 9.4.
- Ask students to identify the vowel patterns. (‘n’ > /n/, ‘nn’ > /n/, ‘gn’ > /n/, and ‘kn’ > /n/)
- Have students independently read the words in the box below the headers and circle the consonants that have the /n/ sound.
- Then, have students independently write the words that match the various spellings below the appropriate headers.

Note: You may wish to circulate around the room offering assistance where needed.

Take-Home Material

“A Walk on the Moon”

- Have students take home Worksheet 9.5 to read to a family member.

Lesson 10

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “What’s it Like in Space?,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “What’s it Like in Space?” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to space in “What’s it Like in Space?” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “What’s it Like in Space?” (RI.3.7)
- ✓ Independently read “What’s it Like in Space?” with purpose and understanding (RF.3.4a)
- ✓ Prior to independently reading “What’s it Like in Space?,” identify what they know and have learned related to space (SL.3.1a)
- ✓ Use commas and quotation marks in dialogue (L.3.2c)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)
- ✓ Use a beginning dictionary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------|---|--|---------|
| Spelling | Spelling Assessment | Worksheet 10.1; optional pens | 25 |
| Reading Time | Whole Group Silent: “What’s it Like in Space?” | <i>What’s in Our Universe?</i> ; Workbook 10.2 | 25 |
| Grammar | Match Me if You Can | Worksheets 10.3, 10.4; dice; game markers | 15 |
| Spelling | Practice Dictionary Skills | Worksheet 10.5 | 15 |

Advance Preparation

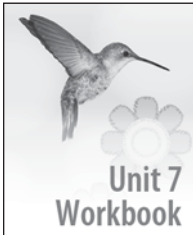
Make sure to erase the spelling table from the board and/or turn the table over so that students cannot refer to it during the assessment.

Have dice (one die is needed for each pair of students) and game markers ready for Match Me if You Can to be played during the Grammar lesson. Markers can be beans, buttons, or cut squares of construction paper. If students did not previously cut the game cards apart during Lesson 9 in preparation for playing the game during this lesson, have them cut them apart prior to play.

Spelling

25 minutes

10 Spelling Assessment



Worksheet 10.1

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

- Have students turn to Worksheet 10.1 for the spelling assessment.
- If you would like for students to have pens, this is the time to pass them out.
- Tell students that for this assessment, they will write their words under the header to which they belong. For example, if you call out the word *net*, they would write that word under the header 'n' > /n/.
- Tell students that should a spelling word fit under more than one header, they should only write the word under one.
- Tell students that they may not have to use all the lines under each header.
- Using the chart below, call out the word using the following format: say the word, use it in a sentence, and say the word once more.

- | | |
|---------------|-----------------------------------|
| 1. nearby | 12. manned |
| 2. gnat | 13. flannel |
| 3. recently | 14. campaign |
| 4. knotted | 15. channel |
| 5. knowledge | 16. annoy |
| 6. knighted | 17. knuckle |
| 7. understand | 18. Challenge Word: very |
| 8. design | 19. Challenge Word: vary |
| 9. knobby | 20. Challenge Word: enough |
| 10. gnarly | Content Word: astronomer |
| 11. skinny | |

- After you have called out all of the words including the Challenge Words and the Content Word, go back through the list slowly, reading each word just once more.
- Ask students to write the following sentences as you dictate them:

1. Nate needed knowledge about designing so he went to the library.
2. Do you understand what ‘enough is enough’ means?

- After students have finished, collect pens, if used.
- Follow your established procedures to correct the spelling words and the dictated sentences.

Note to Teacher

At a later time today, you may find it helpful to use the template provided at the end of this lesson to analyze students’ mistakes. This will help you to understand any patterns that are beginning to develop, or that are persistent among individual students.

Reading Time

25 minutes

Whole Group Silent: “What’s it Like in Space?”

Introducing the Chapter

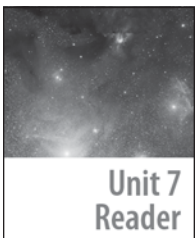
- Tell students that today they will be reading “What’s it Like in Space?”
- Have students share facts from previous chapters about space.
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Tell students that today, they will read the chapter to themselves independently.

Previewing the Vocabulary

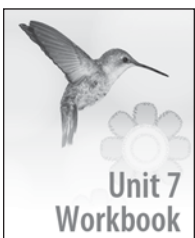
- There is no vocabulary to preview for this chapter.

Guided Reading Supports and Purpose for Reading

The Guided Reading Supports are provided for use at your discretion with students who need more support.



Chapter 10



Worksheet 10.2

Pages 82–87

- Read the title of the chapter together as a class, “What’s it Like in Space?”
- Tell students to read **pages 82–87** to themselves to find the answer to the question: “Why were astronauts on the moon able to jump higher than children on Earth?”
- When students have finished reading, restate the question and ask students to answer. (The force of gravity on the moon is not as great as it is on Earth, so astronauts on the moon can jump higher than children on Earth.)
- Ask, “Why is gravity on the moon not as strong as it is on Earth?” (The moon is not as big as Earth.)
- Direct students’ attention to the images and captions on **pages 83, 85, and 87** and ask, “Why are these astronauts able to do flips and cartwheels in space?” (They are free of the effects of gravity up in space.)

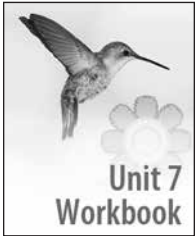
Pages 88–91

- Have students read **pages 88–91** to themselves to find the answer to the question: “What is another difference in space besides less gravity?”
- When students have finished reading, restate the question and ask students to answer. (Astronauts need to carry air tanks for breathing because there is no air or oxygen in space. There also is no sound in space and it is very cold.)
- Direct students’ attention to the images and captions on **pages 89 and 91**.

Wrap-Up

- Have students complete Worksheet 10.2 independently.

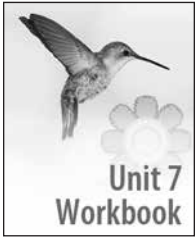
Match Me if You Can



Worksheets 10.3, 10.4

- Tell students they will once again play Match Me if You Can.
- Have students pair up and have one student tear out Worksheet 10.3 (game board). Pairs of students should combine the game cards (Worksheet 10.4) they cut apart during Lesson 9 and place them face down near the game board.
- Have students follow these rules to play:
 1. Begin at 'Start'.
 2. Draw a card, read the sentence aloud, and say whether the punctuation (quotation marks, commas, end punctuation) used in the sentence is correct or incorrect.
 3. If your sentence is incorrect, tell the others playing the game what is incorrect about it and how you would correct it.
 4. Roll a die and count each direction to see on which square you wish to land to match your card to the word *correct* or *incorrect* or to a positive action.
 5. If moving in one direction gives you a match, move there, and place your card in front of you on the table.
 6. If moving in another direction allows you to take your opponent's card, you may choose to move there, take the card, and take another turn using your opponent's card.
 7. If neither gives you a match or a positive action, move either way, turn your card face down, and place it on the bottom of the pile. Do not keep it. Your turn has ended.
 8. Continue in this fashion until all cards are gone.
 9. At the end of play, the player with the most cards wins.

Practice Dictionary Skills



Worksheet 10.5

- Remind students that in a previous lesson, they learned about many different parts of a dictionary.
- Review the various components of the dictionary such as entry words, numbers of word meanings, and parts of speech.
- Ask students to complete Worksheet 10.5 independently or as a teacher-guided activity.

Spelling Analysis Chart

| Name | |
|------|-----------------------------------|
| 1 | 1. nearby |
| 2 | 2. gnat |
| 3 | 3. recently |
| 4 | 4. knotted |
| 5 | 5. knowledge |
| 6 | 6. knighted |
| 7 | 7. understand |
| 8 | 8. design |
| 9 | 9. knobby |
| 10 | 10. gnarly |
| 11 | 11. skinny |
| 12 | 12. manned |
| 13 | 13. flannel |
| 14 | 14. campaign |
| 15 | 15. channel |
| 16 | 16. annoy |
| 17 | 17. knuckle |
| 18 | 18. Challenge Word: very |
| 19 | 19. Challenge Word: vary |
| 20 | 20. Challenge Word: enough |
| | Content Word: astronomer |

Spelling Analysis Directions

Unit 7, Lesson 10

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

- Students are likely to make the following errors:
 - For 'n', students may write 'nn', 'kn', or 'gn'
 - For 'nn', students may write 'n', 'kn', or 'gn'
 - For 'kn', students may write 'n', 'nn', or 'gn'
 - For 'gn', students may write 'n', 'nn', or 'kn'
- While the above student-error scenarios may occur, you should be aware that misspellings may be due to many other factors. You may find it helpful to record the actual spelling errors that the student makes in the analysis chart. For example:
 - Is the student consistently making errors on specific vowels? Which ones?
 - Is the student consistently making errors at the end of the words?
 - Is the student consistently making errors on particular beginning consonants?
- Did the student write words for each feature correctly?
- Also, examine the dictated sentences for errors in capitalization and punctuation.

Lesson 11

Spelling

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “The Space Shuttle,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “The Space Shuttle” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to the space shuttle in “The Space Shuttle” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “The Space Shuttle” (RI.3.7)
- ✓ Compare and contrast the space shuttle and the Apollo 11 spacecraft (RI.3.9)
- ✓ Independently read grade-appropriate irregularly spelled words (RF.3.3d)
- ✓ Independently read “The Space Shuttle” with purpose and understanding (RF.3.4a)
- ✓ Use spelling patterns and generalizations (e.g., word families, position-based spelling) in writing words with /ae/, /k/, /s/, /j/, and /n/ (L.3.2f)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|---|---------|
| Reading Time | Whole Group: “The Space Shuttle” | <i>What’s in Our Universe?</i> ; Vocabulary Cards; Worksheet 11.1 | 25 |
| Spelling | Introduce Spelling Words | board; Worksheet 11.2 | 25 |
| Take-Home Material | Family Letter; “What’s it Like in Space?”; “The Space Shuttle” | Worksheets 11.2–11.4 | * |

Advance Preparation

You may wish to draw the spelling table on the board or chart paper before you begin this lesson.

| /ae/ | /k/ | /s/ | /j/ | /n/ |
|------|-----|-----|-----|-----|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Reading Time

25 minutes

Whole Group: "The Space Shuttle"

Introducing the Chapter

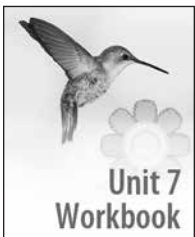
- Tell students that today's chapter is entitled "The Space Shuttle."
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.



Chapter 11



Worksheet 11.1

Vocabulary for “The Space Shuttle”

1. **space shuttle**—a manned spacecraft used for exploration (92)
2. **exploration**—the study of unknown places or things (92)
3. **reusable**—when something can be used more than once (92)
4. **shuttle**—to go back and forth from one place to the next (**shuttled**) (94)
5. **booster rocket**—one of two parts of a space shuttle that helps launch it into space by overcoming gravity (**booster rockets**) (94)
6. **research**—the kind of equipment used to collect information through experiments (96)
7. **especially**—very much; particularly (96)
8. **space station**—a manned satellite that is made to be in outer space for a long period of time (96)
9. **unmanned**—not carrying people (96)
10. **satellite**—a natural or man-made object that orbits a planet or smaller object (**satellites**) (96)

Guided Reading Supports and Purpose for Reading

Pages 92–95

- Read the title of the chapter together as a class, “The Space Shuttle.”
- Follow established procedures to display the image for this chapter and preview the Vocabulary Cards for *space shuttle*, *exploration*, *reusable*, *shuttle*, and *booster rocket*. Note for students that *shuttled* and *booster rockets* are used in this chapter.
- Point students’ attention to the image on **page 93** and read the caption aloud as a class.
- Ask students to share what they know about the space shuttle.
- Tell students to read **pages 92–95** to themselves to find the answer to the question: “Why is the space shuttle reusable?”
- When students have finished reading, restate the question and ask students to answer. (When the space shuttle returned to Earth, the pilot was able to land the spacecraft on a runway like an airplane. In that way, it was able to be used again.)

- Ask, “What are booster rockets and why are they a necessary part of the space shuttle?” (They boost the space shuttle to get off the ground by helping to overcome Earth’s gravity. Once up in space, the booster rockets are dropped because they are no longer needed.)
- Direct students’ attention to the image and caption on **page 95**.

Pages 96–97

- Follow established procedures to preview the Vocabulary Cards for *research*, *especially*, *space station*, *unmanned*, and *satellite*. Note for students that *satellites* is used in this chapter.
- Point students’ attention to the image on **page 97**. Read the caption together as a class or have a student read it to the class.
- Have students read **pages 96–97** to themselves to find the answer to the question: “What was the purpose of the space shuttle?”
- When students have finished reading, restate the question and ask students to answer. (It carried astronauts into space on many missions, brought research equipment and tools into space, and helped build a space station.)
- Ask, “When was the last space shuttle mission?” (2011)
- Say, “List NASA’s plans for exploring space in the future.” (launching unmanned probes and satellites, learning more about the moon’s gravity, exploring asteroids)

Wrap-Up

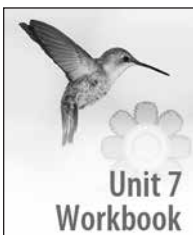
- Have students complete Worksheet 11.1 independently or as a teacher-guided activity.

Spelling

25 minutes

Introduce Spelling Words

- Tell students that this week, they will review the spellings of /ae/, /k/, /s/, /j/, and /n/.
- As you introduce each of the spelling words, write it on the board, pronouncing each word as you write it.



Worksheet 11.2

- | | |
|-----------------|--------------------------------------|
| 1. yesterday | 12. design |
| 2. quickly | 13. digest |
| 3. jewel | 14. kindness |
| 4. recently | 15. character |
| 5. subject | 16. budget |
| 6. awaited | 17. accomplish |
| 7. fascinate | 18. listen |
| 8. annoy | 19. Challenge Word: different |
| 9. knowledge | 20. Challenge Word: thought |
| 10. refrigerate | Content Word: atmosphere |
| 11. gymnasium | |

For additional practice, see worksheets in Section II-E of the *Assessment and Remediation Guide*.

- Go back through the list of words, having students read the words and tell you what letters to circle for the sounds of /ae/, /k/, /s/, /j/, and /n/. Some of the words have more than one of the sounds.

- | | |
|----------------------|--------------------------------------|
| 1. yesterday | 12. design |
| 2. quickly | 13. digest |
| 3. jewel | 14. kindness |
| 4. recently | 15. character |
| 5. subject | 16. budget |
| 6. awaited | 17. accomplish |
| 7. fascinate | 18. listen |
| 8. annoy | 19. Challenge Word: different |
| 9. knowledge | 20. Challenge Word: thought |
| 10. refrigerate | Content Word: atmosphere |
| 11. gymnasium | |

- Point to the Challenge Words on the board. Explain to students that the Challenge Words, *different* and *thought*, are also part of the spelling list and are words used very often. *Different* does follow the spelling patterns for this week as the ‘n’ is pronounced /n/, while *thought* does not follow the spelling patterns for this week. Use the Challenge Words in sentences as examples for students: “Since you have finished your book, would you like a *different* book to read?” “I *thought* you might like to go with me to the movies.”
- Remind students that this week, they once again have a Content Word. Review with them that the Content Word is a little harder than the other words. (If students try to spell the Content Word on the assessment and do not get it right, they will not be penalized. Simply correct it as you do the other words and applaud their effort. There should not be a penalty for not trying or misspelling the Content Word. The important thing is they tried something that was a stretch for them academically.)
- Tell students that the Content Word, *atmosphere*, does follow the spelling patterns for this week as the ‘s’ is pronounced /s/. *Atmosphere* is a content-related word that is defined as an invisible, protective blanket of air around Earth and other heavenly bodies.
- Now, draw the following table on the board:

| /ae/ | /k/ | /s/ | /j/ | /n/ |
|------|-----|-----|-----|-----|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

- Ask students to refer to the **Individual Code Chart pages 1–3**. Point out that they will be sorting words according to their sounds.
- Review with students the spelling that is most frequently used for each sound. (‘a’ > /ae/; ‘c’ > /k/; ‘s’ > /s/; ‘g’ > /j/; ‘n’ > /n/) Remind students to look at the power bar under the spellings and the order in which the spellings are sequenced to determine frequency.

- Ask students to tell you which words to list under the /ae/ header. Briefly explain the meaning of each word.
- Continue through the columns until all words have been listed under the appropriate header. Some of the words have more than one sound found on the table. Briefly explain the meaning of each word.

| /ae/ | /k/ | /s/ | /j/ | /n/ |
|-------------|------------|------------|-------------|-----------|
| yesterday | quickly | yesterday | jewel | recently |
| awaited | subject | recently | subject | fascinate |
| fascinate | kindness | subject | knowledge | annoy |
| refrigerate | character | fascinate | refrigerate | knowledge |
| gymnasium | accomplish | digest | gymnasium | gymnasium |
| | | kindness | digest | design |
| | | listen | budget | kindness |
| | | atmosphere | | listen |
| | | | | different |

Practice the words as follows during the remaining time. Call on a student to read any word on the table. Then, have the student use the word in a meaningful sentence. After the student says the sentence, have him/her ask the class: “Does the sentence make sense?” If the class says, “Yes,” then the student puts a check mark in front of the word and calls on another student to come to the front and take a turn. If the class says, “No,” have the student try again or call on another student to come to the front and use the word in a meaningful sentence. This continues until all of the words are used or time has run out.

- Tell students this table will remain on display until the assessment so that students may refer to it during the week.
- Tell students they will take home Worksheet 11.2 with this week’s spelling words to share with a family member.

Take-Home Material

Family Letter; “What’s it Like in Space?”; “The Space Shuttle”

- Have students take home Worksheet 11.2 to share with a family member and Worksheets 11.3 and 11.4 to read to a family member.

Lesson 12

Grammar

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Ask and answer questions to demonstrate understanding of “The International Space Station,” referring explicitly to the text as the basis for the answers (RI.3.1)
- ✓ Ask and answer questions (e.g., *who, what, where, when, why, how*), orally or in writing, requiring literal recall and understanding of the details of “The International Space Station” by explicitly referring to the text (RI.3.1)
- ✓ Determine the meaning of general academic words and domain-specific words and phrases relevant to the space station in “The International Space Station” (RI.3.4)
- ✓ Describe images, orally or in writing, and how they contribute to what is conveyed by the words in “The International Space Station” (RI.3.7)
- ✓ Independently read “The International Space Station” with purpose and understanding (RF.3.4a)
- ✓ Form and use singular possessive nouns (L.3.2d)
- ✓ Use a glossary to determine or clarify the precise meaning of key words and phrases (L.3.4d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------|---|--|---------|
| Reading Time | Partner Reading: “The International Space Station” | <i>What’s in Our Universe?</i> ; Worksheet 12.1 | 25 |
| Grammar | Introduce Singular Possessive Nouns | board or chart paper; Worksheet 12.2 | 25 |
| Take-Home Material | “The International Space Station” | Worksheet 12.3 | * |

Advance Preparation

Create and display the following possessive nouns poster:

Possessive Nouns

- A **singular possessive noun** shows that one person, place, or thing has or owns something. Form a **singular possessive noun** by adding an apostrophe and ‘s’ to a singular noun. (–’s)

Write the following sentences on the board or chart paper for use during the Grammar lesson:

- (The office of the doctor) is crowded today.
- (The tractor of the farmer) is painted green.
- (The ballet shoes of the dancer) are made of pink silk.
- (The mitt of the catcher) is made of brown leather.
- (The letters from the visitor) made me laugh.

Reading Time

25 minutes

Partner Reading: “The International Space Station”

Introducing the Chapter

- Tell students that today, they will partner read the chapter called “The International Space Station” and complete Worksheet 12.1 as they read.
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Ask students to predict what astronauts do at the space station.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “The International Space Station”

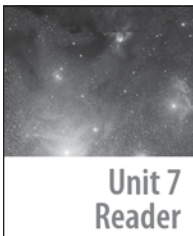
- international**—involving more than one country (98)

Guided Reading Supports and Purpose for Reading

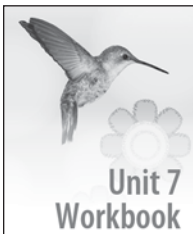
The Guided Reading Supports are provided for use at your discretion with students who need more support.

