TEACHING LITERACY IN TENNESSEE: UNIT STARTER GRADE 2 ELA UNIT CONNECTED TO EARTH SCIENCE

Important Note: *The Unit Starter provides the foundation for English language arts unit planning in connection with Earth science. In addition to thoughtful preparation from these resources, there are additional components of the literacy block for which educators will need to plan and prepare. See page 6 for more guidance on planning for other components of the literacy block.*

TN Department of Education

TABLE OF CONTENTS

Note: A student packet with all daily tasks included can be accessed in a separate document entitled: "Grade 2 Student Packet."

GUIDANCE FOR EDUCATORS

1. WHY IS THE DEPARTMENT PROVIDING UNIT STARTERS?

The research is clear: Reading proficiently—especially reading proficiently early—prepares students for life-long success. To support greater reading proficiency among all students in Tennessee, Governor Haslam, the First Lady, and Commissioner McQueen kicked off the Read to be Ready campaign in February 2016 with a goal of having 75 percent of Tennessee third graders reading on grade level by 2025. Together, we are making progress. High-quality texts that meet grade-level expectations are increasingly making their way into classrooms. Students are spending more time reading, listening, and responding to texts that have the potential to build both skills-based and knowledge-based competencies. However, the first year of the initiative has revealed a need for strong resources to support the growing teacher expertise in Tennessee.

In May of 2017, the Tennessee Department of Education released Teaching Literacy in Tennessee. This document outlines the types of opportunities students need to become proficient readers, writers, and thinkers and includes a literacy unit design framework describing the ways that teachers can create these opportunities. This includes building rich learning opportunities around meaningful concepts within the English language arts block where students listen to, read, speak, and write about sets of texts that are worthy of students' time and attention.

The resources found in each of the Teaching Literacy in Tennessee: Unit Starters are intended to support planning for one full unit aligned to the vision for Teaching Literacy in Tennessee. They are intended to serve as a model to reference as educators continue to design units and compare the alignment of lessons to the vision for Teaching Literacy in Tennessee.

2. WHAT RESOURCES ARE INCLUDED IN A UNIT STARTER?

The Unit Starters include several of the key components in the framework for Teaching Literacy in Tennessee. These components serve as the foundation for strong unit planning and preparation.

Content Goals: Each Unit Starter begins with content goals that articulate the desired results for learners. [Adapted from McTighe, J. & Seif, E. (2011) and Wiggins, G. & McTighe, J. (2013)]

Universal Concept: A concept that bridges all disciplinary and grade-level boundaries. This concept provides educators and students with an organizational framework for connecting knowledge across disciplines into a coherent view of the world.

Universal Concept Example: Interdependence

Unit Concept: The unit concept is the application of the universal concept to one or more disciplines. This concept provides students with an organizational framework for connecting knowledge within the disciplines into a coherent view of the world and provides educators with a focus for unit planning.

Unit Concept Example: Interdependence of living things

Enduring Understandings and Essential Questions: Enduring understandings are the ideas we want students to understand, not just recall, from deep exploration of our unit concept; and essential questions are the corresponding open-ended questions that will guide students' exploration of these ideas. The enduring understandings reflect the abstract, easily misunderstood, "big" ideas of the discipline. They answer questions like "Why?" "So what?" and "How does this apply beyond the classroom?" to support deep levels of thinking. These questions spark genuine and relevant inquiry and provoke deep thought and lively

discussion that will lead students to new understandings.

Enduring Understanding Example: People, plants, and animals depend on each other to survive.
Essential Question Example: Why do humans need to preserve trees?

Disciplinary Understandings and Guiding Questions: Disciplinary understandings are the specific ideas and specialized vocabulary of the discipline. These ideas will focus instruction, build disciplinary knowledge, and provide the schema to organize and anchor new words. Student understanding of these content-related ideas is critical to investigation and understanding of the more abstract and transferable ideas outlined in the enduring understandings. Guiding questions are open ended and guide students' exploration of the disciplinary understanding. These questions prompt ways of thinking and support knowledge building within the content areas.

Disciplinary Understanding Example: The structure of plants and the function of each part
Guiding Question Example: Why are roots important to plants?

The concepts for this set of Unit Starters were derived from the vertical progression of Tennessee's Earth Science Standards and focus on plant and animal life. These standards are represented below. **Though strong connections are made to the science standards within the unit, it is critical to note that this Unit Starter does not encompass the totality of the identified science standards. The unit is not intended to replace instruction and hands-on application of the science standards and practices.**

Kindergarten

- K. ESS2.1: Analyze and interpret weather data (precipitation, wind, temperature, cloud cover) to describe patterns that occur over time (hourly, daily) using simple graphs, pictorial weather symbols, and tools (thermometer, rain gauge).
- K. ESS2.2: Develop and use models to predict weather and identify patterns in spring, summer, autumn, and winter
- K.ESS3.2: Explain the purpose of weather forecasting to prepare for, and respond to, severe weather in Tennessee.

Grade 1

- 1.ESS1.1: Use observations or models of the sun, moon, and stars to describe patterns that can be predicted.
- 1.ESS1.2: Observe natural objects in the sky that can be seen from Earth with the naked eye and recognize that a telescope, used as a tool, can provide greater detail of objects in the sky.
- 1.ESS1.3: Analyze data to predict patterns between sunrise and sunset, and the change of seasons.

Grade 2

- 2.ESS1.1: Recognize that some of Earth's natural processes are cyclical, while others have a beginning and an end. Some events happen quickly, while others occur slowly over time.

Grade 3

- 3.ESS1.1: Use data to categorize the planets in the solar system as inner or outer planets according to their physical properties.

Texts for Interactive Read Aloud & Shared Reading: Each Unit Starter includes a collection of complex texts to support strong interactive read aloud and shared reading experiences. These texts have been selected to provide regular opportunities for students to engage with rich academic language and build the disciplinary and enduring understandings for the unit. Given the complexity of these texts, teachers should revisit them with students after

the initial read(s) to deepen knowledge. Multiple question sequences and tasks are included in the Unit Starter for most texts; however, teachers are encouraged to add additional readings, questions, and tasks as needed to meet the needs of their students. Teachers may also analyze and select additional suitable texts to extend and/or support the development of the unit concepts. *See page 38 in* Teaching Literacy in Tennessee *for the three-part model for determining text complexity: quantitative dimensions of text complexity; qualitative dimensions of text complexity; and reader and task considerations.*

Suggested Resources for Small Group & Independent Reading: The Unit Starters include a list of suggested resources (texts, videos, online resources) to support a volume of reading on the unit concepts. These materials may be used during small group instruction and/or independent reading and writing activities to support knowledge building for students and to meet students' diverse learning needs. In addition, teachers are encouraged to select additional resources to extend and/or support the development of the unit concepts.

End-of-Unit Task: Each Unit Starter includes an end-of-unit task that provides an opportunity for students to demonstrate their understanding of the unit concept and to answer the essential questions for the unit in an authentic and meaningful context.

Daily Tasks & Question Sequences: Each Unit Starter includes a daily task and question sequence for approximately two weeks of instruction. The question sequences integrate the literacy standards to support students in accessing the complex texts during interactive read aloud and shared reading by drawing students' attention to complex features in the text and guiding students toward the disciplinary and/or enduring understandings of the unit.

The daily tasks provide an opportunity for students to demonstrate their new understandings by applying what they have learned from the texts they read daily across the literacy block. The texts and tasks have been carefully sequenced to support students in building disciplinary understandings over the course of the unit, so students are able to successfully engage in the end-of-unit task.

Sidebar Notes: As you navigate this document, you will also see that sidebar notes have been included throughout. These notes are intended to: 1) highlight additional rationale that may be of interest to educators; and 2) point out specific changes that have been made to the second iteration of Unit Starters based on feedback from the first set.

3. WHAT RESOURCES ARE NOT INCLUDED IN A UNIT STARTER?

These resources provide the foundation for unit planning but are not intended to be a comprehensive curriculum resource. Instead, educators must thoughtfully prepare from the resources that are included in the Unit Starter by adding additional resources as appropriate to meet instructional goals and student needs.

In addition, teachers will need to plan for other components of the English language arts block. The Unit Starters **do not include** the following:

- Instructional guidance for small group and independent reading and writing
  - Students should be grouped flexibly and resources selected to meet specific and unique needs of students, which may change over time.
- Instructional guidance and resources for explicit foundational skills instruction and foundational skills practice in and out of context
  - Reading foundational skills instruction should follow a year-long scope and sequence and be responsive to the unique needs of your students.

Please refer to Teaching Literacy in Tennessee for definitions of new or unfamiliar terms used in this document.

4. HOW SHOULD I USE THE RESOURCES IN THE UNIT STARTER TO PLAN MY UNIT?

Interactive Read Aloud and Shared Reading Experiences

To prepare for the unit, start by thoroughly reviewing the resources that are included in the Unit Starter. These resources are designed to support students in thinking deeply about the unit concepts and the enduring understandings embedded in complex text through interactive read aloud and shared reading experiences. To support this step, a unit preparation protocol and a lesson preparation protocol are included in Appendices A and B.

Small Group Reading and Writing

In addition to interactive read aloud and shared reading experiences, plan small group instruction to support the diverse needs of students in your classroom. Group students flexibly and select texts that address students' strengths (e.g., prior knowledge) and meet their specific needs:

Accuracy/word analysis: Some students may need additional practice with foundational reading skills that have already been taught and now are applied to reading authentic texts.

Fluency: Some students may be strong decoders but still struggle to read fluently, which holds them back from successful comprehension.

Comprehension: Some students may require support for their use of comprehension skills and strategies for building knowledge and acquiring academic vocabulary.

The Unit Starters include a list of suggested resources (texts, videos, online resources) that can be used to support small group instruction.

Modeled, Shared, and Interactive Writing

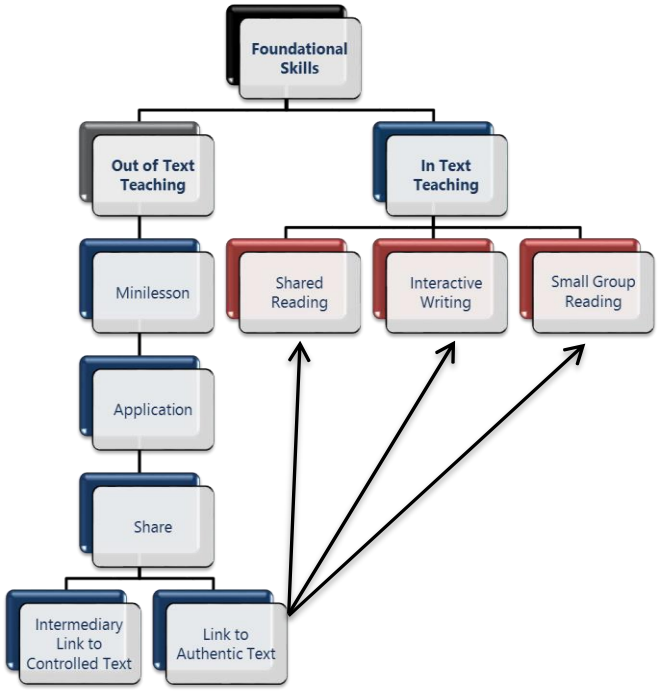
While important for a teacher to use modeled, shared, and interactive writing in order to support student independence with the tasks, please note that the units include few call-outs, if any, for modeled, shared, and interactive writing in the unit. To prepare students for success on the daily and end-of-unit tasks in the Unit Starter, teachers should plan for modeled, shared and interactive writing opportunities. Modeled writing is an instructional strategy where the teacher explicitly demonstrates the writing process for different forms and purposes. Shared writing is an instructional strategy where the teacher and students compose a text together with the teacher acting as the scribe. Interactive writing is an extension of shared writing in which the teacher and students compose a text together with the teacher strategically sharing the pen during the process.

Independent Reading and Writing

The Tennessee English Language Arts Standards call for students to read a range of literary and informational texts and to engage in a high volume of reading independently. The standards also call for students to have aligned writing experiences that develop their skills as writers and support their comprehension of rich, complex texts. Plan for how you will use the suggested resources to engage students in a variety of reading and writing experiences. Consider setting up systems for accountability during independent work time such as one-on-one conferences, center assignments, and/or accountable independent reading structures.

See pages 41-43 in Teaching Literacy in Tennessee for a description of these instructional strategies and their purpose within the literacy block.

Explicit Foundational Skills Instruction
It is recommended that educators consult the Foundational Literacy Standards and use a systematic phonics sequence (often found within a phonics program) for foundational skills instruction in conjunction with the resources in the Unit Starter. Strong foundational skills instruction follows an intentional, research-based progression of foundational skills that incorporates phonological awareness, phonics, and word recognition.



Foundational Skills Practice Out of Text and In Text
Strong foundational skills instruction includes opportunities for students to practice their newly acquired skills out of text and in text.

Out-of-text instruction may take the form of mini-lessons and hands-on application through activities, such as word sorts or the use of manipulatives.

In-text instruction provides opportunities across the literacy block for students to further apply their new learning in authentic reading and writing texts. Foundational skills assessments should be ongoing and should be used to determine when students have mastered the skill and are ready to move on to the next skill.

See pages 78-79 in Teaching Foundational Skills Through Reading and Writing Coach Training Manual *for more information about the relationship between out-of-text and in-text teaching.*

Structures for Academic Talk and Collaboration
The Unit Starters include suggestions for questions and daily tasks, but they do not include guidance on how to structure sharing/discussion time. Consider planning how your students will engage with you and each other when responding to complex text orally or in writing by incorporating things like expectations for talk time, sentence starters, hand signals, etc.

5. WHAT MATERIALS DO I NEED TO ORDER AND PRINT?

Texts for Interactive Read Aloud and Shared Reading
Each of the texts included in the Unit Starters can be purchased or accessed online or through a local library. A list of these texts is included in the Unit Starter materials. Educators will need to secure, purchase, or print one copy of each text selected to support interactive read aloud experiences. Each student will need a copy of the selected text for the shared reading experiences, unless the text is projected or displayed large enough for all students to read.

Suggested Texts for Small Group and Independent Reading
Additionally, each of the texts suggested for small group and independent reading can be purchased or accessed online or through a local library.

Materials to Be Printed

The Unit Starters can be accessed digitally here.

Educators may also consider printing:

- **Question Sequence –** Teachers may want to print question sequences or write the questions on sticky notes to have them available during interactive read aloud and shared reading experiences.
- **Daily Task –** Teachers may want to print the teacher directions for the daily task.
- **End-of-Unit Task –** Teachers may want to print the teacher directions for the end-of-unit task.

UNIT OVERVIEW

The diagram on the next page provides a high-level overview of the unit.

Guidance for the central text and suggested strategy for each day of instruction has been provided in the Unit Starter. It is important to note that this guidance does not reflect a comprehensive literacy block. Educators should support students in developing their expertise as readers and writers by flexibly utilizing a variety of instructional strategies throughout the literacy block.

Educators are also encouraged to use the guidance from this Unit Starter flexibly based on the needs, interests, and prior knowledge of students. For example, teachers may decide to re-read a text, pull in supplementary texts, or provide additional scaffolding based on their knowledge of their students. Teachers are encouraged to be strategic about how many instructional days to spend on this unit.

This Unit Starter is organized around three questions: (1) What are the desired results for learners? (2) How will students demonstrate these desired results? (3) What learning experiences will students need to achieve the desired results?

UNIT OVERVIEW

WHAT ARE THE DESIRED RESULTS FOR LEARNERS?

By the end of this unit, students will have developed an understanding of the following concepts and will be able to answer the following questions…

Universal Concept:
Change

Unit Concept:
Natural Processes that Change the Earth's Surface

Enduring Understandings:
Over time, **natural processes cause changes** to the Earth's surface.

Some **natural processes that change** Earth's surface are cyclical, while others are event based (e.g., they have a beginning and an end).

Essential Questions:
Does the Earth ever change? What causes these changes? How does the Earth's surface change?

Disciplinary Understandings:
Changes to the Earth's surface are constant. Some changes to Earth's surface happen over a long period of time and some happen very quickly.

Movements below the Earth's surface create formations (mountain, volcanoes, fault lines) above the Earth's surface.

Natural processes above the Earth's surface (weathering, erosion) change the shape of the Earth's surface in small and large ways.

Changes to the Earth's surface impact the survival and safety of living things.

Guiding Questions:
"When" does the Earth's surface change? How do natural processes below and above the Earth's surface change how the Earth's surface "looks"? How are living things affected by changes to the Earth's surface?

HOW WILL STUDENTS DEMONSTRATE THESE DESIRED RESULTS?

Students will synthesize their learning from the unit texts and demonstrate understanding in the following authentic and meaningful context …

End-of-Unit Task:

You and some friends came across this website while researching the Earth. The website tells readers that Earth never changes. You know better!

You and some friends came across this website while researching the Earth. The website tells readers that Earth never changes. You know better!

Part 1: Write an informational letter to the webmaster to explain how the Earth is constantly changing and that those changes happen slowly or over a long period of time. Not only do you know that Earth changes, but you also know those changes impact living things. Create a letter that explains to the webmaster how the earth changes. Be sure to include the following in your letter:

- Include an introduction and state your purpose for writing to him;
- Use facts and details from our texts to name and describe at least two processes that cause the Earth's surface to change and include information about whether each process results in a quick change or a slow change to Earth's surface;
- Describe how those processes impact the people, plants, and animals in that area;
- Use at least five words we have learned in our studies; and
- Include facts and definitions from the texts to provide evidence and have a concluding statement.

Part 2: Willy Webmaster received your letter. Before he can update the website, he needs you to assist him in convincing his editors to make the changes. Be prepared to deliver a 1-2 minute oral presentation that highlights the processes that constantly change the Earth's surface and how those changes impact living things. Be sure to:

- Use appropriate facts and relevant descriptive details to inform the editors;
- Speak clearly and at an appropriate pace; and
- Speak in complete sentences to communicate your detailed information.

WHAT LEARNING EXPERIENCES WILL STUDENTS NEED TO ACHIEVE THE DESIRED RESULTS?

Students will achieve the desired results as a result of deep exploration of complex texts through interactive read-aloud (IRA) and shared reading (SR) experiences …

Planet Earth/Inside Out (IRA)

Mountain Dance (IRA)

How Mountains are Made (SR)

Volcanoes (IRA)

Cracking Up: A Story About Erosion (SR)

An Island Grows (SR)

Earthquakes (IRA)

Rocks: The Hard Facts, Erosion and Weathering (IRA)

UNIT CONTENT GOALS

This Unit Starter was created with several levels of conceptual understanding in mind. Each conceptual level serves an instructional purpose, ranging from a universal concept that bridges disciplinary boundaries to concrete disciplinary understandings that focus instruction around specific schema. The diagram below shows the conceptual levels and questions that were considered during the development of all of the Unit Starters. The diagram on the following page outlines the specific concepts and questions for this Second Grade Unit Starter.

Universal Concept: A concept that bridges all disciplinary and grade-level boundaries (i.e., super-superordinate concept). This concept provides students with an organizational framework for connecting knowledge across disciplines into a coherent view of the world. (Example: Interdependence)

Unit Concept: The application of the crosscutting concept to one or more disciplines (i.e., superordinate concept). This concept provides students with an organizational framework for connecting knowledge within the disciplines into a coherent view of the world and provides educators with a focus for unit planning. (Example: Interdependence of living things)

Enduring Understandings: The ideas we want students to understand, not just recall, from deep exploration of our unit concept. The enduring understandings reflect the abstract, easily misunderstood, "big" ideas of the discipline. They answer questions like "Why?" "So what?" and "How does this apply beyond the classroom?" to support deep levels of thinking. (Example: People, plants, and animals depend on each other to survive.)

Essential Questions: Open-ended questions that guide students' exploration of the enduring understandings or "big" ideas of the discipline. These questions spark genuine and relevant inquiry and provoke deep thought and lively discussion that will lead students to new understandings. (Example: Why do humans need to preserve trees?)

Disciplinary Understandings: The specific ideas and specialized vocabulary of the discipline. These ideas will focus instruction, build disciplinary knowledge, and provide the schema to organize and anchor new words. Student understanding of these key ideas is critical to investigation and understanding of the more abstract and transferable ideas outlined in the enduring understandings. (Example: The structure of plants and the function of each part)

Guiding Questions: Open-ended questions that guide students' exploration of the disciplinary understandings in the unit and refer specifically to the domain (e.g., ecosystems). These questions prompt ways of thinking and perceiving that are the province of the expert. (Example: Why are roots important to plants?)

Department of Education

UNIT CONTENT GOALS

The diagram below outlines the specific concepts and questions for the Second Grade Unit Starter.

Universal Concept:
Change

Unit Concept:
Natural Processes that Change the Earth's Surface

Enduring Understanding
Over time, **natural processes cause changes** to the Earth's surface.

Enduring Understanding
Some **natural processes that change** Earth's surface are cyclical, while others are event based (e.g., they have a beginning and an end).

Essential Question
Does the Earth ever change?
What causes these changes?

Essential Question
How does the Earth's surface change?

Disciplinary Understanding
Changes to the Earth's surface are constant. Some changes to Earth's surface happen over a long period of time and some happen very quickly.

Disciplinary Understanding
Movements below the Earth's surface create formations (mountain, volcanoes, fault lines) above the Earth's surface.

Disciplinary Understanding
Natural processes above the Earth's surface (weathering, erosion) change the shape of the Earth's surface in small and large ways.

Disciplinary Understanding
Changes to the Earth's surface impact the survival and safety of living things.
.

Guiding Question
"When" does the Earth's surface change?

Guiding Question
How do natural processes below and above the Earth's surface change how the Earth's surface "looks"?

Guiding Question
How are living things affected by changes to the Earth's surface?

2.ESS1.1: Recognize that some of Earth's natural processes are cyclical, while others have a beginning and an end. Some events happen quickly, while others occur slowly over time.

UNIT STANDARDS

The questions and tasks outlined in this Unit Starter are connected to the following Tennessee English Language Arts and Science Standards. As you will see later in the Unit Starter, the question sequences and tasks for each text integrate multiple literacy standards to support students in accessing the rich content contained in the texts.

ALIGNED STANDARDS: INFORMATIONAL TEXT
2. RI.KID.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. 2. RI.KID.2 Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within a text. 2. RI.KID.3 Describe the connections between a series of historical events, scientific ideas, or steps in a process in a text. 2. RI.CS.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area. 2. RI.CS.5 Know and use various text features to locate key facts or information in a text efficiently. 2. RI.CS.6 Identify the main purpose of a text, including what an author wants to answer, explain, or describe. 2. RI.IKI.7 Identify and explain how illustrations and words contribute to and clarify a text. 2. RI.IKI.9 Compare and contrast the most important points presented by two texts on the same topic. 2. RI.RRTC.10 Read and comprehend stories and informational texts throughout the grades 2-3 text complexity band proficiently, with scaffolding at the high end as needed.

ALIGNED STANDARDS: LITERATURE
2. RL.KID.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. 2. RL.KID.2 Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral. 2. RL.IKI.7 Use information gained from illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot. 2. RL.RRTC.10 Read and comprehend stories and poems throughout the grades 2-3 text complexity band proficiently, with scaffolding at the high end as needed.

TN Department of Education

ALIGNED STANDARDS: WRITING

2.W.T TP.1 Write opinion pieces on topics or texts.

- **a.** Introduce topic or text.
- **b.** State an opinion.
- **c.** Supply reasons to support the opinion.
- **d.** Use linking words to connect the reasons to the opinion.
- **e.** Provide a concluding statement or section.

2.W.T TP.2 Write informative/explanatory texts.

- **a.** Introduce a topic.
- **b.** Use facts and definitions to provide information.
- **c.** Provide a concluding statement or section.

2.W.T TP.3 Write narratives recounting an event or short sequence of events.

- **a.** Include details to describe actions, thoughts, and feelings.
- **b.** Use time order words to signal event order.
- **c.** Provide a sense of closure.

2. W.PDW.4 With guidance and support, produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)

2. W.PDW.5 With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and strengthen writing as needed by revising and editing.

2. W.PDW.6 With guidance and support from adults, and in collaboration with peers, use a variety of digital tools to produce and publish writing.

2. W.RBPK.7 Participate in shared research and writing projects, such exploring a number of books on a single topic or engaging in science experiments to produce a report.

2. W.RBPK.8 Recall information from experiences or gather information from provided sources to answer a question.

2. W.RW.10 With guidance and support from adults, engage routinely in writing activities to promote writing fluency.

ALIGNED STANDARDS: SPEAKING & LISTENING

2. SL.CC.1 Participate with varied peers and adults in collaborative conversations in small or large groups about appropriate 2nd grade topics and texts.
2. SL.CC.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
2. SL.CC.3 Ask and answer questions about what a speaker says in order to gather information or clarify something that is not understood.
2. SL.PKI.4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
2. SL.PKI.6 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

ALIGNED STANDARDS: SCIENCE

2. ESS.1.1 - Recognize that some of Earth's natural processes are cyclical, while others have a beginning and an end. Some events happen quickly, while others occur slowly over time.

TEXTS FOR INTERACTIVE READ ALOUD & SHARED READING

These texts have been selected to provide regular opportunities for students to engage with rich academic language and to build the disciplinary and enduring understandings for the unit. They have been vetted for quality and complexity to support strong interactive read aloud and shared reading experiences.

The texts selected for interactive read aloud are intended to build students' comprehension of vocabulary, rich characters, engaging plots, and deep concepts and ideas across a variety of genres. These texts will typically be 1-3 grade levels above what students can read on their own.

The texts selected for shared reading are intended to provide opportunities for students to practice newly acquired foundational skills, to develop reading fluency, and to build knowledge across a variety of genres. Shared reading texts should be appropriately complex text that students can read with teacher guidance and support. Teachers will need to take the grade level and time of year into account when deciding if the shared reading texts are appropriate for their students. Teachers will also need to consider students' current abilities and the pace at which students need to grow to meet or exceed grade-level expectations by the end of the year. If the shared reading texts included in the Unit Starter are not appropriate for the specific group of students and time of year, educators are encouraged to make an informed decision about selecting a different text for shared reading. The shared reading texts in this Unit Starter are appropriate for instruction closer to the end of the academic school year. Later in the Unit Starter, you will see an example of different texts that may be more appropriate for different times of the year.

While preparing for instruction, educators are urged to carefully consider the needs and interests of the readers, including how to foster and sustain new interests, and to be strategic about the types of tasks that will support readers in deeply engaging with these rich texts. Teachers should also consider how they will make connections to students' prior knowledge and students' cultural and previous academic experiences. Teachers need to consider the vocabulary demands of the text and the level of support readers will need to deeply understand the text.

TITLE	AUTHOR
Planet Earth/Inside Out	Gail Gibbons
Mountain Dance	Thomas Locker
How Mountains are Made	Kathleen Weidner Zoehfeld
Volcanoes	Seymour Simon
Cracking Up: A Story About Erosion	Jacqui Bailey and Matthew Lilly
An Island Grows	Lola M. Schaefer
Earthquakes	Franklyn M Branley
Rocks: The Hard Facts, Erosion and Weathering	Willa Dee
Planet Earth/Inside Out	Gail Gibbons

TN Department of Education

SUGGESTED RESOURCES FOR SMALL GROUP & INDEPENDENT READING

These resources can be used to support a volume of reading on the unit concepts. These materials may be used during small group instruction and/or independent reading and writing activities to support knowledge building for students and to meet students' diverse learning needs.

TITLE (TEXTS, VIDEOS & ELECTRONIC RESOURCES)	AUTHOR
Burst of Fire https://www.timeforkids.com/g2/bursts-of-fire/	Rebecca Katzman (Time for Kids article)
CKLA Grade 2, Unit 6: Cycles in Nature	Core Knowledge Language Arts Curriculum
Earthshake: Poems from the Ground Up	Lisa Westburg Peters
Everything Volcanoes and Earthquakes: National Geographic Kids	Kathy Furgang
How Does It Happen? How Does A Volcano Become An Island?	Linda Tagliaferro
Magic Tree House: Vacation Under the Volcano	Mary Pope Osborne
Magic Tree House: Earthquake in the Early Morning	Mary Pope Osborne
The Magic School Bus Blows Its Top	Gail Herman and Bob Orstrom
The Magic School Bus Inside the Earth	Joanna Cole and Bruce Degen
The Magic School Bus Volcanoes and Earthquakes	Joanna Cole and Bruce Degen
The Magic School Bus Planet Earth	Tom Jackson
I Can Read About Earthquakes and Volcanoes	Deborah Merrians
National Geographic Kids: Everything Volcanoes and Earthquakes	Kathy Furgang

I Wonder Why Volcanoes Blow Their Tops and Other Questions about Natural Disasters	Rosie Greenwood
National Geographic Dirtmeister's Nitty Gritty Planet Earth	Steve Tomecek
The Magic School Bus Science Chapter Book #15: Voyage to the Volcano	Judith Stamper
Dream Jobs: Volcanologist	NewsELA
How the World Works: A Hands-On Guide to Our Amazing Planet (Explore the Earth)	Christian Dorion
Erosion	ReadWorks
The Science of Earthquakes	NewsELA
The Power of the Earth	ReadWorks
Small Earthquakes Tremble the Ground below Mount St. Helens Volcano	NewsELA
Dear Katie, The Volcano is a Girl	Jean Craighead George
Earthquakes!	Cecilia Minden
Princess and the Warrior: The Tales of Two Volcanoes	Duncan Tonatiuh
Tornadoes!	Gail Gibbons
The Sky Stirs Up Trouble	Belinda Jensen
The Firework-Maker's Daughter	Phillip Pullman
Volcano Wakes Up!	Lisa Westberg Peters
How the World Works: Explore the Earth	Christian Dorion and Beverley Young

UNIT VOCABULARY

The following list contains vocabulary words from the interactive read aloud and shared reading texts that warrant instructional time and attention. Teachers should attend to these words **as they are encountered in the texts** to build students' vocabulary and to deepen their understanding of the unit concepts. Educators are encouraged to identify vocabulary that might be unfamiliar to students and to determine how they will teach those words (implicit, embedded, or explicit instruction) based on knowledge of their students. See Appendix C for an example routine for explicit vocabulary instruction.