Pages 98–101

- Read the title of the chapter together as a class, “The International Space Station.”
- Follow established procedures to display the image for this chapter and preview the Vocabulary Card for *international*.



Chapter 12



Worksheet 12.1

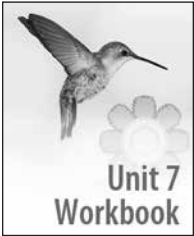
- Point students' attention to the images on **pages 99 and 101** and read the captions aloud as a class.
- Tell students to read **pages 98–101** to themselves to find the answer to the question: “Why do astronauts need to run at least once a day in space?”
- When students have finished reading, restate the question and ask students to answer. (Since astronauts in space don't have the effects of gravity to work against, they do not get much of a workout from drifting around. They have to run at least once a day to stay in good shape.)

Pages 102–105

- Point students' attention to the images on **pages 103 and 105**. Read the captions together as a class or have a student read them to the class.
- Have students read **pages 102–105** to themselves to find the answer to the question: “How is sleeping different in space?”
- When students have finished reading, restate the question and ask students to answer. (Since astronauts don't feel the effects of gravity in space, they can sleep right side up or upside down.)
- Ask, “Why is taking a shower tricky in space?” (Water must be rubbed on and scraped off instead of sprinkled because it would drift away.)
- Ask, “Why would an astronaut have trouble getting used to being on Earth again after months in space?” (Gravity can make their arms and legs feel heavy. It can be hard to stand up and astronauts feel off balance.)

Wrap-Up

- Review answers to Worksheet 12.1 as a class.



Worksheet 12.2

For additional practice, see
Pausing Point Worksheet
PP10.

Introduce Singular Possessive Nouns

- Ask, “What is a noun?” (name of a person, place, or thing)
- Ask, “What is the difference between a common noun and a proper noun?” (A common noun names a general person, place, or thing, such as boy, airport, or book. A proper noun names a specific person, place, or thing, such as Mrs. Brown, Park Elementary School, or the Washington Monument.)
- Ask, “What is different between a common noun and a proper noun in terms of capitalization?” (A common noun is not capitalized while a proper noun is capitalized.)
- Ask, “What is the difference between singular and plural nouns?” (Singular denotes one while plural denotes more than one.)
- Tell students, “One interesting way nouns can be used is to show ownership. Examples are: The book that belongs to a girl is the girl’s book. The desk that belongs to a boy is the boy’s desk. The pencil that belongs to Mrs. Todd is Mrs. Todd’s pencil.”
- Direct students’ attention to the possessive nouns poster you created and displayed in advance and read it with them.

Possessive Nouns

A **singular possessive noun** shows that one person, place, or thing has or owns something. Form a **singular possessive noun** by adding an apostrophe and ‘s’ to a singular noun. (–’s)

- Tell students that the words *girl’s*, *boy’s*, and *Mrs. Todd’s* are called singular possessive nouns.
- Tell students that the word *possessive* means to possess something or own it.
- Tell students that a singular possessive noun shows that one person, place, or thing has or owns something.

- Read aloud to students the following sentences, guiding them to find the possessive nouns:

The cat's whiskers are soft. (*cat's*)

The child's toy is lost. (*child's*)

The dog's bone is yucky. (*dog's*)

The school's clocks are all broken. (*school's*)

Mr. Lincoln's hat is black. (*Mr. Lincoln's*)

Joe's cupcakes are my favorite! (*Joe's*)

The Washington Monument's stairs are steep and hard to climb. (*Washington Monument's*)

- Ask students to justify their answers. (All possessive nouns show ownership.)
- Tell students that in these examples, the word that follows the singular possessive noun is what that person, place, or thing has or owns. Examples are: The cat's whiskers are soft. (The cat owns the whiskers. The whiskers belong to the cat.) The child's toy is lost. (The child owns the toy. The toy belongs to the child.)
- Reread the remaining five sentences from earlier. Ask students to find both the possessive noun and what the possessive noun has or owns.

The dog's bone is yucky. (*dog's*; The dog owns the bone. The bone belongs to the dog.)

The school's clocks are all broken. (*school's*; The school owns the clocks. The clocks belong to the school.)

Mr. Lincoln's hat is black. (*Mr. Lincoln's*; Mr. Lincoln owns the hat. The hat belongs to Mr. Lincoln.)

Joe's cupcakes are my favorite! (*Joe's*; Joe owns the cupcakes. The cupcakes belong to Joe.)

The Washington Monument's stairs are steep and hard to climb. (*Washington Monument's*; The Washington Monument owns the stairs. The stairs belong to the Washington Monument.)

- Direct students' attention to the sentences you placed on the board or chart paper in advance.
- Read the first sentence to students, "(The office of the doctor) is crowded today."
- Ask, "How can we change the words in the parentheses (*The office of the doctor*) to a singular possessive noun?" (Students should answer *The doctors office* but will likely not include the apostrophe.)
- Ask students to support their answers. Ask why the word *doctor* is placed before the word *office*. (The possessive noun is placed before the word that tells what is possessed or owned.)
- Write *The doctors office* above (*The office of the doctor*).
- Tell students that a way to show that a noun is singular possessive is to add an apostrophe before the 's'.
- Note for students that the word *doctor* is singular.
- Write the apostrophe in the word *doctor's* and direct students' attention to it.
- Tell students that to change a singular noun to a singular possessive noun, you add an apostrophe and 's'. Examples could be: *boy* becomes *boy's* and *Mrs. White* becomes *Mrs. White's*.
- Read the second sentence to students, "(The tractor of the farmer) is painted green."
- Ask, "How can we change the words in the parentheses (*The tractor of the farmer*) to a singular possessive noun?" (Students should answer *The farmer's tractor*.)
- Write *The farmer's tractor* above (*The tractor of the farmer*).
- Point out the apostrophe before the 's'.
- Guide students to change the remaining words in parentheses to singular possessive nouns, noting the apostrophe and the -s.

(The ballet shoes of the dancer) are made of pink silk. The *dancer's* ballet shoes are made of pink silk.

(The mitt of the catcher) is made of brown leather. The *catcher's* mitt is made of brown leather.

(The letters from the visitor) made me laugh. The *visitor's* letters made me laugh.

- Have students turn to Worksheet 12.2 and complete it as a teacher-guided activity.

Take-Home Material

"The International Space Station"

- Have students take home Worksheet 12.3 to read to a family member.

Lesson 13

Unit
Assessment

| <i>At a Glance</i> | Exercise | Materials | Minutes |
|---------------------------------------|----------------------------------|----------------|---------|
| Assessment | Student Skills Assessment | Worksheet 13.1 | 50 |
| Optional Assessment of Fluency | "The Hoba Meteorite" | Worksheet 13.2 | * |

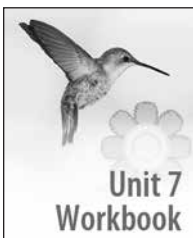
Note to Teacher

Students will complete an assessment by reading three selections during one sitting and answering comprehension, grammar, morphology, and dictionary skills questions that follow each selection. Students will not read out of the Reader but rather from Worksheet 13.1, where the selections have been printed.

Assessment

50 minutes

10 Student Skills Assessment



Worksheet 13.1

- Have students tear out Worksheet 13.1.
- Tell students they will read three selections printed on Worksheet 13.1 and answer comprehension, morphology, grammar, and dictionary skills questions that follow each selection.
- Tell students that should they feel tired, it's a good idea to take a short, personal break. Explain to students that they need to respect the others in the classroom and stay seated, while quietly looking up to the ceiling, stretching their shoulders, and taking a deep breath or two.
- Tell students they should go right on to the second selection once they have finished the first and right on to the third selection once they have finished the second.
- Encourage students to do their best.
- Once students finish all three selections, encourage them to review their papers, rereading and looking over their answers carefully.

- Again, explain the necessity of respecting that not all classmates will finish at the same time, and, if they finish and have checked their papers, they should remain quiet and allow others to finish.

Note to Teacher

When time permits, score these assessments using the guidelines at the end of this lesson to evaluate each student's mastery of the skills taught in this unit.

If additional practice is needed to remediate skills students have not mastered, materials are available in the Pausing Point.

Unit Assessment Analysis Chart

| Question Number | Skill | Benchmarks (number correct out of number given) |
|-----------------|-------------------------|---|
| 4 | Author's Purpose | 1 of 1 |
| 20 | Dictionary Skills | 2 of 2 |
| 28 | Dictionary Skills | |
| 9 | Grammar | 5 of 6 |
| 10 | Grammar | |
| 17 | Grammar | |
| 18 | Grammar | |
| 27 | Grammar | |
| 29 | Grammar | |
| 2 | Inference | |
| 6 | Inference | |
| 16 | Inference | |
| 24 | Inference | |
| 3 | Literal | 6 of 7 |
| 5 | Literal | |
| 7 | Literal | |
| 13 | Literal | |
| 14 | Literal | |
| 22 | Literal | |
| 26 | Literal | |
| 15 | Main Idea | 1 of 1 |
| 8 | Morphology | 4 of 4 |
| 11 | Morphology | |
| 19 | Morphology | |
| 30 | Morphology | |
| 25 | Sequencing | 1 of 1 |
| 21 | Setting | 1 of 1 |
| 1 | Words in Context | 3 of 3 |
| 12 | Words in Context | |
| 23 | Words in Context | |
| | Overall Bench- mark 80% | |

Scoring Guidelines

After you have entered all student scores into the Unit 7 Assessment Analysis Chart, use the following to assist you in determining students who may need additional instruction.

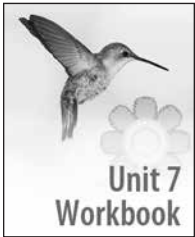
Write the names of students who did not meet the Benchmark for each sub-assessment on the lines.

| | |
|---|--------------------------------------|
| Author's Purpose (#4) | Dictionary Skills (#20, 28) |
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| Grammar (#9, 10, 17, 18, 27, 29) | Inference (#2, 6, 16, 24) |
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| Literal (#3, 5, 7, 13, 14, 22, 26) | Main Idea (#15) |
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| Morphology (#8, 11, 19, 30) | Sequencing (#25) |
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| Setting (#21) | Words in Context (#1, 12, 23) |
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

Optional Assessment of Fluency

You may wish to assess students' fluency in reading using any of the supplemental chapters that they have not yet read. Recording and Scoring Sheets have been specifically included for "The Hoba Meteorite."

10 Instructions for Student Fluency Assessment



Worksheet 13.2

- Turn to the text copy of "The Hoba Meteorite" at the end of this lesson. This is the text copy students will read aloud.
- Ask the student to remove Worksheet 13.2 from his/her workbook. You will use this worksheet to mark as a running record as you listen to the student read orally.
- Tell the student that you are going to ask him or her to read the selection aloud. Explain that you are going to keep a record of the amount of time it takes him or her to read the selection. Please also explain to the student that he/she should not rush but rather read at his/her own regular pace.
- Begin timing when the student reads the first word of the selection. If you are using a watch, write the exact Start Time, in minutes and seconds, on your record page. If you are using a stopwatch, you do not need to write down the start time since the stopwatch will calculate Elapsed Time. As the student reads the selection, make a running record on the copy with the student's name using the following guidelines:

| | |
|-------------------------------|---|
| Words read correctly | No mark is required. |
| Omissions | Draw a long dash above the word omitted. |
| Insertions | Write a caret (^) at the point where the insertion was made. If you have time, write down the word that was inserted. |
| Words read incorrectly | Write an "X" above the word. |
| Substitutions | Write the substitution above the word. |
| Self-corrected errors | Replace original error mark with an "SC." |
| Teacher-supplied words | Write a "T" above the word (counts as an error). |

- When the student finishes reading the selection, write the exact Finish Time in minutes and seconds on your record sheet. Alternatively, if you are using a stopwatch, simply write down the Elapsed Time in minutes and seconds. In the interest of time, ask students to read only the first three pages of text in either chapter. (Five minutes should be enough time to get a measurement on most students.) If the student does not read to the end, draw a vertical line on the record sheet to indicate how far he or she read. Also write down either the Finish Time or the Elapsed Time. After the student finishes reading orally, you may direct him to finish reading the remainder of the selection silently; you may also assess comprehension by having students answer the following comprehension questions orally.

Oral Comprehension Questions on “The Hoba Meteorite”

1. *Literal* What is a meteorite? (a meteor that has fallen to Earth)
 2. *Literal* Why do meteorites fall toward Earth? (Earth’s gravity pulls them toward it)
 3. *Inferential* What is the difference between a meteor and a meteorite? (A meteor is a rock in space that burns up before it reaches Earth. A meteorite is a rock in space that reaches Earth’s surface.)
 4. *Inferential* What is the difference between a shooting star and a meteor? (none; these are two names for the same thing)
- Repeat this process for additional students. Scoring can be done later, provided you have kept running records and jotted down either the Elapsed Time or the Start Time and the Finish Time.

Guidelines for Calculating W.C.P.M. Scores

If the reading was fairly accurate (< 10 uncorrected errors), you can get a rough (and easy) estimate of a student's W.C.P.M. score simply by noting the time and looking at the chart on Worksheet 13.2.

To calculate a student's exact W.C.P.M. score, use the information you wrote down on the record sheet and follow the steps described below. The steps are also shown in graphic form on Worksheet 13.2. You will probably find it helpful to have a calculator available.

1. First, complete the Words section of Worksheet 13.2.
2. Count Words Read. This is the total number of words that the student read or attempted to read, up to the point where he or she stopped. It includes words that the student read correctly as well as words that the student read incorrectly or skipped over. If the student attempted to read the whole selection, use 337 words total. If the student did not finish the selection, you will need to count the number of words that the student actually attempted to read. Write the count for Words Read in the matching box on Worksheet 13.2.
3. Count the Uncorrected Mistakes noted in your running record. This includes words read incorrectly, omissions, substitutions, and words that you had to supply. Write the total in the box labeled Uncorrected Mistakes on Worksheet 13.2. (A mistake that is corrected by the student is not counted as a mistake; the student is penalized for the time he or she lost making the correction, but not for the initial mistake.)
4. Subtract Uncorrected Mistakes from Words Read to get Words Correct.
5. Next, complete the Time section of the worksheet.
6. Calculate Elapsed Time in minutes and seconds. (If you used a stopwatch, this should already be done for you. Skip to the next step.) If you used a watch and recorded start and stop times, you will need to subtract the Start Time from the Finish Time to calculate the Elapsed Time. Subtract seconds from seconds and then minutes from minutes. Calculate Time in Seconds. Multiply the number of minutes by 60 to convert minutes to seconds, and then add the number of seconds.

7. Next, complete the W.C.P.M. section of the worksheet.
8. Divide Words Correct by Time in Seconds. Then multiply by 60 to get Words Correct Per Minute (W.C.P.M.).

As you evaluate W.C.P.M. scores, here are some factors to consider.

It is normal for students to show a wide range in fluency and in W.C.P.M. scores. However, a major goal for third grade students is to read with sufficient fluency to ensure comprehension and independent reading of school assignments in subsequent grades. Exact fluency targets vary from state to state; the national mean calculated by Hasbrouck and Tindal in 2006 for Winter of Grade 3 is 92 W.C.P.M.

A student's W.C.P.M. score can be compared with the score of other students in the classroom (or grade level) and also with the national fluency norms for Winter of Grade 3 obtained by Hasbrouck and Tindal. Students whose scores are below the 25th percentile (62 W.C.P.M) are experiencing serious problems in reading fluently.

The Hoba Meteorite

A meteorite is a rock from outer space. There are lots of rocks floating around in space. If one of these rocks gets close to Earth, it will be attracted by Earth's gravity. It will begin to move closer to Earth. As the rock gets closer, Earth will exert a stronger and stronger gravitational pull on it. The rock will start moving faster and faster. It will also heat up. Eventually, it will turn into a special kind of fireball known as a meteor.

Many meteors burn up before they reach Earth. A few make it all the way to our planet and smack into the ground. If a meteor reaches Earth, we say it is a meteorite.

Someday you may see a meteor in the night sky. They are hard to see during the day, but at night it is much easier. Some people refer to meteors as "shooting stars." That's not quite the right term. Meteors are more like rocks than stars. But they do look like falling stars when they come zipping through the night sky.

More than 35,000 meteorites have been found on Earth. Some of these are tiny pebbles. Others are large boulders. The Hoba meteorite is the largest meteorite ever discovered on Earth. It weighs more than 60 tons.

The Hoba meteorite is in the African country of Namibia. It has never been moved to a museum. It is still lying where it fell. That's mainly because of its size. It would be very difficult to move.

The Hoba meteorite was discovered in 1920. A farmer was plowing his fields with an ox. He heard a metallic scratching noise. Then, his plow stopped suddenly. The farmer tried to dig around the rock and discovered that it was huge. A scientist came to look at it. He concluded that it was a meteorite.

Scientists think the Hoba meteorite fell to Earth about 80,000 years ago. It is about 84% iron and 16% nickel. Thousands of tourists come to see it each year.

Lesson 14

Grammar

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Form and use plural possessive nouns (L. 3.2d)

| At a Glance | Exercise | Materials | Minutes |
|---------------------|--|--|---------|
| Reading Time | Small Group: Remediation and Enrichment | <i>What's in Our Universe?;</i> <i>More Classic Tales</i> | 25 |
| Grammar | Introduce Plural Possessive Nouns | board or chart paper; Worksheet 14.1 | 25 |

Advance Preparation

Display or refer to the Possessive Nouns poster you created for a previous lesson:

Possessive Nouns

- A **singular possessive noun** shows that one person, place, or thing has or owns something. Form a **singular possessive noun** by adding an apostrophe and 's' to a singular noun. (–'s)

Add the following to it:

- A **plural possessive noun** shows that more than one person, place, or thing has or owns something. To form a **plural possessive noun** from a plural noun that ends with 's' or 'es', add only an apostrophe to the plural noun. (–s')

- Write the following sentences on the board or chart paper for use during the Grammar lesson:

(The offices of the doctors) are crowded today.
(The tractors of the farmers) are painted green.
(The ballet shoes of the dancers) are made of pink silk.
(The mitts of the catchers) are made of brown leather.
(The letters from the boys) made me laugh.

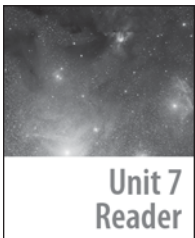
Write the following sentence on the board or chart paper and cover it for use during the Spelling lesson:

Can a child exasperate his or her sibling?

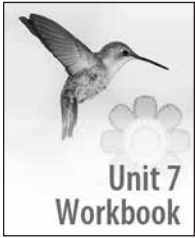
Reading Time

25 minutes

Small Group: Remediation and Enrichment



- While working with students in small groups, please remember to choose activities that fit students' needs at the time.
- ★ **Small Group 1:** Work with these students on any weak areas that were exhibited on the assessment. You may wish to use the *Assessment and Remediation Guide* with these students.
- ★ **Small Group 2:** Ask these students to read additional chapters in *What's In Our Universe?* or chapters in *More Classic Tales*. Alternately, you may ask students to complete any appropriate activities listed in the Pausing Point.



Worksheet 14.1

For additional practice, see Pausing Point Worksheet PP11.

Introduce Plural Possessive Nouns

- Remind students that an interesting way nouns can be used is to show ownership. Examples are: The book that belongs to a girl is the girl's book. The desk that belongs to a boy is the boy's desk. The pencil that belongs to Mrs. Todd is Mrs. Todd's pencil.
- Remind students that the words *girl's*, *boy's*, and *Mrs. Todd's* are called singular possessive nouns.
- Remind students that the word *possessive* means to possess something or own it.
- Ask, "Are all nouns singular?" (No, some are plural.)
- Tell students that plural nouns can be possessive in the same way that singular nouns can be possessive.
- Direct students' attention to the Possessive Nouns poster you added to and displayed earlier and read it with them.