Note: In addition to this comprehensive list, each question sequence lists the newly introduced vocabulary words that warrant instructional time and attention during the specific reading. These lists also provide guidance as to how the specific words could be taught.

Educators are also encouraged to dedicate a space in their classrooms to record unit vocabulary. This will provide a reference point for the students as they read, write, and talk about the unit topics. Through repeated attention to these words over the course of the unit, students will develop their understanding of these words and will begin to use them in speaking and writing activities.

Day 1	Day 2	Day 3	Day 4	Day 5
iron nickel steam surface massive layers core inner core outer core mantle partially molten crust sea level plates pressure	form plain gradually folds waves folded mountains	fault-lines fault-block vent dome jagged	ash crater erupted swell destructive spout puff slumbering	quakes sheer batters pound margins Ring of Fire churn billow
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day10**
extinct dormant cinders thrive sow flock	buckles	border tsunami aftershock	erosion eroded undercutting	bay minerals seabed tides dissolve
Day 11	**Day 12**			
sediment weathering landforms expand continents particles grind deposited	ever-changing living			

PLANET EARTH/INSIDE AND OUT – READING 1, QUESTION SEQUENCE 1, DAILY TASK 1

TEXT
Text: *Planet Earth/Inside Out* by Gail Gibbons
Iteration: First Read
Instructional Strategy: Interactive Read Aloud

Note: In many cases, multiple question sequences are included for one text. These sequences intentionally build on each other in service of deepening students' analysis of the text and understanding of the unit's disciplinary and enduring understandings. Teachers may also decide to read the text in its entirety prior to asking questions.

Note: Each instructional strategy has a different purpose. Interactive read aloud is a time for students to actively listen and respond to above-grade-level complex text. The texts selected for interactive read aloud are intended to build students' comprehension of vocabulary, rich characters, engaging plots, and deep concepts and ideas across a variety of genres. These texts will typically be 1-3 grade levels above what students can read on their own. Shared reading is an interactive experience in which students join in the reading of an appropriately complex text with teacher support. Texts used for shared reading are texts that students can read with teacher support. The purpose of shared reading is to provide opportunities for students to practice their newly acquired foundational skills, develop reading fluency, and build knowledge. These texts should be chosen by considering students' current abilities and the pace at which they need to grow to end the year meeting or exceeding grade-level expectations.

TEXT COMPLEXITY ANALYSIS
QUANTITATIVE COMPLEXITY MEASURES
800L
QUALITATIVE COMPLEXITY MEASURES

TEXT STRUCTURE	LANGUAGE FEATURES
The structure of this text is slightly complex. There are no headings to separate different topics in the text. Some of the illustrations are supplementary; however, most are necessary for understanding the text (e.g., diagrams of the layers of the Earth and the maps of the Earth's plates.)	Language features are moderately complex. There are some subject-specific words that are defined and then used frequently in the text (equator, magnetic field, mantle, molten, plate, faults). There are some words that may be new or used in new ways (iron, nickel, pressure, strain, buckles, collide, flat plains, depressions, climate, natural resources, abused). Most of the sentences are simple or complex.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is moderately complex. The title, *Planet Earth/Inside Out*, communicates the major purpose of the text. This text also implies other ideas, such as the ever-changing nature of the Earth and the conservation of the Earth's resources.	The knowledge demands in this text are slightly complex. Students need to have background knowledge of distance (inches, miles, feet) and temperature. The illustrations and sidebars connect the information in the text to common experiences (water boiling, size of a peach).

Note: The lesson objectives for each reading articulate the integrated understandings, including ELA, disciplinary, and enduring understandings, students will grasp and/or build on as a result of engaging with the text. The question sequence for each reading will draw students' attention to complex features of the text that will support or challenge students. Over the course of the unit, the lesson objectives for each reading build intentionally on one another to provide a coherent learning experience for students. This coherence is also supported through the intentional sequence of texts.

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand that the Earth is constantly moving and changing inside and out. They will understand how movement deep inside the Earth causes plates to constantly move, which causes changes to the Earth's surface.

To achieve understanding, students will:

- use text features and key details to make connections between how the movement of the plates causes changes in the Earth's surface; and
- use illustrations and words, including crust, plates, core, and surface, related to the layers and movement of the Earth to explain how they cause the Earth's surface to change.

Teacher's Note: This text introduces students to a high volume of vocabulary and concepts that are critical to understanding future readings throughout the unit. There is a high volume of questions to help support students' understanding. You may consider spending two days on this text and question sequence if it will better benefit your students' needs.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- iron (embedded)
- nickel (embedded)
- steam (embedded)
- surface (explicit)
- massive (implicit)
- layers (embedded)
- core (explicit)
- inner core (embedded)
- outer core (embedded)
- mantle (embedded)
- partially (embedded)
- molten (embedded)
- crust (explicit)
- sea level (embedded)
- plates (explicit)
- pressure (explicit)

Note: The daily tasks build over the course of the unit to support students in developing the knowledge, vocabulary, and skills they will need in order to complete the end-of-unit task. Expectations for students' performance on the daily tasks are aligned with the disciplinary standards and the grade-level literacy standards for writing and speaking & listening.

DAILY TASK

Anchor Chart:
As we work as a group to create our anchor chart of the Earth's layers, create your own version of the chart. Please label the layers and write details from our text that explain each layer.

Teacher's Note: Included with this Unit Starter is a Geologist's Log that has been included for students to house their daily tasks. This log will begin on day one of the unit and be used throughout. The students can use their Geologist's Log as a support for daily tasks, as well as their end-of-unit task.

Writing Task:
Answer the following question in your Geologist's Log: What is going on beneath the Earth's crust and how is the earth impacted? Make sure to include important details about each layer and how those contribute to the changes of the Earth's surface.

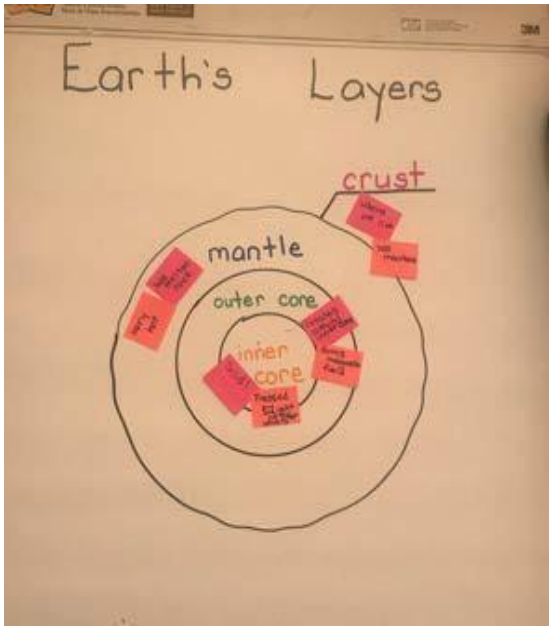
Be sure to include:

- a topic sentence;
- facts and definitions from the text to describe each layer; and
- provide a concluding statement or section.

Note: Tasks throughout the unit are considered to be independent and autonomous writing opportunities where students express their learning through their own writing. Teachers are encouraged to integrate strategies, such as modeled, shared, and interactive writing, in order to equip students with the skills and strategies needed to complete the tasks. The use of these other writing strategies should not demonstrate a carbon copy of the task before students complete it. It is important for students to capture their own thinking as they complete each task.

POSSIBLE STUDENT RESPONSE

Class Anchor Chart



Student Anchor Chart

Writing Task

The Earth is constantly moving and changing inside and out. It has four layers. In the center of the Earth is the inner core. The inner core is very hot and is made of solid rock. The outer core is the next layer. The outer core is made of hot liquid and moves slowly around the inner core. The mantle is the thickest layer. It is made of partially molten, or melted, rock. The last layer is the crust. We live on this layer. The movement of the layers inside the Earth cause plates to constantly move. The movement of the plates cause changes to the Earth's surface. Each layer of the earth is moving or changing and causes the earth's surface to change.

Department of Education

Note: You will not see one specific skill indicated as the focus for the reading. Educators are encouraged to support students in arriving at the objectives for the reading by integrating multiple literacy standards. To that end, the question sequences integrate multiple literacy standards. The literacy standards will come into play as students access the rich texts included in the Unit Starter. In this way, multiple literacy standards naturally support students in accessing and making meaning of the text.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Pages 2-3	Iron and nickel are heavy metals and are part of what the Earth is made of. What happened to these heavy materials and why? Use information from our text to explain your answer.	They sank to the center.
	Why does it say "it sank to the center" and not the bottom?	There is no bottom of the Earth because it is a sphere, or shaped like a ball.
	Think about what you know about things when they cool down or get cold. It says the Earth was very hot at first. Then it cooled down. What happened to it when it cooled down?	It became hard on the outside.
	As it cooled down, steam rose into the air. What started to happen when the steam cooled down? How long did this happen? What was the result? (This is an opportunity for a collaborative talk structure.)	It turned to water and it fell back to the surface as rain. It rained for a long time and the Earth was covered with oceans.
Pages 4-5	Was the entire surface of Earth covered by water?	No. There was some land that remained above the water.
	What do scientists believe about what land looked like at first?	Scientists believe all of the land was one big piece.
	What did the text say about what happened to the land?	Scientists believe that the big piece of land split or broke apart.
	After reading the text, draw their attention to the illustrations.	
	What is the author/illustrator wanting us to notice about the Earth in this picture? (Possible prompting question: Why are their three pictures of the Earth?)	The picture is showing us that the way the Earth looked changed.

	How was it able to change? (Possible prompt: Think about what happened to that first big piece of land.) How long did it take for this change to happen? Would you describe this change to Earth as quick or slow? How do you know?	After the pieces broke apart, they began to move around. It took millions of years. The change was very slow, because it took a long time for it to change from what it first looked like to what it looks like today.
Pages 6-7	Thinking about what the Earth looks like today, how much of the surface is covered by water, or oceans? Is there land under the water? Does the water go all the way through to the other side of the Earth? *Teacher's Note: You might also want to address the difference between the two illustrations depending on what your students know about maps and globes and how they represent the Earth.*	Three-fourths of the surface is covered by water. Their answers might reveal misconceptions. If they do, don't correct them. Leave it open to set a purpose for reading further.
Page 8	The author said earlier that scientists believe those heavy metals, iron and nickel, sank to the center of the Earth. If "core" means the center of something, what does inner core mean? What do we learn about the inner core on this page?	It is the inside of the center of the Earth. *Answers will vary, but make sure to highlight that it is hot and solid.*
Page 9	While the first layer is named the inner core, what is the next layer named? Share at least one interesting piece of information you learned about the outer core? *Possible prompting questions:* What is it made of? How does the inner core move?	Outer core. *Answers may vary but make sure to highlight that it is hot liquid and that it moves slowly around the inner core.*

	I notice the author keeps saying "scientist believe". Why does she keep saying that? Why doesn't she say they "know"?	People are not able to go all the way down to the core. It is too far away and too hot for people.
Page 10	The next layer of the Earth is the mantle. How would you describe most of the mantle?	Most of it is solid around the outer core.
	Some of it is different. How does the mantle change as it gets farther away from the core?	The part farther away from the core is not solid.
Page 11	Notice how the author writes "...some of the outer mantle is made up of partially molten, or melted, rock". What do we learn about the word molten in this sentence?	We learned that the word molten means melted.
	How do you know that?	Authors sometimes gives us the definition of a word right after they write it in the same sentence. (*This is important to highlight since we want them to include definitions within their own writing.)*
	Now that we know what molten means, how does that help us understand more about the mantle?	Now we know that part of the mantle is made of rock that is melted, or molten.
	How does the author describe how this molten, or melted, rock moves?	The author says it moves slowly, like molasses.
	What is molasses? Why would the author describe how the molten rock moves in this way?	Molasses is a very thick liquid. It helps us get a better picture of what it looks like when the molten rock is moving.
	On which layer do we live? How would you describe the Earth's crust?	We live on the Earth's crust. It is very thin and made up of rock and soil.
Pages 12-13	We learned earlier that the Earth split into pieces. Now we know what those pieces are called. What do we call those pieces?	The pieces are called plates.
	What are the plates made up of?	The plates are made up of the crust and part of the mantle.
	What do we know is happening to these plates and why does this happen?	The plates are always slowly moving, because the broken pieces of the crust are floating on top of the molten rock in the mantle.

	Because these plates are constantly moving, what does that mean for Earth?	It means that Earth is constantly changing.

ADDITIONAL SUPPORTS

Teacher's Note: You might consider making a visual representation of the tectonic plates (page 13 of book) to reference throughout the unit. You might make a poster, a copy or a map you already have. The purpose will not be to name the plates or even the continents. The purpose will be to support students' understanding that the Earth's crust is broken into pieces called plates that fit together like a puzzle.

Mountain Dance – READING 1, QUESTION SEQUENCE 1, DAILY TASK 2

TEXT
Text: *Mountain Dance* by Thomas Locker **Question Sequence:** First **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
890L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure is moderately complex. Connections between ideas are clear, with a different full page illustration of a mountain on each two-page spread. Information is provided to build on the understanding of science concepts in a relevant, but not necessarily sequential order. The illustrations are integral to understanding the descriptions of mountains in the text.	Language features are exceedingly complex. There is considerable use of figurative language throughout, such as, "well up like waves flowing across the land." Much of the vocabulary may be unfamiliar to students (jagged, slumbering.) or may be multiple meaning words used in an unfamiliar way (well, folded). Sentences are mainly complex, with multiple concepts and clauses in one sentence.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose is slightly complex. The story is about changes of the Earth's surface that create different types of mountains. This meaning is obvious and is revealed in the title of the text.	Knowledge demands are very complex. To fully access the text, students need to have discipline specific background knowledge about challenging concepts such as how the Earth's surface changes over large periods of time, the effects of erosion and weathering on the earth, and how mountains and volcanoes form.

LESSON OBJECTIVE(S) FOR THIS READING

Students will listen to a complex text to gain introductory knowledge of the scientific concepts of mountain and volcano formation, as well as changes on Earth caused by erosion and weathering.

To achieve understanding, students will:

- listen to a scientific text about mountain formation which contains complex and lyrical language; and
- understand details and descriptions of different mountain types.

Teacher's Note: For this first reading, read the text through page 24 in its entirety without stopping to question. You will dig deeper and make connections as students build knowledge about its content as you revisit in small chunks later in the unit. The questioning for this read will set up for the task following the shared reading, How Mountains Are Formed.

VOCABULARY WORDS

Teacher's Note: There are no new vocabulary words at this point from this text. As we revisit this text, we will explore the language and word choice.

DAILY TASK

Teacher's Note: It is intended to read Mountain Dance *(IRA) and* How Mountains are Made *(SR) on the same day. This task is a joint task with the first shared reading of* How Mountains are Made*, so the task is intended to be completed after the reading of both texts.*

POSSIBLE STUDENT RESPONSE

Teacher's Note: See the student exemplar with How Mountains are Made.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 26	*Teacher's Note: Students will be exploring the author's language choices and how those are related to the scientific processes they are learning about throughout this unit and in subsequent reads of this text.* *Teacher's Script: "The text poses the questions, "How did a sea creature get to the top of a mountain?" As we read our next text, "How Mountains Are Formed," let's see if we can find the answer to this question."*	

	Teacher's Note: After reading the text through page 24, read the introduction paragraph on page 26 in the About Mountains section. *Transition to* How Mountains are Made.	

HOW MOUNTAINS ARE MADE – READING 1, QUESTION SEQUENCE 1, DAILY TASK 2

TEXT
Text: *How Mountains are Made* **Question Sequence:** First Reading **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
620L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. The illustrations include labels and show characters who have thought bubbles that help explain the illustrations. Some of the illustrations are supplemental and some are necessary, such as the examples of the different mountain types showing how they are formed.	Language features are moderately complex. Although much of the language is conversational, there are instances of content-specific vocabulary throughout the text, such as lithosphere, magma, molten rock, and folded mountains. There is a balance of both simple and complex sentences throughout the text.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is slightly complex. The title*, How Mountains are Made*, provides a clear purpose for the text, which is narrowly focused on how different types of mountains are made.	The knowledge demands required to access this text are slightly complex. To fully understand the text, students need to know about distances/height (inches, feet and miles) and time (hundreds of millions of years).

LESSON OBJECTIVE(S) FOR THIS READING
Students will understand how mountains are formed, primarily focusing on folded mountains. To achieve understanding, students will: • describe how a folded mountain is formed using key details from the text; and • use text features and illustrations to understand and explain how fossils of sea creatures could end up at the top of a mountain.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- form (explicit)
- plain (implicit)
- gradually (embedded)
- folds (embedded)
- waves (embedded)
- folded mountains (embedded)

The following words will be reinforced in this reading.

- sea level
- layers
- crust
- mantle
- plates
- molten
- magma
- pressure

DAILY TASK

Writing Task:

When we read *Mountain Dance* earlier today, we learned that explorers found fossils of sea creatures on top of Mount Everest almost five miles above sea level. It also said we could discover the answer to this puzzle by studying the different ways mountains are formed. The children in our text *How Mountains are Made* discovered the same thing on top of their mountain.

Based on what we learned today about how one type of mountain is formed, how is it possible for fossils of sea creatures to end up on the top of mountains? Use facts from the text to describe both how a folded mountain is formed, and how a sea creature fossil could end up at the top. Be sure to include whether this is something that happens slowly or quickly. In your writing, be sure to:

- introduce the topic;
- use facts and definitions to provide information; and
- provide a concluding statement.

Teacher's Note: It is intended to read Mountain Dance *(IRA) and* How Mountains are Made *(SR) on the same day. Completion of Daily Task 2 occurs after reading both texts.*

POSSIBLE STUDENT RESPONSE
Mountains are formed in different ways. Folded mountains are formed when plates push against each other and make the crust, or top layer of the Earth, lift up and fold over itself. Land that used to be flat can end up at the top of a mountain. The land where the fossils were found at the top of the mountains used to be at the bottom of the ocean where the sea creatures lived. When the plates pressed against each other, it pushed that land and the fossil up to the top of the mountain. This takes millions of years and explains why sea creature fossils can end up at the top of a mountain. In conclusion, mountains are formed slowly when the earth's plates press against one another and push the land up to the top of the mountain.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 9	What did the children find at the top of their mountain? *Teacher's Script: "How did a sea animal get to the top of this mountain? This author is wondering the same thing as the author of* Mountain Dance*. Let's see if we can figure this out as we read together."*	They found a fossil in the shape of a seashell.
Page 10	This picture shows sea level. How far above sea level is the children's mountain? Where would the sea creature have lived that the children found on top of their mountain?  (This is an opportunity for a collaborative talk structure.)	It is less than one mile. Possible answers: It would have lived deep in the ocean. It could have lived two or three miles below sea level.
Page 12	The author uses the word "gradually" to explain how mountains are built up and worn down. What other text evidence helps you understand if this means a slow or fast change? What are some ways the Earth is always changing? What text evidence supports your thinking?	Gradually would mean a slow change, because the author explained the mountains changed "over hundreds of millions of years," and the illustration shows small changes in the mountain with the small mountain forming over a long time (the flying prehistoric animals are a clue it happened a long time ago). From the words and illustration evidence, the Earth is always changing by: • Mountains going away

		• Mountains being worn away by wind, ice, and rain • New mountains forming
Page 15	How do scientists believe mountains were formed? Remember how the author of *Planet Earth* described it as moving slow like molasses? How does this author describe how the melted rock flows? How are these comparisons similar and what does this tell us about the melted rock?  What is another word for melted rock?	Most scientists believe that all mountains on Earth were formed by slow movements in the Earth's outer shell. He says it flows like honey. Honey and molasses are very thick and move very slowly. The author uses these words to explain how melted rock moves very slowly also. Another word for melted rock is molten.
Pages 16-17	Look at the illustrations on page 16. How do the mountains look different? Why do the mountains look different? How are the plates moving to create folded mountains? The author says, "great waves of rock are pushed up". What does he mean by "great waves"?	Some of the mountains have sharp points, and some flat tops. The dome mountains look like a smooth hill. Mountains look different because Earth's outer shell moves in different ways. The plates are pressing against each other. He means the rocks look like waves in the ocean going up and down.
Page 18	*Teacher's Note: You could conduct the towel experiment prior to asking this question or you could ask after reading.* Explain how the towel experiment simulates or imitates how mountains form. Use precise vocabulary we have been learning.  Why is this type of mountain called a folded mountain?	When we push the towel together, some parts of the middle fold and get pushed up. When the plates press hard against each other, some of the land gets pushed up and folds over itself. It is called a folded mountain because of how it is made. The land folds when the plates press against each other and the land gets scrunched together.

Skip to Pages 24-25	What can we conclude about age of the children's mountain? What text evidence supported your conclusion?	The fossil they found was millions of years old. That must mean their mountain is very old.
Page 26	How do the children know their mountain is a folded mountain? *Refer back to page 11*. Where did the author say the land that is now Mount Everest and the children's mountain used to be? Thinking about the question both authors have posed to us, how can we now determine that the fossil of a sea creature that lived miles under the ocean end up at the top of a mountain? Would we be able to see this happen? Explain why or why not and use evidence from our text to support your answer.	They can tell from the shape. It folded up in waves. It was part of a flat plain under an ocean. We know that land that used to be flat can get pressed, or scrunched, together and cause the land to lift and fold over itself creating folded mountains. The land that used to be flat and at the bottom of the ocean, can get pushed up all the way to become the top of a mountain. No. The text says this happened very slowly, or gradually, over millions of years, so this would not happen or be visible in our lifetime.

ADDITIONAL SUPPORTS

To support students in making connections to the first text included in the unit, you may also read this selection from the text *Planet Earth Inside Out* by Gail Gibbons: "The shape of the land, like that of the ocean floor, has formed over millions of years. Great forces have worked to make this happen. When plates crashed into one another, they made the layers of continental crust fold and buckle to form mountain ranges. And when plates pulled apart, they formed depressions in the continental crust called rift valleys. Vast ice sheets called glaciers, also changed the Earth's surface. They pushed down over the land, shaping and forming it into valleys, plains, and hills. Most of these changes happen too slowly for people to see."

HOW MOUNTAINS ARE MADE – READING 2, QUESTION SEQUENCE 2, DAILY TASK 3

TEXT
Text: *How Mountains are Made* **Question Sequence:** Second Reading **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
620L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. The illustrations include labels and show characters who have thought bubbles that help explain the illustrations. Some of the illustrations are supplemental and some are necessary, such as the examples of the different mountain types showing how they are formed.	Language features are moderately complex. Although much of the language is conversational, there are instances of content-specific vocabulary throughout the text, such as lithosphere, magma, molten rock, and folded mountains. There is a balance of both simple and complex sentences throughout the text.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is slightly complex. The title*, How Mountains are Made*, provides a clear purpose for the text, which is narrowly focused on how different types of mountains are made.	The knowledge demands required to access this text are slightly complex. To fully understand the text, students need to know about distances/height (inches, feet and miles) and time (hundreds of millions of years).

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand that dome and fault-block mountains are formed differently than folded mountains due to differences in how the Earth is moving. They will also understand that mountain formations are examples of natural processes that slowly change the Earth.

To achieve understanding, students will:

- use words and phrases to name the different types of mountains, describe how they are formed, and describe how they look;
- use text features and illustrations to enhance their understanding of the natural processes that slowly change the Earth's surface; and
- explain how different movements on and beneath the Earth's crust cause different types of mountains.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- fault-lines (embedded)
- fault-block (embedded)
- vent (embedded)
- dome (embedded)

The following words will be reinforced in this reading.

- pressure
- crust
- formed
- magma

DAILY TASK

Teacher's Note: It is intended to read Mountain Dance *(IRA) and* How Mountains are Made *(SR) on the same day. You will complete Daily Task 3 as a combined task following the second read of* Mountain Dance*. The task is intended to be completed after the second reading of* How Mountains are Made *and* Mountain Dance*.*

POSSIBLE STUDENT RESPONSE

Teacher's Note: See student exemplar following the second read of Mountain Dance*.*

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 19	How is the movement of the crust different when a fault-block mountain is formed than when a folded mountain is forming?  (This is an opportunity for a collaborative talk structure.)	When a folded mountain is forming, the plates are pressing against each other. When a fault-block mountain is formed, the crust is pulling and stretching apart.
	What can eventually happen to the crust?	The stretching can cause cracks in the crust.
	What are those cracks called?	The cracks in the crust are called fault lines.
	How do the illustrations on the bottom of page 19 help you understand what happens to the cracked pieces of the crust?	The illustrator included arrows on the picture to show me that some of the cracked pieces can slide up and others can push down.
	What does this moving up and down of pieces form?	Fault-block mountains are formed.
	Why are mountains that are formed this way called fault-block mountains?	They are called fault-block mountains, because faults, or cracks, are created and after the broken pieces move they look like block-shaped mountains.
Page 20	How is the formation of a dome mountain different from both the folded and fault-block mountain? 	The folded and fault-block mountains are formed when the crust is pushing against or pulling away from itself. The dome mountain is formed when magma pushed through a vent, or opening, and it pushes up on the crust. This bends the crust to form a mountain.
	Why are these types of mountains called dome mountains?	They have rounded peaks in the shape of a dome.
Skip pages 21-26	*Teacher's Note: Future unit study will go into more depth about volcanic mountains, so these pages could be omitted at this point. They could be explored with more depth later, or students could also explore on their own.*	

Page 27	Why are these mountains lower and smoother? Explain whether this was a fast change or a slow change and why. 	The mountains are lower and smoother because for millions of years, rain, wind, and ice have worn them down, causing a slow change.

MOUNTAIN DANCE – READING 2, QUESTION SEQUENCE 2, DAILY TASK 3

TEXT

Text: *Mountain Dance*

Question Sequence: Second Read

Instructional Strategy: Interactive Read Aloud

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand the slow changes on the earth that cause the formation of folded, dome, and fault block mountains by analyzing the language the author uses to describe the different types of mountains.

To achieve understanding, students will:

- consider how the author's choice of words and phrases contributes to their understanding of the characteristics and formation of the folded, dome and fault block mountains; and
- make connections between the descriptions of mountains in *How a Mountain Is Made* to *Mountain Dance* to gain a stronger understanding of how mountains are formed by slow changes on the earth.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- jagged (embedded)

The following words will be reinforced in this reading.

- waves
- folded mountains
- dome
- fault-block

DAILY TASK

Teacher's Note: It is intended to read Mountain Dance *(IRA) and* How Mountains are Made *(SR) on the same day. You will complete Daily Task 3 as a combined task following the second read of* Mountain Dance*. The task is intended to be completed after the second reading of* How Mountains are Made *and* Mountain Dance*.*

Writing Task:

You are a traveler who writes articles for the travel website "Mountain Explorer." They are wanting an article about dome or fault-block mountains to include in their website. In your recent travels you visited a beautiful, faraway mountain. Write an article for the website describing your visit to this mountain, what kind of mountain it is, and what you learned about the mountain's history. Include an illustration to be placed next to your article on the webpage.

In your writing, be sure to:

- name your mountain and give your article a title;
- introduce the topic of your article;
- use facts and definitions to provide information;
- provide a concluding statement; and
- illustrate your article by drawing a picture of your mountain.

POSSIBLE STUDENT RESPONSE

My Visit to Mount Dancer
by Sun E. Day

Have you always wanted to visit the majestic stone peak of Mount Dancer? In April of this year, I was lucky to have this opportunity. I discovered that Mount Dancer was not only beautiful, but it also has a long history. Millions of years ago, there was a bubble of hot magma that pushed through the rock layer of the earth. This bubble of hot magma was not able to burst through the crust and become a volcano. Instead it gently lifted the crust into dome shaped mound. Later, the softer crust wore away, and Mount Dancer appeared! Scientists call Mount Dancer a dome mountain because it is shaped like a bubbly dome. Mount Dancer may not be the tallest mountain, but it is a peaceful place to visit. My favorite part of my visit was watching the sun set behind the beautiful dome mountain, knowing it took millions of years to form.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
	Teacher's Note: Co-create an anchor chart with students using interactive writing strategies (modeled, shared, and interactive). The class will revisit and add to the chart as they learn about different processes that change the Earth's surface. See an example in Resources section after question sequence.	
Page 10	Reread this page.	

Folded mountains…	What kind of mountain is he describing? How does the author describe these mountains? What does he mean when he says, "well up like waves flowing across the land"?  (This is an opportunity for a collaborative talk structure.)	He is describing folded mountains. He says they dip down and well up like waves flowing across the land. Waves in the ocean go up and down. He thinks the mountains look like waves in the ocean going up and down, up and down.
Page 8 Shy dome mountains…	Reread this page. What kind of mountain is he describing here? The author says that dome mountains "bubble underneath." What does he mean and why does this happen?  Why does he call a mountain shy and say it is hiding? Can a mountain be shy or hide?	He is describing dome mountains. We know that dome mountains are formed when hot magma pushes up under the crust. If it is hot and moving, it could be bubbling. It could be forming under the crust for millions of years and no one would know it. The text says the domes hide for millions of years. So, that might be like when a person is shy or hiding away from others.
Page 6 Near cracks…	What language does the author use on page 6 to describe fault-block mountains? Thinking back to the illustration from *How Mountains are Made* we looked at earlier, why does the author choose these words to describe fault-block mountains?  How does the author's language on page 6 help you understand fault-block mountains?	He says they "lift and sink, lean and bend". Fault-block mountains are formed when cracked pieces of the crust lift and sink, or slide up and down. The pieces also lean and bend. His words and the way he describes these mountains help me create a better picture in my mind about what they look like.
Page 1 Mountains rise…	Let's reread this page. The author says that mountains move in a "slow dance" and that every mountain "moves in its own way." Can a mountain dance? Why would he describe mountains this way? Use what we have been learning and what we have read in this text to support your thinking. 	No, mountains cannot actually dance. He means that mountains are always moving. They are moving when they are being formed and when they are being worn away. He says it is a slow dance because mountains change over a long period of time. He says they move in their own way, because they are all formed by things moving in different ways.