Possessive Nouns

- A **singular possessive noun** shows that one person, place, or thing has or owns something. Form a **singular possessive noun** by adding an apostrophe and 's' to a singular noun. (-'s)
- A **plural possessive noun** shows that more than one person, place, or thing has or owns something. To form a **plural possessive noun** from a plural noun that ends with 's' or 'es', add only an apostrophe to the plural noun. (-s')
- Tell students that a plural possessive noun shows that more than one person, place, or thing owns something.
- Ask students to supply plural nouns that end with 's' or 'es'. (Examples could be: rabbits, houses, sisters, uncles, or foxes.)
- Ask students to think of something that could belong to rabbits.
- Write their suggestions on the board, following the word *rabbits*. For example:
 - rabbits hutches
 - rabbits fur
 - rabbits babies

- Tell students that to show plural possessives, you only need to add the apostrophe because the words already end with 's'. The difference between singular and plural possessive nouns is that the apostrophe comes after the 's' instead of before it.
- Add the apostrophe to the three phrases on the board, noting for students that the apostrophe is after the 's'.
 - rabbits' hutches
 - rabbits' fur
 - rabbits' babies
- Tell students that plural possessive nouns are nouns that name more than one person, place, or thing, and in this case, each phrase on the board names more than one rabbit.
- Read aloud the following sentences to students, guiding them to find the plural possessive nouns:
 - Cats' whiskers are soft. (*cats'*)
 - Dogs' bones are yucky. (*dogs'*)
 - Workers' uniforms get dirty. (*workers'*)
 - Actors' lines are long and hard to remember. (*actors'*)
 - Foxes' noses are pointed. (*foxes'*)
 - Gardeners' yards are beautiful. (*gardeners'*)
 - Students' papers are written carefully. (*students'*)
- Tell students that in the examples, the word that follows the plural possessive noun is what those people, places, or things own. Examples are: The cats' whiskers are soft. (The cats own the whiskers. The whiskers belong to the cats.) Dogs' bones are yucky. (The dogs own the bones. The bones belong to the dogs.)

- Reread the remaining five sentences that you read earlier and ask students to find both the plural possessive noun and what the plural possessive noun owns.
 - Workers' uniforms get dirty. (*workers'*; The workers own the uniforms. The uniforms belong to the workers.)
 - Actors' lines are long and hard to remember. (*actors'*; The actors own the lines. The lines belong to the actors.)
 - Foxes' noses are pointed. (*foxes'*; The foxes own the noses. The noses belong to the foxes.)
 - Gardeners' yards are beautiful. (*gardeners'*; The gardeners own the yards. The yards belong to the gardeners.)
 - Students' papers are written carefully. (*students'*; The students own the papers. The papers belong to the students.)
- Direct students' attention to the sentences you placed on the board or chart paper in advance.
- Read the first sentence to students, "(The offices of the doctors) are crowded today."
- Ask, "How can we change the words in the parentheses (*The offices of the doctors*) to a plural possessive noun?" Students should answer *The doctors offices* but may not include the apostrophe.
- Write *The doctors offices* above (*The offices of the doctors*).
- Tell students that a way to show that a noun is plural possessive is to add an apostrophe after the 's'.
- Write the apostrophe in the word *doctors'* and direct students' attention to it.
- Tell students that to change a plural noun to a plural possessive noun, you add an apostrophe after the 's'. Examples could be: *boys* becomes *boys'* and *inventors* becomes *inventors'*.
- Read the second sentence to students, "(The tractors of the farmers) are painted green."
- Ask, "How can we change the words in the parentheses (*The tractors of the farmers*) to a plural possessive noun?" Students should answer *The farmers' tractors*.
- Write *The farmers' tractors* above (*The tractors of the farmers*).

- Point out the apostrophe after the 's'.
- Guide students to change the remaining words in parentheses to plural possessive nouns.

(The ballet shoes of the dancers) are made of pink silk. The *dancers' ballet shoes* are made of pink silk.

(The mitts of the catchers) are made of brown leather. The *catchers' mitts* are made of brown leather.

(The letters from the boys) made me laugh. The *boys' letters* made me laugh.

- Have students turn to Worksheet 14.1 and complete it as a teacher-guided activity.

Lesson 15

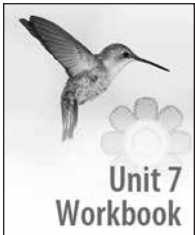
Spelling Assessment

| At a Glance | Exercise | Materials | Minutes |
|---------------------|--|--|---------|
| Spelling | Spelling Assessment | Worksheet 15.1; board | 25 |
| Reading Time | Small Group: Remediation and Enrichment | <i>What's in Our Universe?;</i> <i>More Classic Tales</i> | 25 |

Spelling

25 minutes

10 Spelling Assessment



Worksheet 15.1

For additional practice, see worksheets in Sections II-E and IV-B of the *Assessment and Remediation Guide*.

- Have students turn to Worksheet 15.1 for the spelling assessment.
- If you would like for students to have pens, this is the time to pass them out.
- Tell students that for this assessment, they will write their words under one of the headers to which they belong. For example, if you call out the word *today*, they would write that word under the header 'ay' > /ae/.
- Tell students that should a spelling word fit under more than one header, they should only write the word under one.
- Tell students that they may not have to use all the lines under each header.

- Using the chart below, call out the words using the following format: say the word, use it in a sentence, and say the word once more.

| | |
|--------------|--------------------------------------|
| 1. annoy | 12. digest |
| 2. yesterday | 13. kindness |
| 3. quickly | 14. fascinate |
| 4. gymnasium | 15. character |
| 5. recently | 16. budget |
| 6. subject | 17. refrigerate |
| 7. awaited | 18. accomplish |
| 8. knowledge | 19. Challenge Word: different |
| 9. listen | 20. Challenge Word: thought |
| 10. design | Content Word: atmosphere |
| 11. jewel | |

- After you have called out all of the words including the Challenge Words and the Content Word, go back through the list slowly, reading each word just once more.
- Ask students to write the following sentences as you dictate them:

1. The silky kitten basked in the sun.
2. "Come join our baseball team," said the boy to his friends.

- After students have finished, collect pens, if used.
- Follow your established procedures to correct the spelling words and the dictated sentences.

Small Group: Remediation and Enrichment



- While working with students in small groups, please remember to choose activities that fit the needs of your students at the time.
- ★ **Small Group 1:** Work with these students on any weak areas that were exhibited on the assessment. You may wish to use the *Assessment and Remediation Guide* with these students.
- ★ **Small Group 2:** Ask these students to read additional chapters in *What's in Our Universe?* or chapters in *More Classic Tales*. Alternately, you may ask students to complete any appropriate activities listed in the Pausing Point.

Spelling Analysis Chart

| Name | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1. annoy | | | | | | | | | | | | | | | | | | | | |
| 2. yesterday | | | | | | | | | | | | | | | | | | | | |
| 3. quickly | | | | | | | | | | | | | | | | | | | | |
| 4. gymnasium | | | | | | | | | | | | | | | | | | | | |
| 5. recently | | | | | | | | | | | | | | | | | | | | |
| 6. subject | | | | | | | | | | | | | | | | | | | | |
| 7. awaited | | | | | | | | | | | | | | | | | | | | |
| 8. knowledge | | | | | | | | | | | | | | | | | | | | |
| 9. listen | | | | | | | | | | | | | | | | | | | | |
| 10. design | | | | | | | | | | | | | | | | | | | | |
| 11. jewel | | | | | | | | | | | | | | | | | | | | |
| 12. digest | | | | | | | | | | | | | | | | | | | | |
| 13. kindness | | | | | | | | | | | | | | | | | | | | |
| 14. fascinate | | | | | | | | | | | | | | | | | | | | |
| 15. character | | | | | | | | | | | | | | | | | | | | |
| 16. budget | | | | | | | | | | | | | | | | | | | | |
| 17. refrigerate | | | | | | | | | | | | | | | | | | | | |
| 18. accomplish | | | | | | | | | | | | | | | | | | | | |
| 19. Challenge Word: different | | | | | | | | | | | | | | | | | | | | |
| 20. Challenge Word: thought | | | | | | | | | | | | | | | | | | | | |
| Content Word: atmosphere | | | | | | | | | | | | | | | | | | | | |

Spelling Analysis Directions

Unit 7, Lesson 15

For additional practice, see worksheets in Sections II-E and IV-B of the *Assessment and Remediation Guide*.

- Students are likely to make the following errors:
 - For /ae/, writing 'ay', 'ai', 'ea', or 'a_e' for 'a'
 - For /ae/, writing 'ay', 'ai', 'ea', or 'a' for 'a_e'
 - For /ae/, writing 'ay', 'ai', 'a', or 'a_e' for 'ea'
 - For /ae/, writing 'ay', 'ea', 'a_e', or 'a' for 'ai'
 - For /ae/, writing 'ai', 'ea', 'a_e', or 'a' for 'ay'
 - For /k/, writing 'c', 'k', 'ck', or 'ch' for 'cc'
 - For /k/, writing 'c', 'k', 'ck', or 'cc' for 'ch'
 - For /k/, writing 'c', 'k', 'ch', or 'cc' for 'ck'
 - For /k/, writing 'c', 'ck', 'ch', or 'cc' for 'k'
 - For /k/, writing 'k', 'ck', 'ch', or 'cc' for 'c'
 - For /s/, writing 's', 'c', 'ss', 'ce', 'se', or 'st' for 'sc'
 - For /s/, writing 's', 'c', 'ss', 'ce', 'se', or 'sc' for 'st'
 - For /s/, writing 's', 'c', 'ss', 'ce', 'sc', or 'st' for 'se'
 - For /s/, writing 's', 'c', 'ss', 'se', 'st', or 'sc' for 'ce'
 - For /s/, writing 's', 'c', 'ce', 'se', 'st', or 'sc' for 'ss'
 - For /s/, writing 's', 'ss', 'ce', 'se', 'st', or 'sc' for 'c'
 - For /s/, writing 'c', 'ss', 'ce', 'se', 'st', or 'sc' for 's'
 - For /j/, writing 'g', 'j', 'ge', or 'dge' for 'dg'
 - For /j/, writing 'g', 'j', 'ge', or 'dg' for 'dge'
 - For /j/, writing 'g', 'j', 'dge', or 'dg' for 'ge'
 - For /j/, writing 'g', 'ge', 'dge', or 'dg' for 'j'
 - For /j/, writing 'j', 'ge', 'dge', or 'dg' for 'g'
 - For /n/, writing 'n', 'nn', or 'kn' for 'gn'
 - For /n/, writing 'n', 'nn', or 'gn' for 'kn'
 - For /n/, writing 'n', 'kn', or 'gn' for 'nn'
 - For /n/, writing 'nn', 'kn', or 'gn' for 'n'

- While any of the above student-error scenarios may occur, you should still be aware that misspellings may be due to many other factors. You may find it helpful to record the actual spelling errors that the student makes in the analysis chart. For example:
 - Is the student consistently making errors on specific letters?
Which ones?
 - Is the student consistently making errors at the end of the words?
 - Is the student consistently making errors on particular beginning consonants?
- Did the student write words for each feature correctly?
- Also, examine the dictated sentences for errors in capitalization and punctuation.

Lesson 16

Writing

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ Use text features and search tools (e.g., key words, sidebars, and hyperlinks) to locate information relevant to a given topic efficiently (RI.3.5)
- ✓ With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose, i.e., ideas and paragraphs are presented clearly and in a logical order (W.3.4)
- ✓ With guidance and support from adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (W.3.5)
- ✓ With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others (W.3.6)
- ✓ With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame) (W.3.10)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------------|--|--|---------|
| Writing a Research Paper | Write a Research Paper: Overview; Writing a Research Paper: Plan; Identify Topic, Gather Information, Listen or Read and Take Notes | teacher-prepared chart; Worksheets 16.1–16.4; <i>Tell It Again! Read-Aloud Anthology: Astronomy: Our Solar System and Beyond</i> , Lessons 1–3 | 150 |

Advance Preparation

Select Wiggle Cards or other movement activities for students as needed throughout the lesson.

Create and display a Write a Research Paper poster on the board or chart paper:

Write a Research Paper

Plan

1. _____
2. _____
3. _____
4. _____

Draft

5. _____
6. _____
7. _____
8. _____

Edit

9. _____
10. _____

Publish

11. _____
12. _____
13. _____

Note to Teacher

A list of possible trade books and websites covering topics included in the study of astronomy targeted for this research paper is provided:

Trade Books

1. *Amazing Pop-up Space Atlas*, by Marie Greenwood (Dorling Kindersley Limited, 2008) ISBN 9780756663056
2. *Astronaut Handbook*, by Meghan McCarthy (Alfred A. Knopf, 2008) ISBN 9780375844591
3. *Astronomy*, by Carole Stott (Kingfisher Publications PLC, 2003) ISBN 075345582X

4. *Astronomy (Amazing Science Discoveries)*, by Dr. Bryson Gore (Stargazer Books, 2009) ISBN 9781596041998
5. *Astronomy (DK Eyewitness Books)*, by Kristen Lippincott (Dorling Kindersley Limited, 2009) ISBN 9780756637675
6. *The Best Book of Spaceships*, by Ian Graham (Kingfisher, 1998) ISBN 9780753461679
7. *Big Bang!: The Tongue-Tickling Tale of a Speck That Became Spectacular*, by Carolyn Cinami DeCristofano (Charlesbridge, 2005) ISBN 157091618
8. *Big and Busy Space*, by Roger Priddy (St. Martin's Press, 2008) ISBN 0312506872
9. *The Big Dipper*, by Franklyn M. Branley (HarperCollins, 1991) ISBN 0064451003
10. *Black Holes*, by Dana Meachen Rau (Compass Point Books, 2007) ISBN 9780756510954
11. *Born With a Bang: The Universe Tells Our Cosmic Story*, by Jennifer Morgan (Dawn Publications, 2002) ISBN 1584690321
12. *Comets*, by Melanie Chrismer (Scholastic Inc., 2008) ISBN 0531146944
13. *Comets, Meteors, and Asteroids*, by Seymour Simon (Mulberry Books, 1998) ISBN 0688158439
14. *Comets, Stars, the Moon, and Mars*, by Douglas Florian (Harcourt, Inc., 2007) ISBN 9780152053727
15. *Destination: Space*, by Seymour Simon (HarperCollins, 2006) ISBN 0060877227
16. *Discover Space*, by Cynthia Pratt Nicolson (Kids Can Press, Ltd., 2005) ISBN 1553378245
17. *Discover the Stars*, by Cynthia Pratt Nicolson (Kids Can Press, Ltd., 2006) ISBN 9781553378990
18. *DK First Space Encyclopedia*, by Caroline Bingham (Dorling Kindersley Limited, 2008) ISBN 9780756633660
19. *Floating in Space*, by Franklyn M. Branley (HarperCollins, 1998) ISBN 9780064451420

20. *Forces Make Things Move*, by Kimberly Brubaker Bradley (HarperCollins, 2005) ISBN 9780064452144
21. *Galaxies*, by Seymour Simon (Mulberry Books, 1988) ISBN 0688109926
22. *Galaxies (A True Book)*, by Howard K. Trammel (Children's Press, 2010) ISBN 9780531228036
23. *Galaxies, Galaxies!*, by Gail Gibbons (Holiday House, 2007) ISBN 9780823421923
24. *Galileo's Leaning Tower Experiment*, by Wendy Macdonald (Charlesbridge, 2009) ISBN 9781570918704
25. *Glow in the Dark Constellations: A Field Guide for Young Stargazers*, by C.E. Thompson (Grosset & Dunlap, 1999) ISBN 9780448412535
26. *Gravity is a Mystery*, by Franklyn M. Branley (HarperCollins, 2007) ISBN 0064452018
27. *I Fall Down*, by Vicki Cobb (HarperCollins, 2004) ISBN 0688178421
28. *If You Decide to Go to the Moon*, by Faith McNulty (Scholastic Inc., 2005) ISBN 9780590483599
29. *The International Space Station*, by Franklyn M. Branley (HarperCollins, 2000) ISBN 9780064452090
30. *Mae Jemison: Out of This World*, by Corinne J. Naden and Rose Blue (The Millbrook Press, Inc., 2003) ISBN 0761325700
31. *The Magic School Bus Sees Stars: A Book About Stars*, by Nancy White (Scholastic Inc., 1999) ISBN 0590187325
32. *Me and My Place in Space*, by Joan Sweeney (Dragonfly Books, 1998) ISBN 9780517885901
33. *The Milky Way*, by Gregory L. Vogt (Lerner Publications Company, 2010) ISBN 9780761338758
34. *Moonshot: The Flight of Apollo 11*, by Brian Floca (Atheneum Books for Young Readers, 2009) ISBN 9781416959462
35. *My Book of Space*, by Ian Graham (Kingfisher, 2001) ISBN 9780753453995

36. *My First Book of Space*, by Rosanna Hansen and Robert A. Bell (Simon and Schuster Books for Young Readers, 1985) ISBN 0671602624
37. *Nicolaus Copernicus: The Earth Is a Planet*, by Dennis Brindell Fradin (Mondo Publishing, 2003) ISBN 1593360061
38. *Night Light (A Book About the Moon)*, by Dana Meachen Rau (Picture Window Books, 2006) ISBN 140481731X
39. *Once Upon a Starry Night: A Book of Constellations*, by Jacqueline Mitton (National Geographic Society, 2009) ISBN 9781426303913
40. *On Earth*, by G. Brian Karas (Puffin Books, 2005) ISBN 9780142410639
41. *On the Moon*, by Anna Milbourne (Usborne Publishing Ltd., 2006) ISBN 9780794506179
42. *Our Solar System*, by Seymour Simon (HarperCollins, 2007) ISBN 97800611480082
43. *The Planet Gods: Myths and Facts about the Solar System*, by Jacqueline Mitton (National Geographic Society, 2008) ISBN 142630448X
44. *The Planets in Our Solar System*, by Franklyn M. Branley (HarperCollins, 1998) ISBN 006445178X
45. *Roaring Rockets*, by Tony Mitton (Kingfisher, 1997) ISBN 9780753453056
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48. *Space (Magic Tree House Research Guide)*, by Will Osborne and Mary Pope Osborne (Random House, Inc., 2002) ISBN 037581356X
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51. *Stars*, by Seymour Simon (HarperCollins, 2006) ISBN 0060890010
52. *Stars (A True Book)*, by Ker Than (Scholastic Inc., 2010) ISBN 9780531228067
53. *Stars (Jump into Science)*, by Steve Tomecek (National Geographic Society, 2003) ISBN 079225581X
54. *The Sun*, by Seymour Simon (HarperCollins Publishers, 1996) ISBN 9780688092368
55. *Sun, Moon and Stars*, by Stephanie Turnbull (Usborne Publishing Ltd., 2007) ISBN 9780794513993
56. *The Sun Is My Favorite Star*, by Frank Asch (Voyager Books, 2000) ISBN 9780152063979
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58. *There's No Place Like Space!*, by Tish Rabe (Random House, Inc., 2009) ISBN 9780679891154
59. *The Universe*, by Seymour Simon (HarperCollins, 2006) ISBN 0060877251
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61. *What the Moon Is Like*, by Franklyn M. Branley (HarperCollins Publishers, 2000) ISBN 0064451852
62. *What's Out There?: A Book About Space*, by Lynn Wilson (Grosset & Dunlap, 2007) ISBN 9780448405179
63. *When I Heard the Learn'd Astronomer*, by Walt Whitman (Simon & Schuster Books for Young Readers, 2004) ISBN 9780689863974
64. *Why Can't I Jump Very High?: A Book About Gravity*, by Kamal S. Prasad (Science Square Publishing, 2004) ISBN 0974086150
65. *You Are the First Kid on Mars*, by Patrick O'Brien (G.P. Putnam's Sons, 2009) ISBN 9780399246340
66. *Zoo in the Sky: A Book of Animal Constellations*, by Jacqueline Mitton (National Geographic Society, 2006) ISBN 079225935

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67. The European Space Agency for Kids
<http://www.esa.int/esaKIDSen/index.html>
68. Games, Activities, Facts, and Resources
<http://www.kidsastronomy.com/index.htm>
69. The Hubble Telescope Picture Gallery
<http://hubblesite.org/gallery/>
70. The Hubble Telescope Discoveries: Amazing Space
<http://amazing-space.stsci.edu/Information>
71. Sky Maps, Puzzles, and Post Cards
<http://www.dustbunny.com/afk/>
72. NASA Kids' Club
<http://www.nasa.gov/audience/forkids/kidsclub/flash/index.html>
73. NASA's The Space Place
<http://spaceplace.nasa.gov/>
74. The Natural History Museum: Meteorites
<http://www.nhm.ac.uk/kids-only/earth-space/meteorites/>

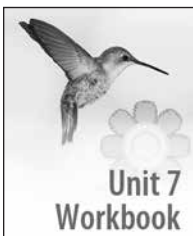
Writing a Research Paper

150 minutes

Write a Research Paper: Overview



Lessons 1–3



Worksheets
16.1–16.4

- Tell students they will spend the next few lessons writing a research paper. The topic of the research paper will come from lessons on astronomy.
- Remind students they have practiced writing paragraphs.
- Ask students what types of paragraphs they have been writing. (opinion, informational, narrative stories, and biographies)
- Ask, “What are the necessary parts of a good paragraph?” (topic sentence, supporting details that are well-ordered, and concluding sentence)
- Ask, “What makes a topic sentence good?” (states the main idea, what the paragraph is mainly about)
- Ask, “What makes a concluding sentence good?” (wraps up the paragraph at the end, restates the topic sentence/main idea)

- Ask, “What makes good supporting details?” (Details follow an order that relates to the topic sentence/main idea.)
- Read the following paragraph aloud and ask students to note the topic sentence and its location in the paragraph, the concluding sentence and its location, and to list supporting details.