RESOURCE

Example Anchor Chart:

What is the author describing? (example: landform, process)	Give examples of words and phrases used to describe different types of mountains.	What is happening to cause/create this process?	What does it look like?
Folded Mountains	dip down and well up like waves flowing over the land	plates pressing against each other	(drawing)
Dome Mountains	shy dome, bubble up, hides for millions of years	magma collects under the crust and pushes it up	(drawing)
Fault-Block Mountains			
Mountains			

Teacher's Note: Consider having students complete a chart in their Geologist's Notebook along with the creation of the class chart.

VOLCANOES – READING 1, QUESTION SEQUENCE 1, DAILY TASK 4

TEXT
Text: *Volcanoes* **Question Sequence:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
880L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is moderately complex. There are few informational text features, and the photographs are typically described in the text. Some of the photographs are supplementary, and some are necessary for understanding the text.	Language features are moderately complex. Some of the words are unfamiliar, subject-specific, or used in new ways (forge, vent, crater, churn, advancing, margins, eruption, weathered, ash, cinders, steep, summit, predecessor). There is some figurative language (she burst forth, awakened from its long sleep, volcanoes are dead, a blanket of pumice and ash). There is a mixture of simple, complex, and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is moderately complex. The text covers a range of topics related to volcanoes including early history of volcanoes, how volcanoes are made, recent examples of active volcanoes, and the impact of eruptions.	The knowledge demands presented by this text are moderately complex. This text requires students to have basic knowledge about volcanic eruptions, the connection between volcanoes and earthquakes, and earth's internal forces. Students also need to know about measurement, including time and distance (a century, 19th century, million years, thirty thousand feet, mile, acre). Students need to recognize the names of different places and groups of people (Norse, Hawaiians, early Romans, Iceland, Washington, native Americans, early settlers, the northwest, California, Oregon).

LESSON OBJECTIVE(S) FOR THE READING

Students will understand the process in which a volcano is formed, and how this change in the Earth's surface can be fast or slow.

To achieve understanding, students will:

- explain how the illustrations and words in the text contribute to their understanding of how volcanoes are formed and impact the earth's surface; and
- use text features and vocabulary (lava, magma, vent, etc.) to illustrate and explain the formation and eruption process of a volcano.

Teacher's Note: These lesson objectives reflect pages 1-13 of this text.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- ash (explicit)
- crater (explicit)
- erupted (explicit)
- swell (explicit)
- destructive (explicit)
- spout (embedded)
- puff (embedded)

The following words will be reinforced in this reading.

- molten
- magma
- crust

DAILY TASK

Draw and label a volcano. Make sure to use the illustrations and vocabulary (lava, magma, vent, etc.) in your drawing. In a paragraph, explain the formation and eruption process of a volcano and how it impacts the Earth's surface.

In your writing, be sure to:

- introduce the topic;
- use facts and definitions to provide information; and
- include a concluding statement.

Teacher's Note: It is intended to read Volcanoes (IRA) and Mountain Dance (IRA) on the same day. You will complete Daily Task 4 after reading both texts.

POSSIBLE STUDENT RESPONSE
Illustration: Student drawings should include labels (lava, magma, vent, etc.) and color to realistically represent the difference between lava and magma. **Writing Task:** A volcanic eruption occurs when magma pushes up through the holes or cracks in Earth's surface. Once magma comes out, it's called lava. The eruption is when lava comes out of the vent and piles up around the vent. The eruptions cause the Earth's surface to change, because it has a bunch of energy and causes destruction all around. Ash spouts into the air and settles on the ground. The eruption can cause earth's surface to swell and crack.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Teacher's Note: For the first read of this text, you will only focus on the first 13 pages.		
Page 6	Using what we just read, and what you know from reading *Planet Earth: Inside Out*, what is the earth made of?	Once you go below the soil, Earth is made of layers of rocks. The earth is made up of the inner core, outer core, magma, and the crust.
Page 6	What is magma?	Some rocks inside the center of Earth are so hot they are melted. Magma is the melted (molten) rock deep inside of Earth and a volcano.
Page 6	What is the difference between magma and lava? How might lava impact the Earth's surface?  (This is an opportunity for a collaborative talk structure.)	We know magma is the melted rock inside a volcano. When the magma comes out of the volcano, it's called lava. Since lava is melted rock, it could sear or burn the earth. It could also leave ash.
Page 6	How is a volcano formed? What is a volcanic eruption?	A volcano is formed when magma pushes its way up through cracks in the earth's crust. When the hot lava comes out of the surface of the earth, it's called a volcanic eruption.
Page 7	Using adjectives, describe what you see in this illustration. 	I see hot lava came out of one volcano, and one volcano shot hot ashes all through the air with lots of force.

	Explain why the author includes photographs of different volcanoes and the large cloud of ashes. 	The author puts photographs in the book to help us understand that all volcanoes don't look alike. He showed us how hot lava came out of one volcano, and one volcano shot hot ashes all through the air with lots of force.
Page 7	What impact does a volcanic eruption have on animals, plants, and people? Use your analysis of the illustrations to support your response.  How is this change to the earth different from natural changes we've learned about previously? 	Volcanoes can shoot out different things. Seeing how red hot it was made me think the hot lava would burn and destroy any plants it touches. It would also kill animals and people it touched, because it would burn them. Since there are different kinds of volcanic eruptions, I can see how people would be hurt and covered by hot ashes too. Mountains take a long time to form. Volcanic eruptions can happen very fast which makes them dangerous and deadly to living things.
Page 8	What does vent mean in this context? (*Share the definition if students don't answer*.)	The vent is the crack in the crust where magma bursts out. A volcano is formed by erupted material that piles up around the vent.
Pages 9-10	On page 9, the author says, "[…] settlers had seen Mount St. Helens *puff out* some ash, steam, and lava […]." What does *puff out* mean? On page 10, the author says, "[…] Mount St. Helen began to *spout* ash and steam." What does *spout* mean? Why does an author use different language/words to tell us the information? 	Using clues from the sentence and what I already know, I think puff means "bursts out." The author is telling us that ash, steam, and lava were bursting out of Mount St. Helens. Now the author is describing how Mount St. Helen spouted ash and steam. Since I know that this is the same mountain and it is doing something to ash and steam, I think spout means burst out, just like puff. When I read the words spout and puff, I liked the author using different words because I don't want him to repeat the same words over and over. This would be boring. I think good writers use different words to make this stuff interesting.

Page 10	Using information from the text and from the illustration, explain how the eruption of Mount St. Helens impacted the earth's surface.	The eruption of Mount St. Helens impacted the earth's surface by causing earthquakes and by spouting steam and ash into the air and onto the land. The mountain also swelled and cracked because of the volcanic eruption.
Page 12	What does destructive mean? What are some examples of destruction? How was the eruption of Mount St. Helens destructive?	Destructive is a description of how much damage something causes. Something that is destructive means it harms or breaks something. The eruption of Mount St. Helens killed and hurt people, animals, and plants.
Page 13	How is Mount St. Helens different after it erupted?	The eruption changed the life of living things on and around the mountain, and it changed the shape of it.

MOUNTAIN DANCE – READING 3, QUESTION SEQUENCE 3, DAILY TASK 4

TEXT

Text: *Mountain Dance*

Question Sequence: Third Read

Instructional Strategy: Interactive Read Aloud

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand the characteristics of volcanoes and the ways in which those characteristics can be described.

To achieve understanding, students will:

- analyze the language the author uses to describe volcanoes; and
- use words and ideas they have learned across multiple texts to describe volcanoes.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- slumbering (embedded)

The following words will be reinforced during this reading.

- ash

DAILY TASK

Teacher's Note: It is intended to read Volcanoes (IRA) and Mountain Dance (IRA) on the same day. After students are more familiar with the scientific process of how volcanoes are formed, they will be more successful in analyzing the language and imagery the author uses in this text. The task is intended to be completed after the first read of Volcanoes and the third reading of Mountain Dance.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 2 Slumbering…	Reread this page. What is the author describing? How does the author describe volcanoes?	 He is describing volcanoes. He says they are slumbering.

	How does the way the author describes the volcano help the reader understand what is happening?  (This is an opportunity for a collaborative talk structure.) *Possible prompting questions:* How can a volcano be slumbering? When the author writes "the volcano awakens", what does he mean? Is this a fast or slow eruption? How do we know?	When the author says the volcano is asleep, it helps the reader see that nothing is happening and everything is calm. When the author describes it as awakening and roaring, it makes me think that a lot is happening and it is fast or sudden. When it is not erupting it is like it is asleep. When the volcano starts erupting, it is like it wakes up. It is describing a fast eruption. The author says it is roaring when it wakes up. It also says fire, gas, and ash leap.

RESOURCE

Anchor Chart:
The teacher will revisit the anchor chart started earlier in the unit and add information about volcanoes to the chart.

What is the author describing? (example: landform, process)	Words used to describe it.	What is happening to cause/create this process	What does it look like?
Folded Mountains	dip down and well up like waves flowing over the land	plates pressing against each other	
Dome Mountains	shy dome, bubble up, hides for millions of years	magma collects under the crust and pushes it up	
Fault-block Mountains			
Mountains			
Volcanoes	slumbering, awake, roaring, leap, rise	A volcano is erupting and ash and gas are coming out.	(Illustration)

AN ISLAND GROWS – READING 1, QUESTION SEQUENCE 1, DAILY TASK 5

TEXT
Text: *An Island Grows* **Question Sequence:** First Read **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
150L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure is slightly complex. There are few words per page. The spacing and placement of the text on the page is clear and simple with a large font which will support the reader in shared reading. The illustrations directly support the text.	Language features are moderately complex. Most of the vocabulary is explicit, though there are some words that would be unfamiliar to students or may be used in new ways (quake, sheer, batters, sow, thrive, plot, dock, flock, settlers, tilled, merchants, root). The sentences cross pages at times. Most of the sentences are simple sentences, though there are a few complex sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose is slightly complex. The story is about an island growing in the middle of the ocean. This meaning is obvious and is revealed in the title of the text.	Knowledge demands are moderately complex. To fully access the text, students need to have background knowledge about how volcanoes form and about how new life comes to islands. Though these are not abstract ideas, they may be new for students.

LESSON OBJECTIVE(S) FOR THIS READING
Students will understand how underwater volcanic eruptions can form islands. To achieve understanding, students will: • use key details and illustrations from the text to describe the steps in the process of volcano formation.

TN Department of Education

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- quakes (explicit)
- sheer (explicit)
- batters (explicit)
- pound (explicit)

DAILY TASK

Teacher's Note: It is intended to read An Island Grows *(SR) and* Volcanoes *(IRA) on the same day. The task is intended to be completed after the first reading* An Island Grows *and the second reading of* Volcanoes.

POSSIBLE STUDENT RESPONSE

Teacher's Note: See task exemplar with the second reading of Volcanoes.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 6	What is happening at this point in the story?	An underwater volcano is erupting.
Page 7	Based on what we have read in previous texts, what do you expect to happen? Explain why.  (This is an opportunity for a collaborative talk structure.)	Lava will pour out and start creating an underwater mountain. When the lava dries, it builds up over time, creating an underwater mountain.
Page 9	Based on the illustrations, what does it mean to say: "an island grows?" 	As the lava piles up and gets higher and higher it can reach the surface of the water to form an island.

VOLCANOES – READING 2, QUESTION SEQUENCE 2, DAILY TASK 5

TEXT

Text: *Volcanoes* by Seymour Simon

Question Sequence: Second Read

Instructional Strategy: Interactive Read Aloud

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand how some volcanoes rise above sea level and form islands.

To achieve understanding, students will:

- determine key details from the text that build knowledge about the changes below the Earth's surface which can form islands in the ocean; and
- use words and terms such as "above sea level" and the "earth's surface" to describe the steps in the formation of volcanoes.

Teacher's Note: These lesson objectives reflect pages 14-25.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- margins (explicit)
- Ring of Fire (embedded)
- churn (explicit)
- billow (explicit)

DAILY TASK

Teacher's Note: It is intended to read An Island Grows *(SR) and* Volcanoes *(IRA) on the same day. Daily Task 5 is to be completed after reading both texts.*

In the middle of the school year, you and your family moved to Hawaii. You visited the local museum to learn how this island was formed. Write a postcard to your old classmates explaining how a volcano formed the island you now live on.

In your writing, be sure to:

- introduce the topic;
- use facts and definitions to provide information; and
- include a concluding statement.

POSSIBLE STUDENT RESPONSE
Dear Classmates, I moved to the island of Hawaii. My parents and I went to the local museum, and I learned that this island wasn't even here many years ago! A very long time ago way down deep on the ocean floor, an underwater volcano started to erupt. Lava flowed out onto the ocean floor. When the lava cooled off, it hardened and became rock. The volcano kept erupting over and over again. Each time, the new lava that came out created a new layer and the volcano grew and grew. Eventually, the volcano grew so big that it appeared above the sea level as an island. Things started to grow on the surface of the new island and people came to live here. This is how Hawaii was formed. Your old pal, Al Grows

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Teacher's Note: For the second read of this text, you will only focus on pages 14-25.		
Page 14	Where do volcanoes erupt? How does the illustration on page 14 further your understanding of what a plate is?	They can erupt anywhere, but mostly they erupt where two plates meet. A plate is a term we use to explain the large sheets of rock on the outer crust of earth. The illustration helps me understand how the author can describe the huge sections or sheets of rock like a cracked eggshell.
Page 15	What is the ocean floor? What is "above sea level?" How do underwater volcanoes impact the earth's surface? How do you know? (This is an opportunity for a collaborative talk structure.) What does the author mean when he says, "Iceland is a volcanic island?"	The ocean floor is the bottom of the ocean. Sea level is the level of the surface of the sea. So, above sea level means above the surface of the sea. Underwater volcanoes impact the earth's surface by creating islands. This happens when the volcanoes grow so high that they rise from the ocean floor to above sea level. Underwater volcanoes form islands that we can see above the water. The author is telling us the long ago, Iceland was formed by an underwater volcano.

Page 18	How does your knowledge about the word "margin" help you understand why an area could be called the "Ring of Fire"?	A fire is very hot and so is lava. A margin is the edge of something. The Ring of Fire is on the edge of where two plates meet. This creates a lot of places for earthquakes and lava to come up.
Page 17	How did this volcano impact the people Heimaey? How did this volcano impact the earth's surface?	It destroyed the town, because hundreds of buildings burned down or were buried in lava. The volcano made the earth change shapes.
Page 21	The illustrations and text talk about the steam billowing as hot lava enters the sea. How does the word billow help you understand what is happening? The author tells us that Hawaii is constantly changing? How can this be?	As the hot lava reaches the sea it cools off. This creates steam that puffs up. The lava hardens and becomes rock. Frequent eruptions add rocks and surface building to the Earth.

ADDITIONAL SUPPORTS

Read related selections from the anchor text *Planet Earth Inside Out* by Gail Gibbons.

Build background knowledge with the following YouTube video:
https://www.youtube.com/watch?v=V863xR0Y2qk

VOLCANOES– READING 3, QUESTION SEQUENCE 3, DAILY TASK 6

TEXT

Text: *Volcanoes*

Question Sequence: Third

Instructional Strategy: Interactive Read Aloud

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand how volcanic islands evolve over time into a place suitable for supporting life.

To achieve understanding, students will:

- use key details from the text to determine the process in which a volcanic island changes slowly over time to support life; and
- determine the meaning of words in the text relevant to changes in volcanic islands, such as crater, extinct, and dormant.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- extinct (explicit)
- dormant (explicit)
- cinders (explicit)

DAILY TASK

Teacher's Note: It is intended to read Volcanoes *(IRA) and* An Island Grows *(SRA) on the same day. The task is intended to be completed after the third reading of* Volcanoes*, the second reading of* An Island Grows*, and a quick reference back to page 4 of* Mountain Dance*.*

POSSIBLE STUDENT RESPONSE

See the exemplar response with the second reading of *An Island Grows*.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Teacher's Note: For the third read of this text, focus on pages 25 through the end.		
Page 29	Stratovolcanoes are one kind of volcano. How are stratovolcanoes formed? Is this a quick or slow process? How do you know?  (This is an opportunity for a collaborative talk structure.)	Stratovolcanoes are formed by the lava, cinders, and ash from many eruptions. This must be a slow change, because I see in the picture that this mountain is very tall. It must take many, many years to stack up so many layers of lava, cinders, and ash.
Page 31	What does extinct mean? Therefore, what is an extinct volcano?	Extinct means something is dead or doesn't live anymore. An extinct volcano is very old and doesn't erupt again.
Page 31	What is the difference between a dormant volcano and an active volcano?  Do you remember how the author of *Mountain Dance* said, "slumbering volcanoes awake, roaring." What might he have been describing?	Now I know volcanoes are different. A dormant volcano is sleeping or is just sitting doing nothing. Sometimes, volcanoes can be dormant for a long, long time. Then is becomes active. An active volcano means that it's not asleep, and changes are happening within the volcano. An active volcano is the opposite of an extinct volcano. He is talking about a dormant volcano that wakes up and starts to show signs of becoming an active volcano.
Page 31	What is a crater? How is a crater lake formed?	Craters are big holes in the Earth. Craters, or calderas, can be caused when the entire top of a volcano crashes inward. An eruption causes the mountaintop to fall in. Sometimes it is fills with water and looks like a big lake.
Page 31	In the text it says, "plants and animals are nowhere to be found." Why is that? 	Plants, animals, and people die or leave.

	How do those volcanoes affect people, plants, and animals? 	People leave because their homes, towns, and property can be covered in cinders, ashes, and lava. Plants are killed by hot lava and tons of rocks but grow back in a few months. Animals that aren't killed have to leave because their food and homes are destroyed.
Page 32 and all text and pictures	Using what you know about different kinds of volcanoes and lava, what effects do volcanic eruptions have on Earth? 	Eruptions can cause the top of volcanoes to collapse and make craters. That means a lake could end up where a mountain used to be! Also, the land can be covered in sharp or billowy rocks, cinders, and ashes. Islands can form in the middle of the ocean.

ADDITIONAL SUPPORTS

Reread related selections from the anchor text *Planet Earth Inside Out* by Gail Gibbons.

Build background knowledge with the following YouTube video:
https://www.youtube.com/watch?v=V863xR0Y2qk

AN ISLAND GROWS– READING 2, QUESTION SEQUENCE 2, DAILY TASK 6

TEXT

Text: *An Island Grows*

Question Sequence: Second

Instructional Strategy: Shared Reading

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand how volcanoes cause changes to the Earth's surface both positive and negative, which impacts the survival of living things.

To achieve understanding, students will:

- use words and illustrations from the text to explain how volcanoes can promote changes, both good and bad, to Earth's surface; and
- synthesize the most important points from two texts about volcanoes to understand how volcanoes change the Earth's surface.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- thrive (explicit)
- sow (embedded)
- flock (embedded)

DAILY TASK

Teacher's Note: It is intended to read An Island Grows *(SR) and* Volcanoes *(IRA) on the same day. Daily Task 6 will be completed after reading both texts.*

We have spent a lot of time learning about volcanoes in several of the texts we've read so far. Using what you have learned from all of these texts, write two paragraphs about how volcanoes and volcanic eruptions impact plants, animals and people. In one paragraph, describe the negative impacts, and in the other paragraph, describe the positive impacts.

In your writing, be sure to:

- introduce the topic;
- use facts and details from the text;
- use domain-specific vocabulary from the word wall/display; and
- include a concluding statement.

POSSIBLE STUDENT RESPONSE
Volcanoes can impact living things in many ways. They can destroy plants, animals, and towns. Sometimes volcanoes can even kill people because lava is hot and can move quickly. Many animals and people living near the volcanic eruption don't move to safety in time. Plants and trees around the volcanic explosions are covered with cinders and ashes which kills them, too. For a while, there are no plants, animals, and people living around the volcano. In a few months after an eruption, plants begin growing in the cracks of the hardened lava and rocks. Animals and people often return to live near the volcanoes again. When people return, they will find new mountains and new soil where new life can thrive. We might think volcanoes are only bad, but sometimes they can make things new.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 14	What is happening on the island? How did the plants get there?	Plants are growing on the island. The wind blew the seeds to the island.
Page 15	How does the illustration describe what is happening with living things?  (This is an opportunity for a collaborative talk structure.)	They are all growing and thriving on the island.
Page 22	How is the island changing throughout the story? 	The island changes from empty, rocky land to a busy place full of life. There are now people on the island, and they are growing plants to eat.
Page 27	How did the island get to be there if it used to only be water?	An underwater volcano built up over time until it rose above sea level.
Page 30	What is the significance of the last line of the text? 	The last line of the text reminds us that the islands will continue to appear if volcanoes erupt in the ocean.
	Teacher's Note: We will again revisit Mountain Dance to explore the language the author uses, now that students have a better understanding of how underwater volcanoes can form islands.	

Page 4 of Mountain Dance	How can the author use the word “quiet” when describing the eruption of volcanoes? Why would the lava be making a hissing sound?	The eruption is slow and steady. It happens under the water, so no one can see or hear it. In the book Volcanoes we learned that hot lava hardens when it hits cold water. This makes a hissing sound.

EARTHQUAKES – READING 1, QUESTION SEQUENCE 1, DAILY TASK 7

TEXT
Text: *Earthquakes* **Question Sequence:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
750L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is slightly complex. There are few text features for students to navigate. There are bolded words, but there is no glossary. Some of the graphics support the text, though there are ideas presented in the text that are not, and do not need to be, supported with illustrations.	Language features are moderately complex. There are subject-specific words, some of which are bolded and defined in the text (magnitude, fault, tectonic plates, natural, afire, dams, steel, satellites, shocks, experiment, yardstick, buckle). There are some words that may be new to students or may be used in a new way (topple, withstand, fortunately). Most of the sentences are simple, though there are complex and compound sentences as well.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is only slightly complex. The text focuses on earthquakes (what they are and what impact they can have). The purpose is easy to grasp from the title and text.	Knowledge demands are moderately complex. Many of the examples call for students to know about parts of the world or specific natural/manmade features (Mexico, California, Pacific Ocean, Japan, southern Europe, Mount Vesuvius, Indian ocean, San Francisco, Golden Gate bridge). Students also need to have a basic understanding of natural occurrences such as floods, landslides, and volcanoes.

LESSON OBJECTIVE(S) FOR THIS READING
Students will understand that earthquakes are caused when two sections of the Earth's crust along a fault push or rub against each other and causes seismic waves to spread through the Earth. To achieve understanding, students will:

- make connections between scientific ideas that explain what causes earthquakes and the effects they have on Earth; and
- use words and illustrations to understand and explain how earthquakes occur.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- buckles (embedded)
- seismic waves (explicit)

The following word will be reinforced in this reading.

- fault

DAILY TASK

Using the illustration on page eight to guide your thinking, draw and label what is happening to the crust during an earthquake. Be sure to label the fault line, waves, and plates. Then write a paragraph explaining what is happening in your illustration.

In your writing, be sure to:

- introduce the topic;
- use facts, details, and definitions from the text; and
- include a concluding statement.

POSSIBLE STUDENT RESPONSE

Parts of the Earth are always moving, but we don't always feel it. Earthquakes happen when the Earth moves too much at one of its fault lines, or where two sections of the crust meet. When these sections push against each other, seismic waves to spread through the earth. This causes an earthquake.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 5	On page 5, the author states that the earth is always moving. What reasons does the text give us as to why we do not feel these movements?	The earth's movements cannot be felt, because they are so small and slow.
	According to the author, do earthquakes happen often or not often? How do you know?	Earthquakes happen often in some places that are close to the fault lines in the Earth.

Page 8	How does the illustration on page 8 show us what happens to the Earth's crust during an earthquake?  (This is an opportunity for a collaborative talk structure.)	The center is where an earthquake begins. The Earth's crust shifts up or down or sideways during an earthquake. This sends out waves that go through the whole earth.
Page 13	The illustration on page 13 shows us the layers of the Earth. How is this illustration similar to what you learned in the *Planet Earth* book? 	It is similar, because it shows the crust, the mantle, the molten outer core, and the inner core.
Page 14	What causes earthquakes to happen? (*Support: Provide the definition of 'buckle' in this context*.) Where does this happen? Is this a fast change or a slow change? What text evidence supports your answer? 	An earthquake happens when the Earth's crust shift up or down or sideways. This can happen at a fault line where two sections of the crust meet. Earthquakes are an example of a fast change because the author states, "Suddenly the bend releases, and a whole section may move four or five feet at once." The key word in this sentence is "suddenly."
Page 18	Why do most earthquakes occur along the shore of the Pacific Ocean? Think back to what we learned in *Volcanoes* about the Ring of Fire. What connections are you making now? 	Most earthquakes occur along the shore of the Pacific Ocean because that is where the crust moves a lot, and we know earthquakes form where the crust moves. Because the Ring of Fire is where the crust moves a lot, there will be many earthquakes in this area.
Page 30	Why would it be important to have these types of supplies ready if you lived in an earthquake zone?	It would be important to have a plan because earthquakes happen very quickly, and you might not have time to get away from it. You will also need supplies after it happens because you might not be able to drive anywhere to get them due to the destruction the earthquake has caused.

Page 31	Take a moment to consider this: Why will we "continue to have earthquakes?" Provide evidence from our texts to support your thinking.	We will continue to have earthquakes because the Earth is always moving and changing. Humans have no way to stop the natural processes of the cycles of the Earth.

ADDITIONAL SUPPORTS
The text *Earthshake: Poems from the Ground Up* by Lisa Westburg Peters might be used to support learning related to this content.

EARTHQUAKES – READING 2, QUESTION SEQUENCE 2, DAILY TASK 8

TEXT

Text: *Earthquakes*

Question Sequence: Second Read

Instructional Strategy: Interactive Read Aloud

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand that earthquakes cause quick changes to the Earth's surface and impact people and places. This quick change requires people to know how to be prepared and stay safe if they live where an earthquake might occur.

To achieve understanding, students will:

- use words and illustrations to understand and how earthquakes can create varying levels of destruction;
- understand and write about why safety and preparedness can help support people as they deal with an earthquake; and
- create a safety plan that describes what to do before, during, and after an earthquake.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- border (explicit)
- tsunami (embedded)
- aftershock (embedded)

DAILY TASK

Graphic Organizer and Writing Task:

With a partner, brainstorm the ways earthquakes affect people and discuss ways you can be prepared to stay safe if an earthquake happens where you are. With your partner, write a safety plan using the chart provided. Your plan should include ways to be prepared before an earthquake occurs, safety steps to take during an earthquake, and what to think about after the earthquake.

Then, independently imagine you live in a small town where earthquakes frequently happen. You have just discovered your town does not have a safety plan. Write a letter to the mayor letting her know how an earthquake affects people and places and why you think it is important to have a plan. Use the information from your safety plan to support your reason for having a plan before an earthquake actually happens.

In your writing, be sure to:

- introduce your topic;
- state your opinion;
- supply reasons to support your opinion; and
- use linking words and provide a concluding statement.

POSSIBLE STUDENT RESPONSE

Graphic Organizer:

Safety Plan	
What should we do before an earthquake in order to be prepared?	People should buy and have certain supplies ready in case of an earthquake. They need to have plastic bottles of water to drink, canned food, flashlights with batteries, a fire extinguisher, and a battery-powered radio.
What safety steps do we need to take during an earthquake?	If you are inside when an earthquake happens, you should get under a strong table or bed. This will protect you from things falling on you. You can also stand in a doorway, but stay away from windows. If you are outside when an earthquake happens, you should stay outside. Get away from anything that could fall on you like buildings, trees, or power lines. Open spaces like a field or parking lot can be a good place to go.
What do we need to remember after an earthquake to keep safe?	After you think the earthquake is over, it is important to remember there can still be aftershocks. These are smaller earthquakes that happen after the main earthquake, but they can still cause damage.

Writing Task:

Dear Mayor,

We have been learning about destructive earthquakes, and in my opinion, it is important to have a safety plan in case we have an earthquake in our town. We need to be prepared because it happens very quickly and can cause destruction to homes, buildings, people, and animals.

If we had an earthquake safety plan, people would have the supplies they need and know how to stay safe before the earthquake occurs. People who are outside would know to stay away from buildings, trees, or anything else that might fall on them. Open spaces like fields or parking lots can be safe places. People that are inside would know they need to get under a table or stand in a doorway. This will protect them from heavy things falling on top of them. The plan would also let people know to be prepared for aftershocks. If we have a safety plan, people will know how to stay safe.

Earthquakes can be so scary! They can be very destructive and happen very quickly! We need to make sure we are prepared in case we have an earthquake in our town.

Sincerely,

Beatrice Prepared

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 7	What is the difference between a magnitude 2 earthquake and a magnitude 7 earthquake? What do you see in the picture? What does that tell you about the impact of earthquakes?	A 2 is hardly noticeable, where a 7 or above can cause extensive damage to buildings and can be felt in large regions. I see a crack in the earth, houses breaking, and people running around. This tells me earthquakes not only change the earth's surface, but also impact houses.
Page 15	Was this a large earthquake or a small earthquake? How do you know? (This is an opportunity for a collaborative talk structure.)	This was a large earthquake. I know this because this earthquake caused buildings to fall down. (This earthquake measured 8.1 on the Richter scale.)
Page 17	What caused the earthquake in San Francisco? Using information from the text and the illustration, what impact did this earthquake have on people and places?	The earthquake in San Francisco was caused when one of the tectonic plates, or the crust, near the San Andreas Fault moved. People had to leave because their homes and buildings were destroyed. There were broken water and power lines that caused dangerous situations.
Page 20-21	What is a tsunami? Using information from the text and the picture, what was the impact of the undersea earthquake in 2004? Would these huge waves cause slow or fast changes to land?	Tsunamis are waves that grow into great walls of water. The picture shows they destroyed buildings and trees and caused people to have to leave. They would cause very fast changes because they happen so quickly, people would not have time to prepare for them.