People have studied stars for a very long time and discovered many star patterns called constellations. Ptolemy was one of the first to identify constellations. By picking out the brightest stars, he then traced lines from one bright star to another. These patterns looked like familiar objects. One that Ptolemy described looks like a bear and is named Ursa Major, or the Big Bear. Within Ursa Major, there is another pattern of stars known as the Big Dipper. It is called the Big Dipper because if you trace a line from star to star, this constellation looks like a ladle or dipper. Ptolemy identified 48 constellations but astronomers now can see a total of 88 constellations in the night sky. Look up at the sky on a clear night and see how many constellations you can find.

- Ask, “What is the topic sentence and where is it located?” (*People have studied stars for a very long time and discovered many star patterns called constellations.*; the first sentence in the paragraph)
- Ask, “What is the concluding sentence and where is it located in the paragraph?” (*Look up at the sky on a clear night and see how many constellations you can find.*; the last sentence in the paragraph)
- Ask, “What are the supporting details in this paragraph and where are they located?” (*first person to identify constellations; constellations formed by tracing lines from one bright star to another; Ursa Major and the Big Dipper; Ptolemy identified 48 constellations, astronomers can now see 88*; in between the topic sentence and the concluding sentence)
- Tell students to turn to Worksheet 16.1. Read the title of the worksheet and explain that a research paper is a piece of writing about a nonfiction, informational topic.
- Again, remind students that they have written short, informational paragraphs. Explain that a research paper is an example of a longer type of informational writing.

- Ask students to explain the difference between fiction and nonfiction. (Fiction is make-believe and not true; nonfiction is true and real.)
- Remind students about the report they may have written in second grade on the War of 1812. Ask students to share memories of the experience. (Mr. Mowse left questions for students to find answers to. Students wrote a report from information gathered.)
- Tell students that they will follow a similar format this week to complete the steps for writing a research paper in class.

Note to Teacher

As you introduce each part of the four-step process of writing a research paper, fill in the chart you prepared in advance and have students fill in the same information on Worksheet 16.1. Have students keep Worksheet 16.1 in their Workbook throughout the week, as they will reference it periodically during the next five lessons.

Write a Research Paper: Plan

- Tell students that during this project, they will be planners, good listeners, readers, note-takers, drafters, editors, illustrators, and publishers.
- Remind students that they will use a four-step writing process to write their research paper. Have students identify the four steps—plan, draft, edit, publish—as they refer to Worksheet 16.1.
- Direct students' attention to the Write a Research Paper poster you prepared in advance. Remind students that this research paper is on a nonfiction topic. Explain that, in general, research papers can be written about any nonfiction topic in history, science, math, art, music, or other content areas.
- Explain to students that they will use specific substeps in the planning, drafting, editing, and publishing process when they write their research paper.
- Tell students to write **Identify topic** on Worksheet 16.1 as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic

2. _____

3. _____

4. _____

Draft

5. _____

6. _____

7. _____

8. _____

Edit

9. _____

10. _____

Publish

11. _____

12. _____

13. _____

- Tell students that this is the first substep in planning.
- Explain to students that once they know what their topic is, prior to starting to write about the topic, students need to make sure they are knowledgeable about the topic. Tell students the second substep in planning is to **Gather information**.
- Have students write **Gather information** on Worksheet 16.1 as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic

2. Gather Information

3. _____

4. _____

Draft

5. _____

6. _____

7. _____

8. _____

Edit

9. _____

10. _____

Publish

11. _____

12. _____

13. _____

- Explain that when gathering information for a research paper, writers pull together information on their topic from a variety of resources. These resources can include books, articles in magazines or on the Internet, and other reference books, such as encyclopedias, atlases, etc., when applicable.
- Next, explain and record the third substep in planning, ***Listen or read and take notes***. Have students write this step on Worksheet 16.1 as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. _____

Draft

5. _____
6. _____
7. _____
8. _____

Edit

9. _____
10. _____

Publish

11. _____
12. _____
13. _____

- Explain that when taking notes about a topic, it is important to listen or read carefully and write down important words and ideas. Students will use these words and phrases later to form complete sentences.

Identify Topic

- Tell students, “It’s time to begin! Now you will become planners!”
- Remind students that for the last three weeks they have been learning about our universe. Tell them that the topic for their classroom research paper is *Our Solar System*.
- Write *Our Solar System* on the board. Tell students that now they will spend a few minutes discussing their topic.
- Ask students to name a few objects in our solar system. (sun, stars, planets, moons, etc.)

Gather Information

- Have students turn to Worksheet 16.1 again and read with you the substep after **Identify topic** while you point out the information on the chart. (**Gather information**)
- Tell students that gathering information is an important part of research and in this part of the writing process, they will become researchers.
- Ask students, “What do you think the word *research* means? Do you see a prefix?” (yes; prefix *re-* + *search*, meaning to search again, to look closely at, to investigate)
- Ask students, “Where do you think we would find the information we need to write a research paper on *Our Solar System*?” (Answers may vary but should include chapters in *What’s in Our Universe?* and the read-alouds from Listening & Learning they have heard over the past three weeks.)
- Tell students they can gather information or conduct research using many sources, including the Internet, but first they will listen once again to the read-alouds on our solar system and reread chapters in *What’s in Our Universe?* to see if those sources help answer questions on Worksheets 16.2–16.4.
- Have students use technology (keyboarding skills, word processing) as appropriate.
- Have students use text features and search tools (e.g., key words, sidebars, and hyperlinks) to locate information efficiently on the Internet.
- Write the word *plagiarism* on the board. Ask students if they remember what the word *plagiarize* means. (taking other people’s words exactly as they are written)
- Remind students that when using the reader, the Internet, or trade books, it is important to avoid plagiarism by using their own words instead of the exact words of others.
- Tell students to tear out Worksheets 16.2, 16.3, and 16.4 from their Workbook.
- Say, “The questions have been printed on three separate worksheets for you to use to take notes while you listen again to the read-alouds.”

Listen or Read and Take Notes

- Say, “Today you will become note-takers, which is part of being a researcher!”
- Tell students to look over the questions on their worksheets.
- Tell students that they will listen again to read-alouds on the solar system and, using their worksheets, take notes during the read-alouds to answer the questions.
- Remind students that when a researcher takes notes, he or she writes only the important words and phrases necessary to answer the questions, rather than complete sentences. An example could be: “What is it like on the moon?” Instead of students writing complete sentences, they would write words or phrases such as *cold, no air, less gravity than Earth*, etc.
- Have students put Worksheets 16.2, 16.3, and 16.4 on their desk as you turn to the matching read-alouds in Lessons 1, 2, and 3 in Listening & Learning *Tell It Again! Read-Aloud Anthology: Astronomy, Our Solar System and Beyond*.
- Say, “I am going to read the questions aloud while you follow along on your worksheets.” (Allow students to share what information they remember.)
- Tell students that as you read the read-alouds, you will pause where necessary to allow them to fill in answers on their worksheets. Note for students that you will model how to do this correctly.

Questions for Note-Taking

Note: Reread the read-alouds in Lessons 1, 2, and 3 to students to help them fill in information to answer the questions on their worksheets. Take breaks as needed. (Wiggle Cards or some other movement activity) Familiarize yourself with the questions on the student worksheets (also printed with answers at the end of this lesson) so you can pause and model taking notes when a question has been answered in the reading. Ensure that students write only the important words and phrases necessary to answer the questions, emphasizing that writing in complete sentences is not necessary at this point in the process.

Note for students that the Readers will not be used today as there will not be time.

Worksheet 16.2

1. What does the word *solar* mean? (sun)
2. What is our sun? (a star; a big ball of very hot gas)
3. Where in our solar system is the sun located? (at the center of all objects that orbit it)
4. The sun is made of _____. (different, very hot gases but mostly hydrogen)
 - A. How hot is our sun? (10,000 degrees)
 - B. How large is our sun? (so large that a million Earths could fit inside of it)
5. What does our sun do? (creates energy in the form of light and heat; provides light and heat; the closer the planet is to the sun, the hotter it is; the further away it is from the sun, the colder it is)

Worksheet 16.3

1. Name the eight planets in order. (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune) What sentence can help you remember the order of the planets? (**M**any **V**ery **E**nergetic **M**ermaids **J**ust **S**wam **U**nder **N**eptune.)
2. What four planets are closest to the sun? (Mercury, Venus, Earth, and Mars) What do they have in common? (rocky surface, small planets, have an atmosphere)
3. What four planets are farthest away from the sun? (Jupiter, Saturn, Uranus, Neptune) How are they different from the four planets closest to the sun? (mostly made up of gas, very large planets, colder, named the *outer planets*, known as gas giants)
4. List three similarities among all planets.
 - A. orbit the sun
 - B. rotate on its own axis
 - C. nearly round object in space

5. List four differences among all planets.
 - A. size
 - B. temperature
 - C. distance from the sun
 - D. what they are made of: four closest to the sun—rock; outer planets—gas
6. On which planet do we live? (Earth)

Note to Teacher

The answers to **questions 7 and 8** are found in “Our Planet Earth.”

7. What is an atmosphere? (a covering of gases that surrounds a planet)
8. How does Earth’s atmosphere support life? (provides just the right amount of light and heat for humans, animals, and plants to live; provides oxygen; provides some protection from some of sun’s harmful rays)

Worksheet 16.4

1. List other objects in our solar system.
 - A. asteroids
 - B. meteoroids
 - C. comets
2. Asteroids are made of _____. (rock, metal, and sometimes ice)
 - A. Why are asteroids not considered planets? (no atmosphere, too small, not round)
 - B. Where are most asteroids located? (in between Mars and Jupiter)
 - C. What is that cluster of stars called? (asteroid belt)

3. What are meteoroids? (space debris made of rock or metal)
 - A. What are meteors? (meteoroids that shine brightly when they enter Earth's atmosphere from space)
 - B. What is another name for meteors? (shooting stars)
 - C. What are meteorites? (meteors that did not burn up before getting to Earth's surface)
 - D. What damage can meteorites cause to Earth's surface? (can make large holes or craters)
 4. Comets are made of _____. (dust and ice)
 - A. What happens when a comet gets too close to the sun? (some of it turns into gas that follows the comet like a tail)
 - B. What is the name of the most famous comet? (Halley's Comet)
 - C. How did it get its name? (named for Edmund Halley, the British scientist who first discovered it)
- Allow students to brainstorm any additional questions they may have about our solar system. Ensure that their questions are pertinent to the topic. Record any additional questions on chart paper. You may wish to encourage or require students who are proficient writers needing more challenge to include additional questions.
 - Have students tuck completed Worksheets 16.2–16.4 in their Workbook for use in the next lesson.

Lesson 17

Writing

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose, i.e., ideas and paragraphs are presented clearly and in a logical order (W.3.4)
- ✓ With guidance and support from adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (W.3.5)
- ✓ With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others (W.3.6)
- ✓ With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame) (W.3.10)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------------|---|--|---------|
| Writing a Research Paper | Write a Research Paper: Plan; Listen or Read and Take Notes, Organize Notes, Write a Research Paper: Draft, Write Drafts of Paragraphs | teacher-prepared chart; Worksheets 16.1–16.4, 17.1; <i>What's in Our Universe?</i> | 150 |

Advance Preparation

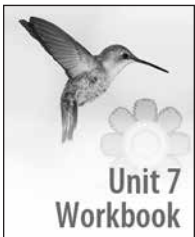
Select Wiggle Cards or other movement activities for students as needed throughout the lesson.

Have the Write a Research Paper poster ready.

Have a blank sheet of chart paper ready to model writing the first paragraph.



Chapters 1–5



Worksheets
16.1–16.4

Write a Research Paper: Plan

- Direct student's attention to the Write a Research Paper poster and to Worksheet 16.1.

Listen or Read and Take Notes

- Ask students to look where they are in the process of writing a research paper. They should notice that they are still on **Listen or read and take notes**.
- Tell students to take out Worksheets 16.2, 16.3, and 16.4.
- Tell students they have completed listening and taking notes and will now reread chapters in their Reader to find additional information to answer questions on Worksheets 16.2–16.4.
- Tell students to look over the questions on their worksheets.
- Direct students' attention to *What's in Our Universe?* and have them reread Chapters 1–5, filling in additional information on their worksheets where appropriate.
- Have students use technology (keyboarding skills, word processing) as appropriate.

Organize Notes

- When students have finished rereading and taking notes on Chapters 1–5 in *What's in Our Universe?*, direct students' attention to the Writing a Research Paper poster and Worksheet 16.1.
- Ask students if all parts of the planning process are finished. (no) Tell students that before writing a draft of a research paper, it is important to **Organize notes**. Have students write **Organize notes** under **Listen or read and take notes** as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. _____
6. _____
7. _____
8. _____

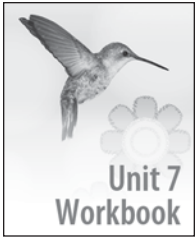
Edit

9. _____
10. _____

Publish

11. _____
12. _____
13. _____

- Explain to students that writers group similar ideas from their notes together so that they will be ready to write good paragraphs.
- Tell students that once they have finished all of their research, it is important to go back and look at all of their notes and organize them into groups that relate to different parts of the research topic.
- Ask students to spend several minutes reviewing their notes on Worksheets 16.2–16.4.
- Tell students that they are fortunate because, thanks to the way the note-taking sheets are arranged, their notes have already been organized into three different parts.
- Tell students that they will use the three worksheets to create three paragraphs for their paper.



Worksheet 17.1

Write a Research Paper: Draft

- Have students look at Worksheet 16.2 and explain that they are going to become drafters and use their notes from this worksheet to write a draft of their first paragraph.

Write Drafts of Paragraphs

- Direct students' attention to the Write a Research Paper chart.
- Have students fill in **Write drafts of paragraphs** on Worksheet 16.1 as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs

6. _____

7. _____

8. _____

Edit

9. _____

10. _____

Publish

11. _____

12. _____

13. _____

- Say, “You are now not only researchers, but you are also drafters!”
- Tell students they will write a draft of their paragraphs on Worksheet 17.1.

- Tell students, “Now, it is time to start writing!”
- Remind students that they have learned that good paragraphs have topic and concluding sentences, as well as several sentences that provide supporting details for the topic sentence/main idea.
- Give students a few minutes to reread all of their notes on the first of the three note-taking sheets, Worksheet 16.2. Once they have had sufficient time, brainstorm ideas as a group for a topic sentence for this paragraph. Once everyone has agreed on a topic sentence, tell students to write this sentence on Worksheet 17.1 as you model writing it on chart paper. Remind students to indent the topic sentence.
- Then, work as a group to orally state, in a complete sentence, the information found in the answer to **Question 1** in their notes.
- Continue in this manner until you and students have written sentences with supporting details using all the information in their notes.
- Then, remind students that they need to end their paragraph with a good concluding sentence.
- Discuss possibilities orally and then write a concluding sentence on the chart paper to end this draft of the paragraph as students write it at the end of their first paragraph on Worksheet 17.1.
- Tell students they will follow the same procedure independently using Worksheets 16.3 and 16.4 to write two more paragraphs.
- Tell students they will use the second and third pages of Worksheet 17.1 to record the other two paragraphs.

Note to Teacher

Move around the room and look at students’ writing, offering assistance and probing with questions where needed. Encourage students to work deliberately, using the first paragraph that you wrote together as a reference. Offer help, support, and encouragement as they complete this task. Encourage students to proofread their own work, setting their paragraph next to the worksheet containing the notes they took. Ask students to check off each detail in their notes that has been included in their paragraph to ensure that all details are included.

Offer breaks as needed. (Wiggle Cards or other movement activities, such as a Simon Says game using astronomy terms like *spin on your axis*, *orbit around your table*, etc.) Depending on student writers, you may wish to work together with one group of students guiding them through this process, while the other students work independently.

Lesson 18

Writing

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose, i.e., ideas and paragraphs are presented clearly and in a logical order (W.3.4)
- ✓ With guidance and support from adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (W.3.5)
- ✓ With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others (W.3.6)
- ✓ With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame) (W.3.10)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------------|---|--|---------|
| Writing a Research Paper | Write a Research Paper: Draft; Add Introductory and Concluding Paragraphs, Use Revision Checklist, Draft Second Copy | teacher-prepared chart; Worksheets 16.1, 17.1, 18.1–18.4 | 150 |

Advance Preparation

Select Wiggle Cards or other movement activities for students as needed throughout the lesson.

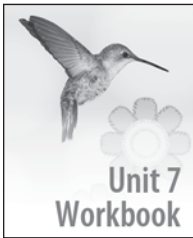
Have the Write a Research Paper poster ready.

Have chart paper or board space ready to write an introduction and a conclusion for the research paper with students.

Write a Research Paper: Draft

Add Introductory and Concluding Sentences

- When students have finished writing three paragraphs, tell them that research papers are more interesting if they have a short introduction and a short conclusion.
- Direct students' attention to the Write a Research Paper poster and Worksheet 16.1.
- Have students write **Add introductory and concluding paragraphs** to Worksheet 16.1 as you write it on the chart.



Worksheets 16.1,
17.1, 18.1–18.4

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs

7. _____

8. _____

Edit

9. _____

10. _____

Publish

11. _____

12. _____

13. _____

- Say, “Think carefully of the main idea of your whole paper and let’s write a sentence or two stating it.”
- Allow students to brainstorm ideas and reach a consensus, forming a few good sentences for the introduction and conclusion.
- Write the sentences on the board and have students copy them on Worksheet 18.1.
- Have students use technology (keyboarding skills, word processing) as appropriate.
- Tell students that there is a space at the top of Worksheet 17.1 to write the title of their paper.
- Explain that the title should provide an idea of what the topic is. Encourage students to brainstorm a title for their paper, writing it in the provided space. Explain that many times, the title may actually be the same as the topic and that’s fine. You may want to model recording a title on a piece of chart paper as students write their title. (*Our Solar System*)
- Note for students that titles are often subject to change once a paper is finished and that is fine.
- Tell students they now have the first draft of their research paper completed and it is time to look over it carefully and revise it.

Use Revision Checklist

- Direct students attention to the Writing a Research Paper chart and Worksheet 16.1. Have students write **Use Revision Checklist**, as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs
7. Use Revision Checklist

8. _____

Edit

9. _____

10. _____

Publish

11. _____

12. _____

13. _____

- Tell students that they are going to use a Revision Checklist to help them know what changes need to be made to the research paper.
- Have students tear out Worksheet 18.2.
- Read the checklist aloud and discuss the questions.
- Remind students that the word *revise* means change and is a substep of the Draft step.
- Explain that writers often revise many times before they are able to call their final manuscript “finished.”
- Remind students that revising is different from editing: revising often includes making changes to the content and/or the order of the content, whereas editing often includes making corrections to grammar, punctuation, and spelling according to the rules of standard English.

- Also, direct students' attention to Worksheet 18.3, which shows the rubric that will be used to evaluate their research paper. Review the differences among the scores/levels with students.
- Ask them to keep Worksheet 18.3 in their workbook for use as a reference.
- Pair up students to begin the process of revising their papers.

Note: You may wish to choose partners carefully, either pairing more proficient writers with others on par with them or pairing a more proficient writer with one who needs more help. The makeup of your class will help determine which approach is better. In either case, you'll want to choose partners who can work well together.

- Students should begin looking at their partner's paper as well as their own to complete the steps of the revision process. Make sure students understand that they need to make revisions to all five paragraphs of their paper.
- As students feel they have completed revising their papers using the Revision Checklist, have them conference with you before moving to the next step.
- While waiting for your suggestions regarding their papers, students may:
 - be paired up a second time with another partner to revise each other's work.
 - review Worksheets 18.2 and 18.3, striving to earn a '5' by checking each expectation of the rubric against their work.
 - complete another appropriate activity of your choosing.

Note to Teacher

Continue conferencing with students who are not finished with previous steps/substeps and also help partners who are in the revision process. Plan breaks throughout the language arts block to meet students' needs. (Wiggle Cards or other movement activities)

Draft Second Copy

- When students have conferenced with you about revisions and are ready for the next step, direct students' attention to Worksheet 16.1. Tell them the next substep after revision is to **Draft second copy**. Have students write **Draft second copy** on their worksheet as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs
7. Use Revision Checklist
8. Draft second copy

Edit

9. _____
10. _____

Publish

11. _____
12. _____
13. _____

- Tell students that they will incorporate the changes made during the revision substep.
- Remind students to include the introductory and concluding paragraphs and all revisions in their draft.
- Have students use technology (keyboarding skills, word processing) as appropriate.
- Tell students to use Worksheet 18.4 to write their second draft.

Note to Teacher

Continue conferencing with students as they finish revising their first drafts. Plan breaks throughout the language arts block to meet students' needs. (Wiggle Card or other movement activities)

Lesson 19

Writing

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

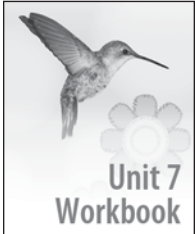
- ✓ With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose, i.e., ideas and paragraphs are presented clearly and in a logical order (W.3.4)
- ✓ With guidance and support from adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (W.3.5)
- ✓ With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others (W.3.6)
- ✓ With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame) (W.3.10)
- ✓ Consult reference materials, including beginning dictionaries, as needed to correct spellings (L.3.2g)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------------|---|--|---------|
| Writing a Research Paper | Write a Research Paper: Edit: List References; Use Editing Checklist: Write a Research Paper: Publish; Write Final Paper | teacher-prepared chart; Worksheets 16.1, 18.1, 18.3, 18.4, 19.1–19.3 | 150 |

Advance Preparation

Select Wiggle Cards or other movement activities for students as needed throughout the lesson.

Have the Write a Research Paper poster ready.



Worksheets 16.1,
18.1, 18.3, 18.4,
19.1–19.3

Write a Research Paper: Edit

- When students are finished with their second draft, direct their attention to Worksheet 16.1 and point to the Write a Research Paper chart.
- Tell students the next step is **Edit** and the first substep is to **List references**. Have students write **List references** on Worksheet 16.1 as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs
7. Use Revision Checklist
8. Draft second copy

Edit

9. List references
10. _____

Publish

11. _____
12. _____
13. _____

List References

- Tell students that the word *references* means the materials used to gather information. These materials could include read-alouds, *What's in Our Universe?*, Internet articles, information from the books used from the classroom library, or library books, etc.
- Have students turn to Worksheet 19.1. Guide students through determining how to identify their references. Clearly, all students used both the read-alouds and the relevant chapters from the Reader.
- Tell students that it is customary, at the end of a research paper, for writers to list references following a certain style.
- Guide students in filling out Worksheet 19.1.

Note: See the next page in this Teacher Guide for reference information you can copy and distribute to students.

- Have students use technology (keyboarding skills, word processing) as appropriate.

List References

- For a read-aloud:
 - *Tell It Again! Read-Aloud Astronomy: Our Solar System and Beyond*, “Our Planet Earth”
 - *Tell It Again! Read-Aloud Astronomy: Our Solar System and Beyond*, “Our Solar System, Part I”
 - *Tell It Again! Read-Aloud Astronomy: Our Solar System and Beyond*, “Our Solar System, Part II”
- For a Reader chapter:
 - *What's in Our Universe?*, “The Sun, the Earth, and Our Solar System”
 - *What's in Our Universe?*, “The Moon”
 - *What's in Our Universe?*, “The Planets Closest to the Sun: Mercury, Venus, Earth, and Mars”
 - *What's in Our Universe?*, “The Outer Planets: Jupiter, Saturn, Uranus, and Neptune”
 - *What's in Our Universe?*, “Asteroids, Comets, and Meteors”

- For books:
 - Name of author (last name, first name), title of book (underlined)
- For Internet articles:
 - Name of author (last name, first name), title of article (in quotation marks)
- Have students turn to Worksheet 19.2. Explain that the Editing Checklist helps to improve research papers. Tell students, “The Editing Checklist guides you in looking for grammatical errors in your paper.”
- Remind students that Worksheet 18.3 is the rubric from which their paper will be graded. Tell students that it would also be wise to use this rubric to look over their second drafts and check off expectations as complete.

Use Editing Checklist

- When students are ready for the next substep, draw their attention to the Write a Research Paper chart you placed on the board and to Worksheet 16.1.
- Have students write ***Use Editing Checklist*** under ***List references*** on Worksheet 16.1 as you write in on the chart.
- Have students use technology (keyboarding skills, word processing) as appropriate.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs
7. Use Revision Checklist
8. Draft second copy

Edit

9. List references
10. Use Editing Checklist

Publish

11. _____
12. _____
13. _____

- Say to students, “This is the last step under **Edit** and then you will be publishers!”
- Tell students to turn to Worksheet 19.2. Read the checklist with them and emphasize that this checklist focuses on grammar, punctuation, and spelling according to the rules of standard English.
- Have students use various reference materials, including beginning dictionaries, to check spelling.
- Tell students that they are going to use an Editing Checklist to help them know if any further corrections are needed. Remind students that writers often edit their drafts many times before they are able to call their manuscripts “finished.”
- Provide time for students to edit their drafts.

- Have students look back at the title they chose for their paper and make edits if necessary.

Write a Research Paper: Publish

Write Final Paper

- When students are finished editing, direct them back to Worksheet 16.1 as you point to the Write a Research Paper chart.
- Say, “Now you will become publishers! You will copy your paragraphs onto Worksheet 19.3 in your neatest handwriting.”
- Have students write **Write final paper** under **Publish** on Worksheet 16.1 as you write it on the chart.

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs
7. Use Revision Checklist
8. Draft second copy

Edit

9. List references
10. Use Editing Checklist

Publish

11. Write final paper
12. _____
13. _____

Remind students that when they are copying their draft to the final copy, they should indent the first sentence of their introductory paragraph, the three supporting paragraphs, and the conclusion paragraph, and write them in that order. They should also incorporate edits they have made.

- Encourage students to take their time to produce high-quality, neat work. Remind them to reference Worksheet 18.3, as this is the rubric that will be used to evaluate their research paper.
- Have students proofread their finished work carefully.

Note to Teacher

Praise students for their hard work, and let them know that in the next lesson they will complete the last parts to finalize their research paper. Continue to plan breaks throughout the language arts block to meet students' needs. (Wiggle Cards or other movement activities) Assist other students as needed so that all will be ready for Lesson 20.

Lesson 20

Writing

✓ Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this unit.

- ✓ With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose, i.e., ideas and paragraphs are presented clearly and in a logical order (W.3.4)
- ✓ With guidance and support from adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (W.3.5)
- ✓ With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others (W.3.6)
- ✓ With guidance and support from peers and adults, use the writing process of plan, draft, edit, and publish to develop and strengthen writing (extended time frame) (W.3.10)

| At a Glance | Exercise | Materials | Minutes |
|---------------------------------|--|--|---------|
| Writing a Research Paper | Write a Research Paper: Publish; Add Illustrations; Organize Components | teacher-prepared chart; Worksheets 16.1, 18.3, 19.3, 20.1–20.3 | 150 |

Advance Preparation

Select Wiggle Cards or other movement activities for students as needed throughout the lesson.

Have the Write a Research Paper poster ready.

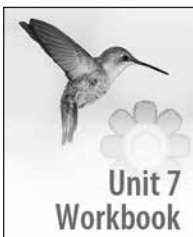
Writing a Research Paper

150 minutes

Write a Research Paper: Publish

Add illustrations

- Have students write the remaining substeps on Worksheet 16.1 as you write them on the chart, which are **Add illustrations** and **Organize components**.



Worksheets 16.1, 18.3, 19.3, 20.1–20.3

Write a Research Paper

Plan

1. Identify topic
2. Gather Information
3. Listen or read and take notes
4. Organize notes

Draft

5. Write drafts of paragraphs
6. Add introductory and concluding paragraphs
7. Use Revision Checklist
8. Draft second copy

Edit

9. List references
10. Use Editing Checklist

Publish

11. Write final paper
12. Add illustrations
13. Organize components

- Say to students, “You will now become illustrators!”
- When students are ready they may:
 - design their cover page (Worksheet 20.1) by carefully writing their title, drawing a picture in color, and writing their name.
 - draw additional illustrations to match their text (Worksheet 20.2).
 - design a “Meet the Author” back page (Worksheet 20.3).
- Have students use technology (keyboarding skills, word processing) as appropriate.

Organize Components

- As students finish, have them arrange all of the pages of their research paper in order and help to staple them together.
- Say, “You are great planners, good listeners, readers, note-takers, drafters, editors, illustrators, and publishers!”
- If time permits, have students share their finished research paper with the class, including their supporting illustrations and “Meet the Author” page.

Note to Teacher

You will want to collect students’ papers so you can assess their work using the rubric on Worksheet 18.3.

Pausing Point

Note to Teacher

We recommend that you select specific Pausing Point activities for individual and/or groups of students on the basis of their performance on the assessment in Lesson 13.

Reading Time

Small Group: “Dr. Mae Jemison”

Introducing the Chapter

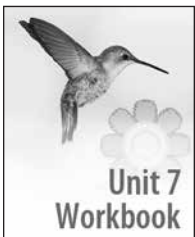
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Tell students that today they will read a biography.
- Remind them that a biography is written about a person’s life.
- Ask students to thumb through the chapter looking at the images to see if they can predict what this chapter may be about.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.



Chapter 13



Worksheet PP1

Vocabulary for “Dr. Mae Jemison”

1. **chemical engineering**—a field of study in which scientists use their knowledge of chemistry and how things in the natural world are made and interact (108)
2. **African-American studies**—the study of the history, culture, and politics of African-Americans, Americans who have ancestors from Africa (108)
3. **Peace Corps**—a group of American volunteers who carry out projects in other countries to help improve the lives of people living there (108)
4. **volunteer**—a person who willingly performs a service without getting paid (108)
5. **health care**—the prevention or treatment of illnesses by trained medical specialists (108)
6. **weightlessness**—to have little or no weight (111)
7. **Endeavour**—a NASA space shuttle (112)

Purpose for Reading

- Tell students that today, they will read independently or in small groups.
- Next, go through the chapter, looking at the images and reading the captions.

Note to Teacher

The Guided Reading Supports that follow are intended for use while you work with students in **Small Group 1**.

- ★ **Small Group 1:** Ask these students to assemble as a group and read the chapter with you. Have students complete Worksheet PP1 as they read.
- ★ **Small Group 2:** Ask these students to read the chapter independently and complete Worksheet PP1.

Guided Reading Supports

Pages 106–109

- Read the title of the chapter together as a group, “Dr. Mae Jemison.”
- Follow established procedures to display the image for this chapter and preview the Vocabulary Cards for *chemical engineering*, *African-American studies*, *Peace Corps*, *volunteer*, and *health care*.

- Direct students' attention to the images and captions on **pages 107 and 109**.
- Have students read **pages 106–109** to themselves to find the answer to these questions: “Who is Dr. Mae Jemison? Why do you think she makes a good role model?”
- When students have finished reading, restate the questions and ask students to answer. (Dr. Jemison worked hard in school, finished early, studied two subjects at once in college, and joined the Peace Corps to use her medical training to help people in Africa and countries where people are poor.)

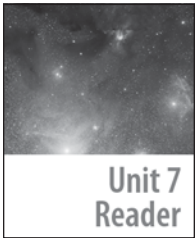
Pages 110–113

- Follow established procedures to preview the Vocabulary Cards for *weightlessness* and *Endeavour*.
- Direct students' attention to the images and captions on **pages 111 and 113**.
- Have students read **pages 110–113** to themselves to find the answer to the question: “What did Dr. Jemison do after finishing her time in the Peace Corps?”
- When students have finished reading, restate the question and ask students to answer. (She became an astronaut and was chosen for a mission on the *Endeavour* space shuttle.)
- Ask, “What is the important fact about her serving on the Endeavour that proves she is a good role model?” (She became the first African-American female astronaut in space.)

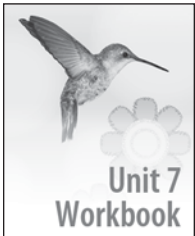
Take-Home Material

Have students take home Worksheet PP2 to read to a family member.

Reading Time



Chapter 14



Worksheet PP3

Small Group: “Nicolaus Copernicus”

Introducing the Chapter

- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Tell students that today they will read a biography.
- Remind them that a biography is written about a person’s life.
- Ask students to thumb through the chapter looking at the images to see if they can predict what this chapter may be about.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.

Vocabulary for “Nicolaus Copernicus”

1. **courage**—bravery (118)

Purpose for Reading

- Tell students that today, they will read independently or in small groups.
- Next, go through the chapter, looking at the images and reading the captions.

Note to Teacher

The Guided Reading Supports that follow are intended for use while you work with students in **Small Group 1**.

- ★ **Small Group 1:** Ask these students to assemble as a group and read the chapter with you. Have students complete Worksheet PP3 as they read.
- ★ **Small Group 2:** Ask these students to read the chapter independently and complete Worksheet PP3.

Guided Reading Supports

Pages 114–119

- Read the title of the chapter together as a group, “Nicolaus Copernicus.”

- Follow established procedures to display the image for this chapter and preview the Vocabulary Card for *courage*.
- Direct students' attention to the images and captions on **pages 115, 117, and 119**.
- Have students read **pages 114–119** to themselves to find the answer to these questions: "Who was Nicolaus Copernicus? Why is he famous?"
- When students have finished reading, restate the questions and ask students to answer. (Nicolaus Copernicus was a scientist who loved astronomy. His careful observations of the movement of the sun, planets, and stars led him to believe that the sun did not orbit Earth, but rather Earth orbited the sun. He wrote a book explaining his ideas about how the universe worked. While his beliefs were not widely accepted when he was alive, his great courage led him to discover something true.)

Take-Home Material

Have students take home Worksheet PP4 to read to a family member.

Reading Time

Small Group: "The Big Bang"

Introducing the Chapter

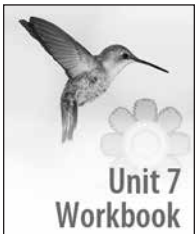
- Ask students to turn to the Table of Contents, locate the chapter, and then turn to the first page of the chapter.
- Ask students to thumb through the chapter looking at the images to see if they can predict what the title means and what it has to do with space.

Previewing the Vocabulary

- Following your established procedures, preview the vocabulary as well as assist students who need help with decoding.



Chapter 15



Worksheet PP5

Vocabulary for “The Big Bang”

1. **theory***—a suggested explanation for why something happens (**theories**) (122)
2. **Big Bang Theory***—a scientific explanation of how the universe began (122)
3. **astrophysicist**—a scientist who studies the physical characteristics of heavenly bodies (**astrophysicists**) (122)
4. **matter**—the stuff everything in the universe is made of; anything that takes up space (124)
5. **sphere**—an object shaped like a ball (**spheres**) (124)

Purpose for Reading

- Tell students that today, they will read independently or in small groups.
- Next, go through the chapter, looking at the images and reading the captions.

Note to Teacher

The Guided Reading Supports that follow are intended for use while you work with students in **Small Group 1**.

- ★ **Small Group 1:** Ask these students to assemble as a group and read the chapter with you. Have students complete Worksheet PP5 as they read.
- ★ **Small Group 2:** Ask these students to read the chapter independently and complete Worksheet PP5.

Guided Reading Supports

Pages 120–123

- Read the title of the chapter together as a group, “The Big Bang.”
- Follow established procedures to display the image for this chapter and preview the Vocabulary Cards for *theory*, *Big Bang Theory*, and *astrophysicist*. Note for students that *theories* and *astrophysicists* are used in this chapter.
- Direct students’ attention to the images and captions on **pages 121 and 123**.
- Have students read **pages 120–123** to themselves to find the answer to the question: “Who is Edmund Hubble and what did he discover?”

- When students have finished reading, restate the question and ask students to answer. (Dr. Edmund Hubble was a famous scientist who discovered all of the distant galaxies in the universe seem to be moving outward faster the more distant they are. The more distant the galaxies, the faster they are moving outward. This concept is now called “Hubble’s Law.”)

Pages 124–127

- Follow established procedures to preview the Vocabulary Cards for *matter* and *sphere*. Note for students that *spheres* is used in this chapter.
- Direct students’ attention to the images and captions on **pages 125 and 127**.
- Have students read **pages 124–127** to themselves to find the answer to the question: “What is the Big Bang Theory?”
- When students have finished reading, restate the question and ask students to answer. (The Big Bang Theory states that the universe began as a tiny ball that exploded out all at once and finally became stars and galaxies. It took billions of years for this to happen.)

Take-Home Material

Have students take home Worksheet PP6 to read to a family member.

Grammar

Build Sentences With the Conjunction *so*

- Worksheet PP7
- Build sentences using the conjunction *so*

Conjunctions *and* and *or*

- Worksheet PP8
- Choose the correct usage of the conjunctions *and* and *or* in sentences and create sentences using conjunctions *and* and *or*

Quotation Marks

- Worksheet PP9
- Choose the sentence that uses quotation marks correctly and write correctly punctuated dialogue

Singular Possessive Nouns

- Worksheet PP10
- Apply singular possessive nouns in sentences

Plural Possessive Nouns

- Worksheet PP11
- Apply plural possessive nouns in sentences

Morphology

Suffixes *-ful* and *-less*

- Worksheet PP12
- Use clues to complete a crossword puzzle

Review Suffixes *-ous*, *-ive*, *-ly*, *-ful*, and *-less*

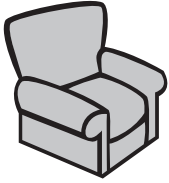
- Worksheet PP13
- Determine if the sentence using the affixed word shows an example of the correct meaning of the word; write your own examples showing the correct meanings of affixed words

Reading Resource

What's in Our Universe? Glossary

- Worksheet PP14
- Use this as a reference during this unit

Teacher Resources



Reader's Chair

Reader's Chair Sign-Up Sheet

Write your name on the line when you are ready to read to the class.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

This template is for recording anecdotal notes about students' reading abilities. You can record things such as: (1) repeated trouble with specific sound-spelling correspondences; (2) difficulty with certain digraphs/letter teams; (3) inability to segment isolated words; and (4) progress with specific skills.