Page 24-25	Looking at these illustrations, describe how an earthquake might change the surface of the earth or impact people and places.	During an earthquake, fires can start in houses, flooding can happen, telephone poles and trees can fall, and pipes underground can break. These things happen because the ground moves during an earthquake.
Page 26	What are some ways people are trying to prevent the impact of earthquakes?	People are building buildings to be able to withstand the movement of the ground. Bridges and dams are reinforced with concrete and extra steel.
Page 29	What are some ways people can protect themselves from the effects of earthquakes? Why do these things help people stay safe?	People can protect themselves by getting under strong tables, keeping away from windows or standing in a doorway. The book also says it is safer to stay inside the building rather than try to get out. Doing this will protect people from things falling on them
Page 30	Look at the illustration. Why would it be important to have these types of supplies ready if you lived in an earthquake zone?	It would be important to have a plan because earthquakes happen very quickly, and you might not have time to get away from it. You will also need supplies after it happens because you might not be able to drive anywhere to get them due to the destruction the earthquake has caused.
Page 31	How does knowing that we will continue to have earthquakes make it important to inform others about being prepared?	We will continue to have earthquakes, because the Earth is always moving and changing. Sometimes these can happen quickly with no warning. People should know the safest places to go during an earthquake to protect themselves. They should also have supplies they need to survive afterward if water and power sources are damaged.

CRACKING UP: A STORY ABOUT EROSION – READING 1, QUESTION SEQUENCE 1, DAILY TASK 9

TEXT
Text: *Cracking Up: A Story About Erosion* **Question Sequence:** First Read **Instructional Strategy:** Shared Reading

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
650L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The text structure is moderately complex. Text features include words called out in different locations on the page, or in boxes, or in panes with pictures. The different colored boxes contain information about key terms or concepts that support an understanding of the main portions of text. Some of the illustrations are supplementary and some are necessary to understating the text.	Language features are moderately complex. There are many words that may be used differently than students are used to (face, droppings, baked, groove, base, lashed, wave, ground, wore, hung, foot, grain). Some of the subject-specific words (ledge, seabed, churning, surge, tide, dissolve, bay, shore) are defined in the text, and some aren't. There are some complex and compound sentences.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is moderately complex. The purpose of the text is hinted at in the title and on page 6. The text is narrowly focused on the impact of erosion.	Knowledge demands are moderately complex. Students will need to have a basic understanding of landforms. In addition, there are a few references to historical events that may help students understand the age of a landform and how long the process of erosion takes. To understand the last page of the text, students need to know what happens to a sandcastle when the tide comes in.

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand that erosion is the way in which water, ice, wind, and sun wear away at Earth's surface and change the shape of the land.

To achieve understanding, students will:

- make connections between scientific ideas such as water freezing and expanding, making cracks in rocks wider and the process of erosion turning rock into sand; and
- use the words and illustrations to understand and explain about the different types of erosion.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- erosion (explicit)
- eroded (explicit)
- undercutting (embedded)

DAILY TASK

Provide a written response to the following question: What is erosion? Choose at least two examples of erosion from *Cracking Up: A Story About Erosion* and explain how they caused the ledge/cliff to be eroded away.

In your writing, be sure to:

- introduce the topic of erosion;
- use facts from the book to explain; and
- provide a concluding statement.

Teacher's Note: Students may refer to the class-created list of types of erosion happening to the cliff.

POSSIBLE STUDENT RESPONSE

Erosion is the name scientists give to the way water, ice, wind, and sun wear away at the Earth's surface and change the shape of the land. One example the author gives of erosion is wind. The wind blows against the cliff with specks of dust and grit and rubs the cliff face like sandpaper. Another example of erosion is the plant roots growing into the cracks on the cliff making them wider and eventually breaking the cliff apart. These are two examples of how the cliff was eroded away over time.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Teacher's Note: For this read of the story, read only the story of the cliff. Omit supplementary scientific information for this read. The cliff story has the white background in most cases, and is typically in square boxes; the scientific information has colored backgrounds and is in rounded shapes. Exception: do read pages 10-11.		
	Teacher's Note: To connect students' prior learning from previous texts, read aloud pages 12-22 of Mountain Dance*. Then, read the text about the process of erosion happening to a cliff.*	
Page 8	What is the connection between freezing water and the cliff?  (This is an opportunity for a collaborative talk structure.) How do the illustrations in the pink section about water freezing help you understand what is happening in the cracks?	Water froze in cracks, which made the cracks wider in the cliff. The four small drawings show the sequence of events in making the crack wider. First the water rains in the crack. Next the water freezes and expands. Last, the rock cracks open and breaks.
Page 9	What changes happened to the cliff? *Teacher's Note: gather student responses of types of erosion for students to later reference during writing task.* Has this been a slow change or a quick change? How do you know? 	The following changes happened to the cliff: • Birds pecked and scraped at the ledge creating cracks. • Hot sun baked the cliff face. • Wind carried specks of dust and grit and rubbed the ledge like sandpaper. • Roots pushed into cracks. • Rain water froze in cracks making them wider. • Waves crashed into the foot of cliff undercutting it. This is a slow change. I know this because the text said from the very beginning, every spring, every autumn, and each year which means many years have passed.
Page 9	I noticed the author used the word erosion until this page. On this page, I heard the word eroded. How are those two words related - erosion and eroded?	Heavy waves crashing against the cliff cause the cliff to be *eroded*. *Erosion* is what happens to the cliff when the water wears it away.

	 *If necessary, explain that erosion is an event (a noun) while eroded is an action (a verb).*	
Pages 6-9	Think about the examples the author has given us. What do you think erosion might mean? 	Erosion is the wearing away of the Earth. It is a way the Earth's surface changes.
Page 10-11	Compare your definition for erosion with the author's explanation. What parts did you have the same? (*Revise the class definition if needed to more closely match what is in the text*.) What are some examples of erosion on page 11, and how do they change the surface of Earth?	Answers will vary depending on previous answers. • Ice rainwater wears down rock/ mountains. • Rivers cut deep valleys into the land. • Winds scrub against rocks and erode them into strange shapes. • Ocean waves erode the land's edges.
Page 10-11	What connections have you made from the examples on page 11 to the story of what is happening to the cliff so far? 	• Rock is usually covered by soil but cliffs are bare rock where there is no soil or soil is very thin. • Rainwater and ice have worn down the cliff. • Wind has rubbed against the cliff like sandpaper. • The ocean waves have been undercutting, or eroding, the foot of the cliff.
Page 12	What happened to the cliff? After being there for so long, why did the ledge of the cliff finally break off? 	The ledge broke off the cliff into pieces and fell into the ocean during a great storm. Erosion! All the examples that we have already gave weakened the rock over time so those powerful waves finally broke it off.
Page 14	How is the cliff being eroded now? What does it mean that the underwater waves were eroding the cliff?	The cliff is being eroded under the water. The waves under the water keep crashing against the cliff and causing part of it to be worn away. The big waves threw the rocks against the cliff.

Page 15	Describe how the rock from the ledge looks in the first picture to the last picture. What is causing the rock to change? 	The rock has sharp edges and points. After it rolls back and forth with the waves its edges are worn smooth.
Page 21	The rocks from the ledge, which are now tiny pebbles, have moved closer to the beach, or shore. Where do they end up? How?	On the beach as sand. As they traveled, they rubbed and rolled against the ocean floor. All that rolling around wore the pebbles away and the water was dissolving them. The waves flung them onto the beach now as tiny as a grain of rice - they're sand.

CRACKING UP: A STORY ABOUT EROSION – READING 2, QUESTION SEQUENCE 2, DAILY TASK 10

TEXT

Text: *Cracking Up: A Story About Erosion*

Question Sequence: Second Read

Instructional Strategy: Shared Reading

LESSON OBJECTIVE(S) FOR THIS READING

Students will understand the natural processes of erosion by water.

To achieve understanding, students will:

- explain how the illustrations and added scientific text contributes to their understanding of how the process of erosion changed the cliff into grains of sand;
- compare important points presented in *Cracking Up* and *An Island Grows*; and
- describe erosion from water by writing about the process from the point of view of a grain of sand.

VOCABULARY WORDS

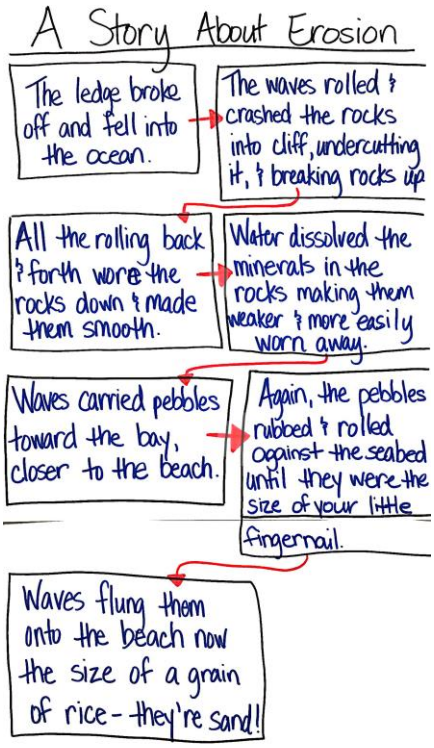
The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- bay (embedded)
- minerals (embedded)
- seabed (implicit)
- tides (embedded)
- dissolve (implicit)

DAILY TASK

Teacher's Note: During the second read of this text, co-create a flow map to capture the sequence of events that happen with the cliff from the time the ledge falls off until the rocks end up as sand on the beach.

Example Flow Map:



Writing Task:

At the end of the book, *Cracking Up: A Story About Erosion* the author states, "Because of erosion, the grains of sand were high above the ground like they were on the cliff." Pretend you are one of these grains of sand. From the point of view of a grain of sand, write a narrative explaining how you began your journey on the ledge of a cliff and ended up on the beach. Remember to include if this change occurred quickly or slowly. Use the notes from your flowchart to help you explain this process of erosion. In your writing, be sure to:

- include details to describe actions, thoughts, and feelings;
- use time order words to signal event order; and
- provide a sense of closure.

POSSIBLE STUDENT RESPONSE
For many years I was a rock sitting on the ledge of a cliff observing the beautiful view. I enjoyed feeling the cool water from the waves lash against my rocky surface. Then one day a giant wave caused my body to break in half and plunge into the ocean below. My new home was very different than before. For the next thousand years, I bumped into other rocks around me like bumper cars at a carnival. Every time I hit another rock, parts of me gradually broke off. I began to get smaller and smaller. Eventually my sharp broken edges were ground smooth. Water was also dissolving the minerals inside of me making me become weaker and slowly wearing my body away. Next, the waves carried me toward the bay, closer to the beach. I began rolling and rubbing against the seabed until I became the size of a fingernail. Finally, the waves flung my body on the beach and I became a piece of sand the size of a grain of rice. I was very tired and enjoyed resting on the warm beach with thousands of my other friends. In the summer, lots of people visit my beach and walk or play on me. This is the story of my erosion journey that took me from a cliff high above the ocean to a grain of sand on the beach.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Teacher's Note: For this second read of the text, reread the portion related to the cliff and the supplementary scientific information. The cliff text has the white background in most cases, and is typically in square boxes; the scientific information has colored backgrounds and is in rounded shapes.		
Pre-reading	*Teacher's Note: Revisit the definition of erosion. The focus of this text, once the ledge falls off, is more about the process of erosion by water.*	
Page 12	The text said the wind and rain lashed at the cliff. What does it mean to lash? What is the relationship between the wind and the waves? How does this cause erosion? (This is an opportunity for a collaborative talk structure.)	Lashing means to hit hard against something. Wind blows across the surface of the oceans and makes waves. The stronger the wind, the bigger the waves. The wind and rain lash against the cliff so hard that the cliff breaks into pieces. Also, the waves were crashing into the cliff.
Page 13	Now the ledge has broken off and fallen into the ocean. What is happening underneath the waves? How does this additional information provided by the author on this page help you to better understand the story of erosion?	The water is churning around like a washing machine. I understand there are waves under the water, too that are moving the rocks around.

	What does heaved mean? How is this eroding the rocks?	Heaved means to pick up and throw with great force. The water is heaving the rocks against the seabed and cliff breaking them apart even more.
Page 15	What are the tides? What happens to the rocks as a result of the tides? *Teacher's Note: Reread* An Island Grows *starting at "An Island Grows" and end at "Sands Mound".* What is happening in *An Island Grows* to the newly formed island on these pages? Is this the same natural process that is happening in our *Cracking Up* story? How do you know?	When the sea rises and falls. The tides cause the rocks to roll backward and forward and now they are smaller pebble-sized pieces. The rain, wind, and waves are lashing against the rock and eroding it, making it smooth. Sand is gathering around to form the beach just like in *Cracking Up*. Yes. This is the process of erosion where wind and water wear away the rock making it smooth.
Page 16	Rocks are made of minerals and some of these minerals dissolve, or disappear, in water. How does this add to the process of erosion of the rocks?	It leaves tiny holes in the rocks and makes them weaker so they are more easily worn away.
Pages 18-19	A bay is a body of water where the land curves inward. How is a bay formed? How do the pebbles get to the bay?	There is hard rock and soft rock. Soft rock erodes more quickly. When soft rock is in between hard rock, the water wears away the soft rock faster and a bay is formed. The waves push them sideways and they begin to drift around the side of the cliff toward the bay.
Page 20	How do the pebbles from the ledge get to be the size of a little fingernail?	They rub and roll against the seabed being worn away bit by bit, or gradually.
Page 22	How do the pebbles become sand on the beach?	The waves flung them on to the beach, or shore, now as tiny as grains of rice. They are sand on the beach now.

TEXT
Text: *Rocks: The Hard Facts, Erosion and Weathering* **Question Sequence:** First Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
880L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The text structure is moderately complex. There is a table of contents to support readers with locating information. Each page has a heading. Bolded text draws the reader's attention to words that are defined in the glossary. Diagram labels support students in accessing the illustrations. Some of the diagrams and illustrations are necessary for understanding the text.	Language features are moderately complex. Most of the language is explicit and easy to understand. Many of the critical words are bolded in the text and are defined in the glossary or in the text. There are other content-specific words that are not defined in the text (coastlines, riverbank, canyons, pressure, acid, sandstone).
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of the text is slightly complex: to learn about weathering and erosion. This is clearly conveyed through the title of the book and the table of contents.	Knowledge demands are slightly complex. Most of the knowledge students need to access the text is presented in the text. Students need to understand gravity to fully understand the text.

LESSON OBJECTIVE(S) FOR THIS READING
Students will understand there are many ways erosion and weathering are constantly working together to change the surface of the Earth. To achieve understanding, students will: • use information from the photographs and the words to demonstrate their understanding of how erosion and weathering change the surface of the earth; • use text features to locate key facts about weathering and erosion; and • describe the connection between two scientific ideas: weathering and erosion.

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- sediment (explicit)
- weathering (explicit)
- landforms (embedded)
- expand (embedded)
- continents (embedded)
- particles (embedded)
- grind (embedded)
- deposited (embedded)

The following words will be reinforced in this reading.

- erosion
- dissolve

DAILY TASK

There are several places in *Rocks: The Hard Facts, Erosion and Weathering* where the author says weathering and erosion work together. Using what you know about erosion, explain two ways erosion and weathering are constantly changing the surface of the Earth. Make sure you include whether these changes occur slowly or quickly.

In your writing, be sure to:

- introduce the topic;
- use facts, details, and definitions from the text; and
- include a concluding statement.