Anecdotal Reading Record

Week of: _____

| | | | |
|-------|-------|-------|-------|
| Name: | Name: | Name: | Name: |
| Name: | Name: | Name: | Name: |
| Name: | Name: | Name: | Name: |
| Name: | Name: | Name: | Name: |
| Name: | Name: | Name: | Name: |
| Name: | Name: | Name: | Name: |
| Name: | Name: | Name: | Name: |

Tens Conversion Chart

Number Correct

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 0 | 10 | | | | | | | | | | | | | | | | | | | |
| 2 | 0 | 5 | 10 | | | | | | | | | | | | | | | | | | |
| 3 | 0 | 3 | 7 | 10 | | | | | | | | | | | | | | | | | |
| 4 | 0 | 3 | 5 | 8 | 10 | | | | | | | | | | | | | | | | |
| 5 | 0 | 2 | 4 | 6 | 8 | 10 | | | | | | | | | | | | | | | |
| 6 | 0 | 2 | 3 | 5 | 7 | 8 | 10 | | | | | | | | | | | | | | |
| 7 | 0 | 1 | 3 | 4 | 6 | 7 | 9 | 10 | | | | | | | | | | | | | |
| 8 | 0 | 1 | 3 | 4 | 5 | 6 | 8 | 9 | 10 | | | | | | | | | | | | |
| 9 | 0 | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | | | |
| 10 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | | |
| 11 | 0 | 1 | 2 | 3 | 4 | 5 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | |
| 12 | 0 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 9 | 10 | | | | | | | | |
| 13 | 0 | 1 | 2 | 2 | 3 | 4 | 5 | 5 | 6 | 7 | 8 | 8 | 9 | 10 | | | | | | | |
| 14 | 0 | 1 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 9 | 10 | | | | | | |
| 15 | 0 | 1 | 1 | 2 | 3 | 3 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 9 | 9 | 10 | | | | | |
| 16 | 0 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 10 | | | | |
| 17 | 0 | 1 | 1 | 2 | 2 | 3 | 4 | 4 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | | | |
| 18 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | | |
| 19 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | |
| 20 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 |

Simply find the number of correct answers the student produced along the top of the chart and the number of total questions on the worksheet or activity along the left side. Then find the cell where the column and the row converge. This indicates the Tens score. By using the Tens Conversion Chart, you can easily convert any raw score, from 0 to 20, into a Tens score.

Please note that the Tens Conversion Chart was created to be used with assessments that have a defined number of items (such as written assessments). However, teachers are encouraged to use the Tens system to record informal observations as well. Observational Tens scores are based on your observations during class. It is suggested that you use the following basic rubric for recording observational Tens scores.

| | |
|------|---|
| 9–10 | Student appears to have excellent understanding |
| 7–8 | Student appears to have good understanding |
| 5–6 | Student appears to have basic understanding |
| 3–4 | Student appears to be having difficulty understanding |
| 1–2 | Student appears to be having great difficulty understanding |
| 0 | Student appears to have no understanding/does not participate |

Reader's Journal Writing Prompts

Unit 7:

1. **Choose** a planet and make a list of facts you know about it.
2. **Determine** ways that life in space is different from life on Earth and write a paragraph stating why one would be easier than the other.
3. **Arrange** the sun, planets, moon, stars, and asteroids of the Milky Way in order.
4. **Select** a constellation and research facts about it. Write a paragraph including your research.
5. Research the Big Bang Theory and write a paragraph outlining facts that scientists know about it.
6. Writing as Dr. Mae Jemison, convince your readers to follow their dreams so they can one day be a good role model for young students.

Either fiction or nonfiction:

1. Summarize the story or chapter you read in three to five sentences.
2. After reading this story or chapter, I wonder...
3. Name three things you liked about the story or chapter.
4. Make a timeline of three to five events in your reading today.
5. Pretend you are a TV reporter who has to interview the main character or person in the story or chapter you read, and write down five questions you would ask.
6. Make a prediction about what will happen next in the story or chapter you just read. Explain why you think this will happen.
7. Pretend you are the main character or a person in the story or chapter you read today and write a diary entry for that person.
8. Tell about something in the story or chapter you read today that is similar to something you have already read.
9. Draw a Venn diagram to show what is alike and/or different between two characters or people in the story or chapter you read.
10. How does the title fit the story or chapter? Suggest another title.

11. Write down three new words you learned while reading and tell what they mean. Use each word in a new sentence.
12. Name three questions you would ask the author of the story or chapter.

Fiction:

1. Tell about the setting.
2. Tell about the plot.
3. Tell about your favorite character. Write three reasons why you chose that character.
4. Which character is your least favorite? Write three reasons why you chose that character.
5. Give examples of personification from the story.
6. Draw a line down the center of your paper. On one side write the title of your favorite story. On the other side write the title of whatever you read today. Compare and contrast the main characters, the settings, and the plots.
7. Write a different ending for the story.
8. If you could be any character in the story or chapter you read today, who would you be? Give three reasons why.
9. Invent a conversation or dialogue between two characters or people in the story or chapter that you read. Write what each character says and don't forget to use quotation marks.
10. Describe a character, setting, or plot that surprised you. Explain what it was and why it surprised you.
11. Tell about a problem that someone in the story or chapter had and what he or she did about it.

Nonfiction:

1. Describe something that you learned from what you read today.
2. Write at least three questions you have after reading the chapter about the topic in the chapter.
3. In three sentences, summarize what you read today.

Glossary for *What's in Our Universe?*

A

African-American studies—the study of the history, culture, and politics of African-Americans, Americans who have ancestors from Africa

Andromeda Galaxy—the spiral galaxy that is closest to the Milky Way Galaxy

Apollo 11—a rocket ship that took three American astronauts to the moon in 1969

asteroid—a space rock, smaller than a planet, that orbits the sun
(asteroids)

asteroid belt—an area between Mars and Jupiter where thousands of asteroids orbit around the sun in a shape like a belt

astronaut—a person who travels into outer space

astronomer—a scientist who studies stars, planets, and outer space
(astronomers)

astrophysicist—a scientist who studies the physical characteristics of heavenly bodies (astrophysicists)

atmosphere—an invisible, protective blanket of air around Earth and other heavenly bodies

attraction—when things are drawn to move closer together

axis—an imaginary straight line through the middle of an object, around which that object spins

B

Big Bang Theory—a scientific explanation of how the universe began

billion—a very large number (**billions**)

booster rocket—one of two parts of a space shuttle that helps launch it into space by overcoming gravity (**booster rockets**)

C

chemical engineering—a field of study in which scientists use their knowledge of chemistry and how things in the natural world are made and interact

comet—a frozen ball of dust and ice that travels through outer space (**comets**)

constellation—stars that form a pattern or shape that looks like such things as a person, an object, or an animal as seen from Earth (**constellations**)

courage—bravery

E

eclipse—the blocking of the light from the sun by another heavenly body (**eclipses**)

Endeavour—a NASA space shuttle

especially—very much, particularly

exploration—the study of unknown places or things

G

galaxy—a very large cluster of billions of stars, dust, and gas held together by gravity and separated from other star systems by a large amount of space (**galaxies**)

gas giant—one of the large outer planets, Jupiter, Saturn, Uranus, and Neptune, that is composed of mainly hydrogen gas (**gas giants**)

gravity—a force that pulls things toward one another

H

Halley's Comet—a famous comet named for British scientist Edmund Halley that is visible from Earth with the naked eye every 76 years

health care—the prevention or treatment of illnesses by trained medical specialists

Hubble Telescope—a large telescope that collects information in space; It was carried into space in 1990 and will be there until 2014.

hydrogen—a gas that is lighter than air and easily catches fire

I

imagine—to pretend

international—involving more than one country

L

launch—to send a rocket into outer space (**launched**)

M

manned—carrying and operated by people

matter—the stuff everything in the universe is made of; anything that takes up space

meteor—a piece of rock that burns very brightly when it enters Earth's atmosphere from space, also called a shooting star (**meteors**)

meteorite—a meteor that does not fully burn up in Earth's atmosphere and falls to Earth

meteoroid—a space rock, smaller than an asteroid, that orbits the sun (**meteoroids**)

Milky Way Galaxy—the galaxy that contains Earth and the solar system in which it lies

N

naked eye—your eye

NASA—National Aeronautics and Space Administration; an organization in the United States that directs space travel and research

O

observatory—a place used to observe the sun, moon, stars, and outer space (**observatories**)

orbit—the curved path something in space takes around another object in space; Planets move in an orbit around the sun. (**orbiting**)

P

Peace Corps—a group of American volunteers who carry out projects in other countries to help improve the lives of people living there

planet—a round object in space that orbits a star (**planets**)

Polaris—the North Star; the brightest star at the end of the handle of the Ursa Minor/Little Dipper that stays in the same place in the night sky all year long

probe—a tool used to explore something, such as outer space (**probes**)

R

research—the kind of equipment used to collect information through experiments

reusable—when something can be used more than once

rotate—turn about an axis or a center (**rotating, rotates, rotation**)

S

satellite—a natural or man-made object that orbits a planet or smaller object (**satellites**)

shuttle—to go back and forth from one place to the next (**shuttled**)

solar system—the sun, other bodies like asteroids and meteors, and the planets that orbit the sun

space shuttle—a manned spacecraft used for exploration

space station—a manned satellite that is made to be in outer space for a long period of time

sphere—an object shaped like a ball (**spheres**)

T

theory—a suggested explanation for why something happens (**theories**)

tilted—slanted or tipped to one side

U

unmanned—not carrying people

Ursa Major—the constellation named by Ptolemy that is also called Big Bear; It includes the Big Dipper.

Ursa Minor—the constellation made of seven stars named by Ptolemy that is also called Little Bear; It is the Little Dipper.

V

volunteer—a person who willingly performs a service without getting paid

W

weightlessness—to have little or no weight

Name: _____

1.1

The Sun, Earth, and Our Solar System

- What two types of energy does the sun provide?
 - The sun provides electrical and wind energy.
 - The sun provides heat and light energy.**
 - The sun provides light and electrical energy.
 - The sun provides water and heat energy.Page 6
- How many days does it take for the Earth to orbit the sun?
 - It takes about 78 days for the Earth to orbit the sun.
 - It takes about 439 days for the Earth to orbit the sun.
 - It takes about 365 days for the Earth to orbit the sun.**
 - It takes about 149 days for the Earth to orbit the sun.Page 12
- How long does it take for the Earth to make a full rotation on its axis?
 - It takes 24 hours for the Earth to make a full rotation on its axis.**
 - It takes 3 days for the Earth to make a full rotation on its axis.
 - It takes 365 days for the Earth to make a full rotation on its axis.
 - It takes 24 days for the Earth to make a full rotation on its axis.Page 12

Unit 7 1
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- What process creates the energy that the sun gives off?
 - The sun's gases create the energy that the sun gives off.**
 - Light and heat from other stars create the energy that the sun gives off.
 - Absorbing energy from the eight planets creates the energy that the sun gives off.
 - Running into objects in space creates the energy that the sun gives off.Page 8

- What is the solar system?

The solar system is made up of the sun, the planets, and other objects in space that orbit the sun.

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Name: _____

2.1

The Moon

- Describe what happens during a solar eclipse.
A solar eclipse occurs when the moon gets in between the sun and Earth.
Page 20
- Describe what happens during an eclipse of the moon.
A lunar eclipse occurs when the moon passes behind Earth and into its shadow.
Page 22
- Why does the moon look different on different nights of the month?
The moon looks different at different times of the month because of the way the light is reflected and how much of the moon we can see from Earth.
Page 18

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- Compare and contrast Earth's rotation around the sun and the moon's rotation around Earth.
It takes 365 days for Earth to rotate around the sun. It takes a month for the moon to rotate around Earth. Both rotate around something.

Pages 12, 18

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

- The moon gives off light of its own just like the sun.
false
Page 16
- The moon orbits around Earth.
true
Page 18
- It takes 24 hours for the moon to orbit around Earth.
false
Page 18
- Solar eclipses happen much more often than eclipses of the moon.
false
Page 22

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Name: _____

2.2

Conjunction *so*

Match the sentences by writing the number of the *cause* in the blank that identifies the appropriate *effect*. Rewrite the sentences below, inserting the conjunction *so*. Remember to add correct capitalization and punctuation.

Causes

- the book was very exciting
- the puppy was very tired
- the weather was rainy
- mother lost her glasses

Effects

- we played inside
- we helped her look for them
- it took a long nap
- Randy read it three times

- The book was very exciting so Randy read it three times.
- The puppy was very tired so it took a long nap.
- The weather was rainy so we played inside.
- My mother lost her glasses so we helped her look for them.

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- Read the two simple sentences.
- Decide which happened first and write the word *Cause* over top of it.
- Decide which happened second and write the word *Effect* over top of it.
- Add the conjunction *so* before the simple sentence that happens second and is the effect, join the two sentences.
- Then, write them as a compound sentence including the conjunction *so*.

Cause

Effect

Example: I forgot to clean up my room. I wasn't allowed to go out to play.

I forgot to clean up my room so I wasn't allowed to go out to play.

- Chocolate is my favorite flavor of ice cream. I asked for it for dessert.
Chocolate is my favorite flavor of ice cream so I asked for it for dessert.
- Tom enjoys Uncle Steve's company very much. He invited Uncle Steve to go out to a movie.
Tom enjoys Uncle Steve's company very much so he invited Uncle Steve to go out to a movie.
- The little girl said hello. Her neighbor said hello back.
The little girl said hello so her neighbor said hello back.

Unit 7

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Name: _____

2.4

Take-Home Worksheet

Practice Conjunction *so*

Match the sentences by writing the number of the *cause* in the blank that identifies the appropriate *effect*. Rewrite the sentences below, inserting the conjunction *so*. Remember to add correct capitalization and punctuation.

Causes

- the day was very hot
- the day was very cold
- the puppy was shivering and afraid
- the kitten was cute

Effects

- we adopted her immediately we bundled up in several layers of clothing
- we asked Mom if we could go swimming at the park
- he hid behind the couch to escape the thunder

- The day was very hot so we asked Mom if we could go swimming at the park.
- The day was very cold so we bundled up in several layers of clothing.
- The puppy was shivering and afraid so he hid behind the couch to escape the thunder.
- The kitten was cute so we adopted her immediately.

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Name: _____

3.1

The Planets Closest to the Sun

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

- Venus is a good place for us to live and visit.
false
Page 28
- The planet Mars looks red because its rocks have rust in them.
true
Page 30
- It takes Mercury less time to orbit the sun than the Earth does because Mercury is much closer to the sun.
true
Page 26
- The four planets closest to the sun have a rocky and solid surface.
true
Page 26

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Name: _____

3.3

-ful: Suffix Meaning "full of"

| | |
|---|-------------------|
| careful—(adjective) full of effort to do something correctly or safely | Answers may vary. |
| fearful—(adjective) full of the feeling that something bad will happen | Answers may vary. |
| hopeful—(adjective) full of the feeling of wanting something to happen and thinking it will | Answers may vary. |
| painful—(adjective) full of suffering caused by injury, illness, or sadness | Answers may vary. |

Write the correct word to complete each sentence.

hopeful careful fearful painful powerful

1. I had a painful blister on my foot from walking a long distance in my new shoes.
2. Grandma told us to be careful when we walked on the icy sidewalk so we wouldn't fall.
3. The fearful kitten hid under the couch when the thunderstorm came through with lots of noises and flashes.
4. The powerful motor in the boat allowed the boat to move quickly even with so many people in it.

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5. Write your own sentence using the one word left in the box.

answers may vary but should include the word
hopeful.

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Name: _____

3.5

-less: Suffix Meaning "lacking"

| | |
|--|-------------------|
| careless—(adjective) lacking the effort to do something correctly or safely | Answers may vary. |
| powerless—(adjective) lacking the strength or authority to do something | Answers may vary. |
| fearless—(adjective) lacking the feeling that something bad will happen | Answers may vary. |
| hopeless—(adjective) lacking the feeling of wanting something to happen and thinking it will | Answers may vary. |

Write the correct word to complete each sentence.

powerless careless painless hopeless fearless

1. He smiled and had a fearless look in his eye and he climbed the ladder up to the high-dive platform for the first time.
2. Steven made a careless mistake on his math test because he didn't check over his answers before turning in the test.
3. Katie had the hopeless thought that she would never finish writing her paper in time for the due date.
4. The powerless lawn mower needed more gas to start up again.

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- Write your own sentence using the one word left in the box.

answers may vary but should include the word
painless.

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Name: _____

3.7

Blank Busters

| | | | |
|-----------|---------|-----------|--------|
| jellyfish | germy | digest | fringe |
| nudging | ridge | exchange | eject |
| budget | lodging | gymnasium | jewel |
| bridging | dodge | average | fudge |
| giraffe | | | |

Challenge Word: answer
Challenge Word: great/grate
Content Word: Jupiter

Fill in the blanks in the sentences below with one of the spelling words in the chart. Only if needed, add a suffix to the end of a word in order for the sentence to make sense: *-s, -ed, -ing, -er, or -ly.*

1. A stained and dirty kitchen sink is germier than a clean one.
2. The stained sink was dirty and germy.
3. The normal or average size of jellyfish in the ocean is about five inches.
4. The long-necked giraffe at the zoo looks like a giant to a short child.
5. My stomach is digesting the yummy fudge that my grandmother made.

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6. In the school's gymnasium students made a huge replica of the planets in our solar system and our class made Jupiter.
7. The fringe around the collar of your jacket looks just great.
8. My little brother kept nudging me with his elbow so I would look at all of the sparkly jewels in the glass case.
9. Our group was ejected from the game because the referee said we were cheating.
10. Asking questions and answering them are opposites.

Write three sentences using spelling words of your choice that were not used in the first ten sentences. Make sure to use correct capitalization and punctuation. You may use the Challenge Words or Content Word in your sentences.

1. Answers may vary.
2. Answers may vary.
3. Answers may vary.

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Name: _____

4.1

The Outer Planets

1. The planets below are in the wrong order. Use the numbers 1–8 to put them in the right order from closest to the sun to farthest away from the sun.

| | |
|---------------------|---------------------|
| A. <u>4</u> Mars | E. <u>7</u> Uranus |
| B. <u>8</u> Neptune | F. <u>6</u> Saturn |
| C. <u>2</u> Venus | G. <u>3</u> Earth |
| D. <u>1</u> Mercury | H. <u>5</u> Jupiter |

Page 33

2. Which planet is the only one that cannot be seen from Earth with the naked eye?

B. Neptune is the only one that cannot be seen with the naked eye.

C. Uranus is the only one that cannot be seen with the naked eye.

D. Jupiter is the only one that cannot be seen with the naked eye.

E. Saturn is the only one that cannot be seen with the naked eye.

Page 32

3. What feature is the planet Saturn most known for?

Saturn is best known for its rings.

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4. Out of all eight planets, which one is the largest?

E. Mercury is the largest of all eight planets.

G. Jupiter is the largest of all eight planets.

H. Saturn is the largest of all eight planets.

I. Neptune is the largest of all eight planets.
- Page 34
5. Jupiter is made up mostly of a gas that is the most common gas in the universe. What type of gas is it?

Jupiter is mostly made of hydrogen

Page 34

6. Choose an inner planet (Mercury, Venus, Earth, Mars) and compare and contrast it with an outer planet. (Jupiter, Saturn, Uranus, Neptune)

| Inner Planet | | Outer Planet |
|--------------|----------------------|--------------|
| Answers | size? | Answers |
| <u>may</u> | rings? | <u>may</u> |
| <u>vary</u> | surface? | <u>vary</u> |
| | distance from Earth? | |
| | interesting fact? | |

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Name: _____

4.2

Conjunctions *and* and *or*

Read both sentences in each item carefully, looking closely at the words in the sentence. Choose and write one conjunction (*and*, *or*) in the blank so that the sentence makes sense.

1. Saturday is going to be a busy day full of fun things to do. First, Mother plans to take all of us to the library and then we will go to get ice cream at my favorite ice cream shop. YUM!
2. My little sister had forgotten to make her bed. Father said to her, "Sandy, you must make your bed or you will not be able to watch TV tonight."

Read both sentences in each item carefully, looking closely at the conjunction *and* or *or* and other clue words in the sentence. Circle the choice that uses the conjunction correctly so that the sentence makes sense.

3. (A) My sister wants to go shopping and my brother wants to go too.
B. My sister wants to go shopping or my brother wants to go too.
4. (A) Sally could wake up early in the morning or she could sleep late today.
B. Sally could wake up early in the morning and she could sleep late today.
5. A. Pete likes the color orange or he also likes the color blue.
(B) Pete likes the color orange and he also likes the color blue.
6. (A) Aunt Dolly should go to the gas station or she will run out of gas.
B. Aunt Dolly should go to the gas station and she will run out of gas.

Choose the correct answer, looking closely at the conjunctions *and* or *or*.

7. (A) Tim is going to play board games or he is going to play basketball this weekend. He can't decide which one.
B. Tim is going to play board games and he is going to play basketball this weekend. He can't decide which one.
8. (A) She will feel better or she will still be sick in the morning.
B. She will feel better and she will still be sick in the morning.

Write compound sentences using the conjunctions *and* and *or*.

9. (*and*)

Answers may vary. _____

10. (*or*)

Answers may vary. _____

Name: _____

4.3

Suffixes *-ful* and *-less*

Write the correct suffix in the blank to complete the sentence. Explain why the suffix you added makes the correct word for the sentence.

1. She had a hope ful expression on her face as she checked the weather and saw that the rain would stop before the outdoor concert that night.
Why did you choose your answer? Answers may vary.
2. With a fear less look in his eyes, Jack touched the snake that the zookeeper brought around to the group even though he was terrified of snakes.
Why did you choose your answer? Answers may vary.
3. Her last visit to the doctor was pain less because she felt great and did not need any shots or medicine.
Why did you choose your answer? Answers may vary.

4. He used a care ful and steady hand to paint the details on the outside of the wooden box so the design would look perfect.

Why did you choose your answer? Answers may vary.

5. The power less camera needed to have a charged battery to start back up again.

Why did you choose your answer? Answers may vary.

6. The hope less search for Grandpa's missing glasses took all morning and finally stopped when he said he would just go the eye doctor to get a new pair.

Why did you choose your answer? Answers may vary.

7. She had the fear less thought that during her next swim practice, she would try to swim the entire length of the pool without stopping.

Why did you choose your answer? Answers may vary.

Name: _____

4.4

Word Sort

Identify the headers. Read the words in the box and circle the vowels that have the /j/ sound. Write the words under each header that match the header's spelling pattern.

| | | |
|------------------|------------------|------------------|
| 'j' > /j/ | 'dge' > /j/ | 'g' > /j/ |
| <u>Jill</u> | <u>budge</u> | <u>cage</u> |
| <u>adjective</u> | <u>smudge</u> | <u>gypsy</u> |
| <u>ajar</u> | <u>pledge</u> | <u>appendage</u> |
| <u>injury</u> | <u>fudge</u> | <u>giant</u> |
| <u>enjoy</u> | _____ | <u>cabbage</u> |
| <u>judgment</u> | _____ | <u>tonnage</u> |
| _____ | _____ | _____ |
| 'dg' > /j/ | 'ge' > /j/ | |
| <u>hedging</u> | <u>gerbil</u> | |
| <u>porridge</u> | <u>gelcap</u> | |
| <u>wedged</u> | <u>gemstones</u> | |
| <u>abridging</u> | _____ | |
| <u>judgment</u> | _____ | |
| _____ | _____ | |

| | | | | |
|-----------|--------|-----------|---------|----------|
| budge | game | beige | cabbage | great |
| hedging | Jill | gemstones | gadget | botch |
| cage | gerbil | abridging | gallery | tonnage |
| gypsy | gelcap | ghastly | ajar | enjoy |
| appendage | smudge | adjective | injury | judgment |
| porridge | wedged | giant | pledge | fudge |

Name: _____

5.2

Asteroids, Comets, and Meteors

- Where in the solar system is the asteroid belt located?
 - The asteroid belt is located right next to the sun.
 - The asteroid belt is located between the two outermost planets.
 - The asteroid belt is located between a small, red planet and the largest planet in the solar system.
 - The asteroid belt is located between the largest planet in the solar system and the planet known for its rings.
 Page 40
- How often can Halley's Comet be seen from Earth with the naked eye?
 - Halley's Comet can be seen every 56 years.
 - Halley's Comet can be seen every 89 years.
 - Halley's Comet can be seen every 20 years.
 - Halley's Comet can be seen every 76 years.
 Page 42
- What is another name for a meteor as it falls to Earth?

Another name for a meteor as it falls to the Earth is a "shooting star."

 Page 44

- Compare and contrast comets and asteroids.

| | | |
|----------------|-------------------|------------------|
| Comets | | Asteroids |
| Answers | size? | Answers |
| may | structure? | may |
| vary | orbit? | vary |

- What are the differences between meteoroids and meteors?

When a meteoroid enters Earth's atmosphere, we call it a meteor.

Page 44

- Compare and contrast asteroids and planets.

| | | |
|------------------|-------------------|----------------|
| Asteroids | | Planets |
| Answers | size? | Answers |
| may | structure? | may |
| vary | orbit? | vary |

Name: _____

5.3

Dictionary Skills

Use the following portion of a dictionary page to answer the questions below.

| | |
|--|--------------|
| jester | jiffy |
| jet 1. <i>noun</i> A stream of liquid forced out a small opening. 2. <i>noun</i> A plane powered by jet engines. 3. <i>verb</i> To travel by jet. | |
| jewel 1. <i>noun</i> A gem used in jewelry. 2. <i>noun</i> A thing greatly valued. | |

1. What are the two guide words on the page? jester jiffy
2. What are the two entry words on the page? jet jewel
3. How many definitions are there for *jet*? 3
4. Would the word *jest* be on this page? no
5. Circle the word(s) that would come before *jester* from the following list: jeep, jigsaw, jettison

6. Which definition of *jet* matches the use of the word in the sentence:
When you shake up a soda and open it, a *jet* of soda will shoot out of the can opening. 1

What part of speech is *jet* in this sentence? noun

7. Choose one of the two remaining definitions for *jet* and write a sentence using *jet* in that form. Answers may vary.

8. Which definition of *jewel* matches the use of the word in the sentence:
The smallest puppy in the litter was the *jewel* of the bunch. 2

What part of speech is *jewel* in this sentence? noun

9. Write a sentence using definition 1 for *jewel*. Answers may vary.

Name: _____

6.1

Galaxies and Stars

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

1. The stars do not look like the sun because they are all a lot smaller than the sun. false
Page 46
2. Other stars revolve around our sun. true
Page 50
3. Other stars are balls of hot gas, just like the sun. true
Page 48
4. The Greek root *astron* means sky. false
Page 48
5. Our solar system is in the Andromeda Galaxy. false
Page 50

Answer the following question in complete sentences on the lines below.

6. What are some ways that stars can be different?
Answers may vary.

7. Compare and contrast a solar system and a galaxy.

| Solar System | | Galaxy |
|----------------|-------------------------|----------------|
| Answers | size? | Answers |
| may | location? | may |
| vary. | characteristics? | vary. |

Name: _____

7.1

Constellations

- How many constellations can be seen in the night sky?
A. 40 constellations can be seen in the night sky.
B. 64 constellations can be seen in the night sky.
 C. 88 constellations can be seen in the night sky.
D. 48 constellations can be seen in the night sky.
Page 56
- Why might the stars in constellations look brighter than other stars?
A. The stars look brighter because they are closer to the Earth.
B. The stars look brighter because they are reflecting light of other stars.
C. The stars look brighter because they are hotter than other stars.
 D. Both A and C

- What is another name for the constellation Ursa Major?
Another name for Ursa Major is Big Bear.

Page 56

- What group of stars is within the constellation Ursa Major?
A. The Little Dipper is within the constellation Ursa Major.
 B. The Big Dipper is within the constellation Ursa Major.
C. Ursa Minor is within the constellation Ursa Major.
D. Polaris is within the constellation Ursa Major.
Page 58

- Why is Polaris different from other stars in the sky?
A. It is part of the Big Dipper.
B. It never stays in the same place.
C. It is not really a star.
 D. It stays in the same place all year.
Page 60

- Pretend you are outside on a clear night. Describe the steps you would take to locate Polaris.

Answers may vary.

Page _____

Name: _____

8.1

Exploring Space

- What did Galileo discover with his telescope?
A. Galileo discovered Mars with his telescope.
B. Galileo discovered Jupiter with his telescope.
 C. Galileo discovered four of Jupiter's moons with his telescope.
D. Galileo discovered the Andromeda Galaxy with his telescope.
Page 62
- What is the Hubble Telescope?
A. It is a telescope in an observatory in Texas.
 B. It is a telescope launched into space by NASA.
C. It is Galileo's first telescope.
D. It is a large telescope NASA put on the moon.
Page 66

- If the Hubble Telescope took a picture of Jupiter, describe what the picture would look like.

Answers may vary.

- Who was the first American astronaut to go into space?
Alan Shepard was the first American astronaut to go into space.
Page 68

- When did the first rocket ship go to the moon?
 A. The first rocket ship went to the moon in 1969.
B. The first rocket ship went to the moon in 1961.
C. The first rocket ship went to the moon in 1972.
D. The first rocket ship went to the moon in 1965.
Page 70

- What is gravity and why is it a challenge for rocket ships?

Gravity is a force of attraction that pulls things toward one another. Earth's gravity pulls things back down to Earth, like rocket ships.

So rocket ships need a lot of force to escape Earth's gravity.

Page 72

Name: _____

8.4

Review Conjunctions

Write the correct conjunction on the blank. Choose from *and*, *but*, *or*, *so*, or *because*.

- 1. We were not surprised that it was so hot because it was summer in the south.
2. Bees, ants, and wasps are all insects.
3. Would you rather go to the movies or to the county fair tonight?
4. Our school has first grade, second grade, and third grade classrooms.
5. I have a bad stomachache so I won't be able to go to my basketball game tonight.
6. We could have done better on the history test but we forgot to study ahead of time.

Write the word Cause over what happened first and the word Effect over what happened second.

Write the conjunction because or so on the blank.

- 7. My cousin likes spaghetti so her children took her to an Italian restaurant.
8. The child began to cry because her parents were angry with her behavior in the store.
9. Aunt May moved to a new city because she needed to move to start her new job.
10. My favorite activity is to read a good book so my friends gave me a gift certificate to a bookstore.
11. My father couldn't find his keys so he missed his doctor's appointment.

Name: _____

8.5

Blank Busters

Table with 4 columns: gnat, skinny, knotted, recently; flannel, knighted, nearby, understand; design, knobby, manned, knowledge; channel, annoy, gnarly, knuckle; campaign

Challenge Word: very/vary
Challenge Word: enough
Content Word: astronomer

Fill in the blanks in the sentences below with one of the spelling words in the box. Only if needed, add a suffix to the end of a word in order for the sentence to make sense: -s, -ed, -ing, -er, or -ly.

- 1. The bothersome TV show was so annoying that I begged my family to change the channel.
2. My very silly uncle conducted a lavish campaign to be knighted, Sir Uncle Fred!
3. Scientists called astronomers study stars, planets, and satellites that are manned by astronauts.
4. In the pasture is a tree that is so old, its branches are knotted and gnarly.

- 5. The flannel nightgowns were warm.
6. When the lights went out, I fumbled around in the dark and ran my knuckles into a closed door.
7. Teachers make it so easy to understand difficult topics and they love to fill our heads with knowledge.
8. I had searched for months but recently discovered there is a library right around the corner, which is nearby enough for me to walk to it.

Write three sentences using spelling words of your choice that were not used in the first ten sentences. Make sure to use correct capitalization and punctuation. You may use the Challenge Words or Content Word in your sentences.

- 1. Answers may vary.
2. Answers may vary.
3. Answers may vary.

Name: _____

9.1

A Walk on the Moon

- What was the name of the landing craft on the Apollo 11?
The landing craft on the Apollo 11 is named the Eagle.
Page 74
- What did Neil Armstrong say when he stepped on the moon?
Neil Armstrong said, "That's one small step for man, one giant leap for mankind."
Page 78
- How did people find out about the walk on the moon?
 - They had to wait until the astronauts came back to earth to talk about it.
 - They were able to watch it while it happened on live TV.
 - No one was really interested in the walk on the moon.
 - Reporters went to the moon with the astronauts.Page 78
- Where did the spaceship land when it returned from space?
 - The spaceship landed at a NASA base.
 - The spaceship landed at an airport in Florida.
 - The spaceship landed at an Army base.
 - The spaceship landed in the ocean.Page 80

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- The events of the Apollo 11 mission to space are listed below are in wrong order. Use the numbers 1-6 to put them in the right order.
4 The Eagle lands on the surface of the moon.
3 Apollo 11 gets into space and steers toward the moon.
2 Apollo 11 uses its strong rockets to push against gravity and into space.
1 Three men board Apollo 11 and will be the first men to explore the moon.
6 The space ship splashed down in the sea and is picked up by the Navy.
5 Neil Armstrong and Buzz Aldrin go for a walk on the moon.

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

- Neil Armstrong is the name of the astronaut who was in charge of flying Apollo 11.
false
Page 76
- It is extremely hot on the moon.
false
Page 78
- Buzz Aldrin and Michael Collins are the names of two of the astronauts on Apollo 11.
true

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Name: _____

9.2

Grammar Review

Circle the sentence that is punctuated correctly.

- "she was so glad to see her friend remarked Sally."
 - "She was so glad to see her friend," remarked Sally.
 - "She was so glad to see her friend?" remarked Sally.
 - "She was so glad to see her friend, remarked Sally."
- "The tunnel was dark long and scary, said Ted."
 - "The tunnel was dark, long, and scary," said Ted.
 - "The tunnel was dark, long, and scary, said Ted."
 - "The tunnel was dark long, and scary," said Ted.
- Mrs. Black asked "Do you have your reader open."
 - Mrs. Black asked "Do you have your reader open?"
 - Mrs. Black asked? "Do you have your reader open."
 - Mrs. Black asked, "Do you have your reader open?"

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9.3

Suffix Review

Reminder:

- *-ous* means "full of"
- *-ive* means "relating to"
- *-ly* means "in a _____ way"
- *-ful* means "full of"
- *-less* means "lacking"

If the sentence shows an example of the correct meaning of the underlined word, write *yes* on the blank that follows. If the sentence does not show an example of the correct definition of the underlined word, write *no*.

- Dana came up with an inventive way to hang art in her room and made the arrangement look like all the other rooms in the house. no
- I saw the hopeless look in my brother's eyes when I told him Dad was running late and we probably wouldn't make it to the movie tonight. yes
- Dad keeps poisonous cleaning supplies locked up in the shed so no one can accidentally get into them and get sick. yes
- He drove dangerously through the neighborhood, taking his time and slowing down when he saw people walking or riding bikes. no
- The principal appreciatively presented the teacher with her award, thanking her for her hard work and dedication. yes
- I had a painful gash on my knee from falling on the playground that throbbed and ached. yes
- At the craft store, she bought supplies to make a decorative frame to hang on a wall that needed some decoration. yes

- His fearless attitude prevented him from trying new things since he was scared of almost everything. no
- We drove through the mountainous area and could see nothing but flat farmland all around. no
- Workers used the powerful crane to lift the steel beams high up to the top of the building. yes

Write a sentence for each word like the previous ones that you can answer with *yes*.

- creative*

Answers may vary.

- furiously*

Answers may vary.

- fearful*

Answers may vary.

Name: _____

9.4

Word Sort

Identify the headers. Read the words in the box and circle the vowels that have the /n/ sound. Write the words under each header that match the header's spelling pattern.

| 'n' > /n/ | 'n' > /n/ | 'nn' > /n/ |
|------------------|------------------|------------------|
| <u>unknown</u> | <u>nicely</u> | <u>annex</u> |
| <u>recognize</u> | <u>bigness</u> | <u>funny</u> |
| <u>darkness</u> | <u>bleakness</u> | <u>connect</u> |
| <u>agnostic</u> | <u>messenger</u> | <u>beginning</u> |
| <u>ignite</u> | <u>diagnose</u> | <u>sunny</u> |
| <u>hooknoses</u> | <u>signal</u> | _____ |
| | 'gn' > /n/ | 'kn' > /n/ |
| | <u>gnu</u> | <u>knapsack</u> |
| | <u>signs</u> | <u>unknown</u> |
| | <u>foreign</u> | <u>knocker</u> |
| | _____ | <u>knifed</u> |

| | | | | |
|------------------|------------------|------------------|------------------|------------------|
| <u>nicely</u> | <u>sunny</u> | <u>signal</u> | <u>knocker</u> | <u>signs</u> |
| <u>bigness</u> | <u>gnu</u> | <u>unknown</u> | <u>recognize</u> | <u>hooknoses</u> |
| <u>annex</u> | <u>messenger</u> | <u>loving</u> | <u>darkness</u> | <u>knifed</u> |
| <u>bleakness</u> | <u>knapsack</u> | <u>connect</u> | <u>agnostic</u> | <u>foreign</u> |
| <u>funny</u> | <u>diagnose</u> | <u>beginning</u> | <u>ignite</u> | <u>baking</u> |

Name: _____

10.2

What's it Like in Space?

- What is gravity?
 - Gravity is the force of attraction that pulls things away from each other.
 - Gravity is the measurement of how hot the sun is.
 - Gravity is the force of attraction that pulls things toward one another.
 - Gravity is the measurement of how far away the moon is.
 Page 82
- Why isn't gravity as strong on the moon as on Earth? _____
The moon is not as big as Earth so the gravity isn't as strong. _____
 Page 84
- How is eating in space different than eating on Earth? _____
If you let go of your food, it won't stay where you put it. It will float. _____
 Page 88

4. Why can't you hear sounds in space? _____
There is no air in space so there is no medium
for the sound waves to travel through.
 Page 90

5. Why don't astronauts need to carry air tanks inside their spacecraft to breathe? _____
Oxygen is pumped inside the spaceship
so astronauts don't need to carry air tanks
inside their spaceship.
 Page 90

Write *true* or *false* on the line after the sentence.

1. Seen from space, Earth looks like a large brown sphere. false
 Page 91
2. The astronauts do not need to wear any extra clothing because it is the same temperature in space as on Earth. false
 Page 90
3. The astronauts on the moon had great difficulty jumping because the pull of gravity on the moon is very strong. false
 Page 84

Name: _____

Dictionary Skills

Use the following portion of a dictionary page to answer the questions below.

| name | neck |
|--|------|
| name 1. <i>noun</i> A word used to call a person, place, or thing. 2. <i>noun</i> A bad word or phrase used to hurt someone. 3. <i>noun</i> A person's reputation. 4. <i>verb</i> To state the name of something. 5. <i>verb</i> To select someone for a job. | |
| neat 1. <i>adjective</i> Not messy. 2. Great or excellent. | |

1. Would the word *narrate* be on this page? yes
2. Circle the word(s) that would come before *name* from the following list:
nails, nag, namely
3. Which definition of *neat* matches the use of the word in the sentence:
 My desk at school is always *neat*. 1
 What part of speech is *naked* in this sentence? adjective
4. Write a sentence using definition 2 for *neat*. _____

Answers may vary.

Name: _____

The Space Shuttle

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

1. A space shuttle only carries astronauts into space. false
 Page 96
2. Booster rockets help space shuttles get off the ground and overcome Earth's gravity to get into space. true
 Page 94
3. The last space shuttle mission took place in July, 2011. true
 Page 96

Answer the following questions on the lines provided.

4. How is a space shuttle different from the Apollo 11 spacecraft?
Answers may vary.

Page(s) _____

5. What are the other ways NASA is planning to explore space?
NASA is planning to launch unmanned probes
and satellites. NASA hopes to learn more
about the moon's gravity and want to explore
asteroids.

Page 96

Name: _____

12.1

The International Space Station

- How many astronauts can live at the international space station at once?
 - Two astronauts can live at the international space station at once.
 - Fifteen astronauts can live at the international space station at once.
 - Three astronauts can live at the international space station at once.**
 - Five astronauts can live at the international space station at once.
 Page 98
- How long does an astronaut stay at the international space station?
 - An astronaut stays at the international space station for one year.
 - An astronaut stays at the international space station for six months.**
 - An astronaut stays at the international space station for six years.
 - An astronaut stays at the international space station eight months.
 Page 98

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

- Astronauts in the space station experience the same amount of gravity as people on Earth. false
Page 100
- Astronauts have to run at least once a day to stay in good physical shape. true
Page 100
- When an astronaut returns from space, they have no problem adjusting to the gravity on Earth. false
Page 104

Answer the following question on the lines provided.

6. How is taking a shower in space different than showering on Earth?

In space you have to rub the water on your skin and scrape it off.

Name: _____

12.2

Singular Possessive Nouns

Rewrite each sentence, changing the group of words in parentheses to a singular possessive noun.

Example: (The light of the sun) is warm on my face.
The sun's light is warm on my face.

- (The child of my aunt) came to visit us.
My aunt's child came to visit us.
- (The car belonging to my friend) was hit by a truck.
My friend's car was hit by a truck.
- (The phone call from my teacher) made my mother very happy.
My teacher's phone call made my mother very happy.
- (The cage belonging to the hamster) needed to be cleaned.
The hamster's cage needed to be cleaned.

Write the singular possessive noun and what belongs to each singular possessive noun on the appropriate blanks.

Example: The boy's picture was hung in the front hall.
Singular Possessive Noun: boy's What belongs to him/her/it? picture

- Hank's skateboard is purple.
Singular Possessive Noun: _____ What belongs to him/her/it? skateboard
Hank's
- The giant's footsteps in the hall were thunderous.
Singular Possessive Noun: _____ What belongs to him/her/it? footsteps
giant's
- The horse's mane blew in the wind as he ran around the track.
Singular Possessive Noun: _____ What belongs to him/her/it? mane
horse's
- The artist's portrait was so realistic that I thought it would speak to me.
Singular Possessive Noun: _____ What belongs to him/her/it? portrait
artist's

13.1
continued

Name: _____

1. What does the word **exert** mean in the following sentence from the selection?

Newton's law of gravity says that the closer something is, and the more mass it has, the more gravitational pull it will **exert** on another object.

A. take away
 B. apply
 C. eliminate
 D. play

2. Why might your sandcastle be swept away by a high tide?

A. At high tide, water stays far away from the beach.
 B. At high tide, water is calm.
 C. At high tide, water comes far up onto the beach.
 D. At high tide, the water is shallow.

3. How often is a tidal island an island? **only at high tide**

4. Why did the author write this selection?

A. to inform readers about tides on Earth
 B. to inform readers about tides on the moon
 C. to inform readers about gravity
 D. to inform readers about scientists

5. What has more impact on the tides, the moon or the sun? **the moon**

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13.1
continued

6. Why does the tidal basin in Washington, D.C., need gates to let water in and out?
The tidal basin is a man-made reservoir that captures 250 million gallons of water twice a day at high tide. The gates let the water in and out.

7. Tidal power plants are not very **common**.

8. Read the following sentence.

She made a **careful** measurement of the picture frame to be sure she trimmed the picture correctly so it would fit inside.

Does the sentence demonstrate the meaning of the word *careful*?

Circle: Yes No

Why? **She measured with care the picture frame so the picture would fit inside.**

9. Circle the correct conjunction.

The child looked sad (because, so) we stopped to cheer her up.

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13.1
continued

Name: _____

10. Add adjectives and adverbs to the first row of boxes and simple sentences to the second row to answer the question, *Why did the kitten play?* Choose from your list to create a new, more interesting sentence using the conjunction *because* to connect the two simple sentences.

| Starter Sentence: The kitten played. | | | |
|--------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Adjectives to describe the kitten | Adverbs to describe how | Adverbs to describe when | Adverbs to describe where |
| 1. Answers may vary. | 1. Answers may vary. | 1. Answers may vary. | 1. Answers may vary. |
| 2. Answers may vary. | 2. Answers may vary. | 2. Answers may vary. | 2. Answers may vary. |

Simple sentences that answer the question, "Why did the kitten play?"

1. **Answers may vary.**
 2. _____

New sentence: **Answers may vary.**

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13.1
continued

11. Which word with the suffix *-less* has the opposite meaning of the word *powerful*? **powerless**

12. What does the word **swirling** mean in the following sentence from the selection?

There are also other gases on Jupiter and all of them are blowing and **swirling** around.

A. standing still
 B. spinning
 C. rocking
 D. crawling

13 & 14. The Great Red Spot only moves **east** or **west** and never moves **north** or **south**.

15. What is the main idea of this selection?
The Great Red Spot of Jupiter is a giant storm that only moves east and west, is larger than Earth, and resembles a predictable hurricane.

16. What might happen if the belts of gas on Jupiter started moving north and south as well as east and west?

A. It might be harder to predict their movement.
 B. Jupiter may not be called a gas giant.
 C. Jupiter may move closer to the sun.
 D. There might be more hurricanes on Jupiter.

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Name: _____

13.1
continued

- 17 & 18. Circle the correct conjunction.

People must pay for items they take from a store (and, or) they will be arrested for stealing.

(And, Or, So, Because) purple is my sister's favorite color, she asked Mother to buy her a purple lunch box.

19. Which word with the suffix *-ous* might describe the fastest winds in the Great Red Spot?
- A. humorous
 - B. mountainous
 - C. joyous
 - D. dangerous
20. Circle words that would be on a dictionary page with the entry words *red* and *reef*.
- A. recycle, redeem, redundant
 - B. redcoat, reek, redwood
 - C. redwood, reduce, reed
 - D. reek, redden, Red Cross

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Name: _____

13.1
continued

21. Where is the family at the beginning of this selection? _____

They were at Mega Adventure Land.

22. List 5 things Jen knew about astronomy.

1. Atmosphere of Venus

2. Rings of Saturn

3. Great Red Spot on Jupiter

4. Why Pluto was no longer counted as a planet

5. About Apollo 11 and moon landings

23. What does the word **spotted** mean in the following sentence from the selection?

That's why Mr. Jones was so happy when he **spotted** the flyer.

- A. saw
 - B. wrote
 - C. threw away
 - D. cut up
24. Why was it like Jen to take an awesome ride and turn it into a science lesson?

Jen was nuts about science.

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25. Arrange the events from the selection in order from 1–5.

5 Jen called to tell her family about the first day of astronomy camp.

2 Jen's dad saw a flyer for astronomy camp and thought Jen would like it.

1 Jen calculated the g-force on the last plunge of the roller coaster ride.

4 Jen's mother cried most of the way home.

3 Jen's family took her to astronomy camp.

26. Which of the following was not something Jen learned about during her first day of astronomy camp?
- A. the Hubble Space Telescope
 - B. the Big Bang
 - C. galaxies
 - D. Halley's Comet

27. Write the sentence with appropriate punctuation and capitalization.

our art teacher asked which of the four paintings do you like the best

Our art teacher asked, "Which of the four paintings do you like the best?"

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Name: _____

13.1
continued

28. Circle words that would be on a dictionary page with the entry words *bagel* and *ballad*.

- A. ballast, bale, balcony
- B. baggage, ball, balance
- C. bait, ballerina, bald
- D. bag, bailiff, balk

29. Rewrite the sentence, changing the group of words in parentheses to a singular possessive noun.

(The wagon belonging to Bobby) was full of huge pinecones that he had collected all over the neighborhood.

Bobby's wagon was full of huge pinecones that he had collected all over the neighborhood.

30. Circle the appropriate suffix or suffixes to add to the root word to complete the following sentence.

Jen act_____ pursued opportunities to talk about science, learn about science, and do science-related activities.

- ive
- ly
- ous
- less

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Name: _____

14.1

Plural Possessive Nouns

Rewrite each sentence, changing the group of words in parentheses to include a plural possessive noun.

Example: (The statues belonging to the sculptors) are very lifelike.
The sculptors' statues are very lifelike.

- (The neighbors of my cousins) came to visit us.
My cousins' neighbors came to visit us.
- (The bicycles belonging to my friends) are all brand new.
My friends' bicycles are all brand new.
- (The cards from well-wishers) made my brother feel very loved.
Well-wishers' cards made my brother feel very loved.
- (The leashes belonging to my cats) should be replaced.
My cats' leashes should be replaced.

Write the plural possessive noun and what belongs to each plural possessive noun on the appropriate blanks.

Example: The boys' pictures were taped to the refrigerator.
Plural Possessive Noun: boys' What belongs to them? pictures

- The painters' spots to paint are near the ocean.
Plural Possessive Noun: _____ What belongs to them?
painters' spots
- The magicians' tricks fooled all of us.
Plural Possessive Noun: _____ What belongs to them?
magicians' tricks
- The kittens' ears all twitch when I open a can of cat food.
Plural Possessive Noun: _____ What belongs to them?
kittens' ears
- The plumbers' tools are shiny and new.
Plural Possessive Noun: _____ What belongs to them?
plumbers' tools

Name: _____

PP1

Dr. Mae Jemison

- The events of Mae Jemison's life listed below are in the wrong order. Use the numbers 1–7 to put them in the right order.
 - 4 Joins the Peace Corps and goes to Africa
 - 1 Graduates from high school at the age of 16
 - 6 Becomes the first African-American female astronaut to go into space
 - 2 Attends Stanford University
 - 5 Is one of 15 people chosen out of 2,000 applicants to be an astronaut
 - 3 Goes to medical school
 - 7 Retires from NASA and becomes a professor
- Why do you think Mae Jemison is a good role model for others? Can you name any other people that you have learned about in previous lessons who would be a good role model?

Answers may vary.

Name: _____

PP3

Nicolaus Copernicus

If a statement is true, write "true" on the line. If a statement is false, write "false" on the line.

- The Greeks and other ancient people believed that the sun revolved around the Earth.
true
Page 114
- Nicolaus Copernicus studied astronomy, psychology, history, and art.
false
Page 114
- Nicolaus Copernicus was only able to view space and come up with ideas because he had a telescope.
false
Page 116
- Even after Nicolaus Copernicus died, the church and other scientists argued against his theory that the Earth revolved around the sun.
true
Page 118

Answer the following question on the lines below.

5. List some ways that ancient people's ideas about space differ from what we know today.

Answers may vary.

Page _____

Name: _____

PP5

The Big Bang

1. What does the Big Bang Theory try to explain?
The Big Bang Theory tries to explain how the universe and our solar system came to be.

Page 120

2. Who proposed the Big Bang Theory?
- A. George Lemaitre proposed the Big Bang Theory.
 - B. Alexander Friedmann proposed the Big Bang Theory.
 - C. Edwin Hubble proposed the Big Bang Theory.
 - D. all of the above
- Page 122
3. According to the Big Bang Theory, how did everything in space start off?
- A. Everything started as a tightly packed ball.
 - B. Everything started as one giant planet.
 - C. Everything started as a small ball of heat energy.
 - D. Everything started the exact way that it is now.

Page 124

4. How long ago do many scientists believe the Big Bang happened?

- A. 14 million years ago.
- B. 7 billion years ago.
- C. 14 billion years ago.
- D. 14 thousand years ago.

Page 124

5. According to the theory, after the matter from the Big Bang cooled off, what caused the matter to pull together into spheres?

- A. Heat caused the matter to pull together into spheres.
- B. Black holes caused the matter to pull together into spheres.
- C. Expansion caused the matter to pull together into spheres.
- D. Gravity caused the matter to pull together into spheres.

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Name: _____

PP8

Conjunctions *and* and *or*

Read both sentences in each item carefully, looking closely at the conjunction *and* or *or* and other clue words in the sentence. Circle the choice that uses the conjunction correctly so that the sentence makes sense.

1. A. I am wearing sneakers or I am wearing sandals right now.
B. I am wearing sneakers and I am wearing sandals right now.
2. A. We are going to watch a movie and we are also going to eat cake for my birthday.
B. We are going to watch a movie or we are also going to eat cake for my birthday.
3. A. She will wear a purple sweater or she will wear a green sweater to school today.
B. She will wear a purple sweater and she will wear a green sweater to school today.
4. A. Uncle Zack should get more sleep and he may fall asleep driving.
 B. Uncle Zack should get more sleep or he may fall asleep driving.
5. A. I ate an orange or my brother ate an apple for snack yesterday.
 B. I ate an orange and my brother ate an apple for snack yesterday.

Write sentences using the conjunctions *and* or *or*.

6. (and) **Answers may vary.** _____

7. (or) **Answers may vary.** _____

Name: _____

PP9

Quotation Marks

Circle the sentence that is punctuated correctly.

- A. "the hamster wore himself out and is sleeping now," said Bob.

B. "The hamster wore himself out and is sleeping now," said Bob.

C. "The hamster wore himself out and is sleeping now?" said Bob.

D. "the hamster wore himself out and is sleeping now, said Bob."
- A. "Why are you so friendly to everyone," asked Gina.

B. "Why are you so friendly to everyone?" asked Gina.

C. "Why are you so friendly to everyone," asked Gina?

D. "why are you so friendly to everyone." asked Gina.
- A. My art teacher exclaimed, "you are a terrific artist!"

B. "My art teacher exclaimed, "You are a terrific artist!"

C. My art teacher exclaimed! "You are a terrific artist!"

D. My art teacher exclaimed, "You are a terrific artist!"
- A. Have you ever seen a purple and orange cat, "I wondered."

B. "Have you ever seen a purple, and orange cat," I wondered.

C. "Have you ever seen a purple and orange cat?" I wondered.

D. "Have you ever seen a purple and orange cat," I wondered?

Name: _____

PP10

Singular Possessive Nouns

Rewrite each sentence, changing the group of words in parentheses to a singular possessive noun.

Example: (The light of the sun) is warm on my face.
 The sun's light is warm on my face.

- (The visit of my grandfather) surprised and delighted all of us.
My grandfather's visit surprised and delighted all of us.
- (The wagon belonging to my neighbor) was painted bright red.
My neighbor's wagon was painted bright red.
- (The note from my sister) said, "Happy Birthday."
My sister's note said, "Happy Birthday."
- (The bowl belonging to my poodle) needed to be filled.
My poodle's bowl needed to be filled.

Write the singular possessive noun and what belongs to each singular possessive noun on the appropriate blanks.

Example: The boy's picture was hung in the front hall.
 Singular Possessive Noun: boy's What belongs to him/her/it? picture

- Shel's poetry was very funny and imaginative.
 Singular Possessive Noun: _____ What belongs to him/her/it? _____
Shel's **poetry**
- The troll's shouts made us stop before crossing the bridge.
 Singular Possessive Noun: _____ What belongs to him/her/it? _____
troll's **shouts**
- The school's cafeteria was full of students eating lunch.
 Singular Possessive Noun: _____ What belongs to him/her/it? _____
school's **cafeteria**
- The cloud's movement across the sky changed its shape.
 Singular Possessive Noun: _____ What belongs to him/her/it? _____
cloud's **movement**

Name: _____

PP11

Plural Possessive Nouns

Rewrite each sentence, changing the group of words in parentheses to include a plural possessive noun.

Example: (The patterns of the blocks) were hard to copy.
 The blocks' patterns were hard to copy.

- (The smiles of the neighbors) made us feel very welcome.
The neighbors' smiles made us feel very welcome.
- (The lawnmowers of the workers) were all falling apart.
The workers' lawnmowers were all falling apart.
- (The paintings from the students) were cheery and bright.
The students' paintings were cheery and bright.
- (The toys belonging to the toddlers) needed to be put away.
The toddlers' toys needed to be put away.

Write the plural possessive noun and what belongs to each plural possessive noun on the appropriate blanks.

Example: The girls' portraits were waiting to be hung.
Plural Possessive Noun: girls' What belongs to them? portraits

1. The authors' books filled our library.

Plural Possessive Noun: _____ What belongs to them? _____
authors' books

2. The farmers' hours were long and full of work.

Plural Possessive Noun: _____ What belongs to them? _____
farmers' hours

3. The puppies' paws were muddy and messy.

Plural Possessive Noun: _____ What belongs to them? _____
puppies' paws

4. My cousins' names all begin with the letter 'S'.

Plural Possessive Noun: _____ What belongs to them? _____
cousins' names

Name: _____

A crossword puzzle grid with the following words filled in:
 1. careful (horizontal)
 2. painless (horizontal)
 3. careless (horizontal)
 4. hopeful (horizontal)
 5. painful (vertical)
 6. painless (vertical)
 7. careful (vertical)
 8. hopeless (vertical)

Name: _____

Suffix Review

Reminder:

- *-ous* means "full of"
- *-ive* means "relating to"
- *-ly* means "in a _____ way"
- *-ful* means "full of"
- *-less* means "lacking"

If the sentence shows an example of the correct meaning of the underlined word, write **yes** on the blank that follows. If the sentence does not show an example of the correct meaning of the underlined word, write **no**.

1. He stacked the papers in such a careless way that when someone accidentally bumped into the table, the stack fell to the floor. yes
2. She was so fearful of spiders that she was always the person that others asked to catch spiders and put them outside. no
3. The carpenter inventively solved the problem of having a piece of wood with a hole in it by filling in the hole and strengthening the board with other materials. yes
4. The genie was so furious that he left Aladdin in the cave. yes
5. I had an appreciative feeling when nobody would help me look for my lost keys. no
6. The powerless sailboat just sat in the middle of the lake since the wind wasn't blowing. yes
7. The president of the college added some humorous comments at the end of his speech to be sure audience members knew he was serious. no

8. The hopeful boy would not go to bed until he saw whether his favorite basketball team won their game. yes
9. We worked in a cooperative group and argued over how to finish the mural for the playground. no
10. He dangerously rides his bike only on roads with bike lanes and only when he wears a helmet. no

Write a sentence for each word like the previous ones that you can answer with **yes**.

1. *deconatively*

Answers may vary.

2. *careful*

Answers may vary.

3. *hopeless*

Answers may vary.

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ACKNOWLEDGMENTS

These materials are the result of the work, advice, and encouragement of numerous individuals over many years. Some of those singled out here already know the depth of our gratitude; others may be surprised to find themselves thanked publicly for help they gave quietly and generously for the sake of the enterprise alone. To helpers named and unnamed we are deeply grateful.

CONTRIBUTORS TO EARLIER VERSIONS OF THESE MATERIALS

Susan B. Albaugh, Kazuko Ashizawa, Nancy Braier, Kathryn M. Cummings, Michelle De Groot, Diana Espinal, Mary E. Forbes, Michael L. Ford, Ted Hirsch, Danielle Knecht, James K. Lee, Diane Henry Leipzig, Martha G. Mack, Liana Mahoney, Isabel McLean, Steve Morrison, Juliane K. Munson, Elizabeth B. Rasmussen, Laura Tortorelli, Rachael L. Shaw, Sivan B. Sherman, Miriam E. Vidaver, Catherine S. Whittington, Jeannette A. Williams

We would like to extend special recognition to Program Directors Matthew Davis and Souzanne Wright who were instrumental to the early development of this program.

SCHOOLS

We are truly grateful to the teachers, students, and administrators of the following schools for their willingness to field test these materials and for their invaluable advice: Capitol View Elementary, Challenge Foundation Academy (IN), Community Academy Public Charter School, Lake Lure Classical Academy, Lepanto Elementary School, New Holland Core Knowledge Academy, Paramount School of Excellence, Pioneer Challenge Foundation Academy, New York City PS 26R (The Carteret School), PS 30X (Wilton School), PS 50X (Clara Barton School), PS 96Q, PS 102X (Joseph O. Loretan), PS 104Q (The Bays Water), PS 214K (Michael Friedsam), PS 223Q (Lyndon B. Johnson School), PS 308K (Clara Cardwell), PS 333Q (Goldie Maple Academy), Sequoyah Elementary School, South Shore Charter Public School, Spartanburg Charter School, Steed Elementary School, Thomas Jefferson Classical Academy, Three Oaks Elementary, West Manor Elementary.

And a special thanks to the CKLA Pilot Coordinators Anita Henderson, Yasmin Lugo-Hernandez, and Susan Smith, whose suggestions and day-to-day support to teachers using these materials in their classrooms was critical.



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