POSSIBLE STUDENT RESPONSE

Erosion and weathering work together to change the surface of the Earth. One example of this is forming new landforms. The Grand Canyon was formed by physical weathering and wind/water erosion over a very long period of time. Another example is in deserts where the quick temperature changes break down the rocks turning them into sand and wind carries the sand away. Erosion and weathering are constantly changing the Earth's surface.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Pages 4-5	What is sediment? The author calls this process weathering. How is weathering different from erosion?  (This is an opportunity for a collaborative talk structure.)	Sediment is small pieces of rock that have been broken down. Weathering is the wearing down of rocks into sediment, and erosion is moving of the sediment.
	Teacher's Script: "I wonder if there are examples in Cracking Up *that we would call weathering and not erosion. As we read about weathering, I want you to consider this."*	
Pages 6-7	How does weathering cause the Earth to change over time? What were some examples in *Cracking Up* that we might call weathering instead of erosion?	Earth's natural forces break down rocks. In *Cracking Up*, water froze in the cracks of the cliff. The water expanded causing the cliff to crack.
Page 10	How does gravity cause erosion?	Gravity pulls rainwater down, carrying rock particles downward.
Pages 10-11	How does water cause changes to the Earth's surface? 	• Rainwater picks up loose soil and rock and carries them away. • Water flowing in streams and rivers moves particles and, over time, widen and deepen rivers.
Pages 12-13	What is this section of the book called? What are the examples of erosion on these pages? How do these two types of erosion cause changes to the Earth's surface?	Other Erosion Wind and glaciers Wind carries particles that blow against rock surfaces and wear them down. Glaciers are slow moving ice that break apart rock as they move downhill.

Pages 14-15	Let's look at the word deposited. Can we tell what it means? Moving forces are things like wind and rainwater. What is being deposited by those forces and how?	Deposited means put down or set down. Sediment is deposited when those moving forces stop. This creates soil.
Pages 16-17	How can erosion cause something to "build up"?	The sediments eroded from one place are deposited somewhere else. The place where sediment is deposited is built up.
Pages 18-19	What are some examples of the Earth changing? How were the examples formed? 	The Landscape Arch and The Grand Canyon are examples of the Earth changing by erosion. The Landscape Arch was formed by the breaking down of rocks. The Grand Canyon was formed by wind erosion and the Colorado River.
Pages 20-21	What were some examples the author gives of natural disasters? How does erosion cause natural disasters?	Some examples of natural disasters are landslides, mudslides, avalanches, hurricane, and flooding. Erosion moving sediment, mud, or snow downhill causes landslides, mudslides, and avalanches.
Page 22	Explain the rock cycle to a partner. How is erosion and weathering part of the rock cycle?  Why does the rock cycle never end? Throughout this book, the author has included additional text boxes, or captions. Why did the author include these and how do they help you better understand weathering and erosion? 	The rock cycle is the process of breaking down old rock and forming new rock. Weathering, causes the breakdown of rocks and erosion causing the rocks to be moved away and deposited. The rock cycle never ends, because there is constant weathering and erosion. Authors use captions to provide more information about the pictures. I understand how weathering and erosion look because of the pictures and captions.

	Does the Earth ever stop changing? How do you know? 	No, the Earth is always changing. Erosion and weathering are always in a cycle so the Earth keeps changing.

PLANET EARTH/ INSIDE OUT – READING 2, QUESTION SEQUENCE 2, DAILY TASK 12

TEXT
Text: *Planet Earth/Inside Out* **Question Sequence:** Second Read **Instructional Strategy:** Interactive Read Aloud

TEXT COMPLEXITY ANALYSIS	
QUANTITATIVE COMPLEXITY MEASURES	
800L	
QUALITATIVE COMPLEXITY MEASURES	
TEXT STRUCTURE	**LANGUAGE FEATURES**
The structure of this text is slightly complex. There are no headings to separate different topics in the text. Some of the illustrations are supplementary; however, most are necessary for understanding the text (e.g., diagrams of the layers of the Earth and the maps of the Earth's plates.	Language features are moderately complex. There are some subject-specific words that are defined and then used frequently in the text (equator, magnetic field, mantle, molten, plate, faults). There are some words that may be new or used in new ways (iron, nickel, pressure, strain, buckles, collide, flat plains, depressions, climate, natural resources, abused). Most of the sentences are simple or complex.
MEANING/PURPOSE	**KNOWLEDGE DEMANDS**
The purpose of this text is moderately complex. The title, *Planet Earth/Inside Out*, communicates the major purpose of the text. This text also implies other ideas, such as the ever-changing nature of the Earth and the conservation of the Earth's resources.	The knowledge demands in this text are slightly complex. Students need to have background knowledge of distance (inches, miles, and feet) and temperature. The illustrations and sidebars connect the information in the text to common experiences (water boiling, size of a peach).

LESSON OBJECTIVE(S) FOR THIS READING
Students will understand natural processes such as formation of mountains and volcanoes and erosion and weathering change the Earth's surface and impact life on Earth. To achieve understanding, students will: • synthesize the information from multiple texts to explain that Earth is constantly changing; and • use evidence from Mountain Dance and Planet Earth/Inside Out to explain why the authors use the phrase "the living planet" to describe Earth.

TN Department of Education

VOCABULARY WORDS

The following words are introduced during the reading. Suggested instructional methods are included in parentheses.

- ever-changing (embedded)
- living (embedded)

Teacher's Note: Reinforce language pulled out previously from Mountain Dance *to ensure students understand the comparisons being made.*

DAILY TASK

Teacher's Note: There is no daily task for this daily lesson as the discussion from this question sequence will provide speaking and listening opportunities that will prepare students for completion of the End-of-Unit task.

PAGE/PART OF TEXT	QUESTION SEQUENCE	EXEMPLAR STUDENT RESPONSE
Page 1	What is special about the planet Earth? (This is an opportunity for a collaborative talk structure.)	The Earth is the only planet that is just right for plants and animals to live.
Page 4- 5	When we first started this unit, we looked at these illustrations and discussed the changes over time. What are you thinking now that you know so much more about natural processes that are happening on Earth?	Answers will vary. Students should surface connections to knowledge gained from multiple texts throughout the unit.
Page 13	Revisit the illustration on page 13. Consider this statement we read in several texts that, many earthquakes and volcanic eruptions occur without us noticing. Why would this be so?	From this picture and all that I have learned in this unit, I see many of the (margins, borders, plates, etc.) are located in water or places where people don't live. Even if we don't see, hear or feel it, these processes are still happening all the time.
Page 14	Why do we call the Earth "the living planet?"	We call the Earth the living planet because the Earth's plates are in constant motion, and the earth's surface is always changing.

Page 27	The author says the Earth is our beautiful, living and ever-changing Earth, inside and out. How has the Earth changed over its lifetime? How is the earth changing inside and out?	Possible answers: Mountains and volcanoes have formed and been eroded away. New islands are being formed all of the time. Places on Earth are destroyed and damaged and new life grows. *(Teachers should also hear responses that include information from other texts that are part of this unit.)* The Earth is beautiful and living on the outside. It changes as new structures are formed when its plates move on the inside. *(Teachers should also hear responses that include information from other texts in this unit.)*
	Teacher's Note: Now, go back to revisit Mountain Dance one last time. You will again read it in its entirety. Students have a better understanding of the natural processes the author is describing and should connect to this text in a different and deeper way this time. The only question for this read of Mountain Dance *is tied to the daily task after finishing the reading both texts.*	
	The author of *Mountain Dance* describes the Earth in ways we might describe a living thing. The author of *Planet Earth/Inside Out* describes the Earth as a living planet. Why do they choose to describe Earth in this way?	Possible answers: • Dormant volcanoes are like sleeping or slumbering people and they can be active when they are awake. • New islands grow all the time. • Mountains grow and erode away all of the time. • The Earth is always changing just like living things. • The Earth is always moving on the surface and on the inside.

END-OF-UNIT TASK

Note: The end-of-unit task gives students the opportunity to independently answer the essential questions for the unit and to demonstrate their understanding of the unit concepts. The end-of-unit task prompts student thinking, speaking, and writing about unit texts that reflect the demands of the grade-level literacy standards. In addition, the end-of-unit task provides students a chance to demonstrate their understanding in an authentic and meaningful context.

EARTH NEWS CENTRAL: WEBSITE FOR STUDENTS

A PICTURE OF MOUNTAINS NEAR MY HOME

Earth Never Changes

BY: NEVELL KNOW-IT-ALL

Earth Never Changes

By: Nevell Know-it-all

"The Earth never changes," exclaims my friend, Simple Simon the Scientist. He tells everyone the mountains have stayed the same since he was a little boy, therefore the other scientists must be wrong. As evidence, Simon has pictures of mountains near his home from when his parents moved there fifty years ago. When he looks at the same mountains now, they look the same!

Simple Simon the Scientist also describes events such as flooding, tornadoes, and volcanic eruptions as nature causing a problem for a few days, but not causing changes to the Earth. This smarty scientist says once the event is over, everything goes back to the same as it was before the big event.

As a know-it-all, I told Simon how I had heard that Earth can change in many ways and from many natural events. However, after seeing Simon's picture of the mountains behind his childhood home, I've decided Simple Simon is correct. I guess Earth really doesn't change.

Respectfully,

Nevell Know-It-All

Peaceful Creek

This beautiful creek is behind my home. It hasn't changed since I moved here ten years ago. We even had heavy rains this spring! Simon must be correct, Earth doesn't change.

Webmaster: Willy Webmaster

Contact:
Willy.Webmaster@Earthnews.com

You and some friends came across this website while researching the Earth. The website tells readers that Earth never changes. You know better!

Part 1: Write an informational letter to the webmaster to explain how the Earth is constantly changing and that those changes happen slowly or over a long period of time. Not only do you know that Earth changes, but you also know those changes impact living things. Create a letter that explains to the webmaster how the earth changes.

Be sure to include the following in your letter:

- include an introduction and state your purpose for writing to him;
- use facts and details from our texts to name and describe at least two processes that cause the Earth's surface to change and include information about whether each process results in a quick change or a slow change to Earth's surface;

- describe how those processes impact the people, plants, and animals in that area;
- use at least five words we have learned in our studies; and
- include facts and definitions from the texts to provide evidence and have a concluding statement.

Part 2: Willy Webmaster received your letter. Before he can update the website, he needs you to assist him in convincing his editors to make the changes. Be prepared to deliver a 1-2 minute oral presentation that highlights the processes that constantly change the Earth's surface and how those changes impact living things.

Be sure to:

- use appropriate facts and relevant descriptive details to inform the editors;
- speak clearly and at an appropriate pace; and
- speak in complete sentences to communicate your detailed information.

Teacher's Note: Be sure to have vocabulary and anchor charts from the unit visible/available for students to reference to support their writing.

POSSIBLE STUDENT RESPONSE

Dear Willie Webmaster,

My second-grade class came across your website last week. I know from our studies that your article is false. Simple Simon the Scientist and Nevell Know-It-All are incorrect, because the Earth is always changing. Their evidence is false because some changes are fast and some are slow. Erosion can move soil and rock from one place to another gradually. These changes may take hundreds or thousands of years. One example of this is a cliff on the ocean being eroded by the lashing, heaving, and surging of water. Another example of a slow change is how mountains are made. Wind, ice, and water cause mountains to form over many years. Simon's family photograph would not show big changes over fifty years, but that doesn't mean the mountains don't change. An example of a quick change is an earthquake. An earthquake can cause a section of the Earth to buckle or break open. We have learned the Earth is always changing.

Sincerely,

Second Grade Student

TN Department of Education

END-OF-UNIT TASK RUBRIC

Note: The end-of-unit task rubric is designed to support educators in determining the extent to which students' responses meet the grade-level expectations. This rubric will also help teachers analyze the extent to which each student understands the unit concepts and understandings.

End of Unit Task Rubric

Student End of Unit Task Rubric: Grade 2

Directions: After reading and reflecting on the student work sample, score each area and total the rubric score at the bottom of the page. This rubric is designed to look at student work samples in a holistic manner.

	Below Expectation (0)	**Needs More Time (1)**	**Meets Expectation (2)**	**Above Expectation (3)**
Science Content (2.ESS.1.1) (Text-based evidence)	Writes but **does not** explain how the Earth changes**.**	Writes to explain **1 way** Earth changes and identifies whether the changes are fast or slow.	Writes to explain **at least 2 ways** Earth changes and identifies whether the changes are fast or slow.	Writes to explain **3 or more** Earth changes and identifies whether the changes are fast or slow.
Reading Standard (2.RI.KID.3)	**Does not describe** connections of Earth processes and its impact on living things.	Describes the connections of **1** Earth process and its impact on living things.	Describes the connections **of at least 2** Earth processes and their impact on living things.	Describes the connections of **3 or more** Earth processes and their impact on living things.
Content Vocabulary (2.FL.VA.7c)	Uses **0 or 1** science content vocabulary to explain Earth's processes.	Uses **2** science content vocabulary to explain Earth's processes.	Uses **3** science content vocabulary to explain Earth's processes.	Uses **4 or more** science content vocabulary to explain Earth's processes.
Mechanics (2.FL.SC.6)	Uses **little or no use** of punctuation and capitalization.	Uses **some** punctuation and capitalization but errors make understanding difficult.	**Mostly** uses punctuation and capitalization but errors do not interfere with the understanding.	**Consistently** uses punctuation and capitalization.
Writing Structure (2.W.TTP.2)	**Writing omits an introduction and conclusion**, and includes **few detail sentences.**	**Writing omits an introduction or conclusion**, and includes **some detail sentences.**	Writing includes an **introduction, detail sentences,** and a **conclusion.**	Writing includes **a clear introduction, many key details,**

				and a **clear conclusion.**

Total:_____

Above Expectation: 11 -12 points **Meets Expectation: 8-10 points**

Needs More Time: 4-7 points **Below Expectation: 0-3 points**

***Points are not designed to be averaged for a grade.**

TN Department of Education

APPENDIX A: UNIT PREPARATION PROTOCOL

Question 1: What will students learn during my unit?

Review the content goals for the unit and identify the desired results for learners.	
• What are the concepts around which I will organize my unit (*universal concept, unit concept*)? • What will students come to understand through deep exploration of these concepts (*essential questions, enduring understandings*)?* • What disciplinary knowledge will focus instruction and provide the schema for students to organize and anchor new words (*guiding questions, disciplinary understandings*)? • Why is this content important for students to know? *Adapted from McTighe, J. & Seif, E. (2011), Wiggins, G. & McTighe (2013).	

Question 2: How will students demonstrate their learning at the end of my unit?

Review the end-of-unit task and the exemplar response to determine how students will demonstrate their learning.	
• How does the task integrate the grade-level standards for reading, writing, speaking and listening, and/or foundational literacy in service of deep understanding of the unit texts and concepts? • How does the task call for students to synthesize their learning across texts to demonstrate their understanding of the unit concept? • How does the task call for students to use appropriate details and elaborate on their thinking sufficiently? • How does the task prompt student thinking and writing that reflects the grade-level expectations? • What is the criteria for success on this task? What does an excellent response look/sound like?	

Question 3: How will students build knowledge and vocabulary over the course of the unit?

Read each of the texts for the unit and consider how the texts are thoughtfully sequenced to build world and word knowledge.	
• How are the texts sequenced to build knowledge around the unit concepts? • How are the texts sequenced to support students in developing academic and domain-specific vocabulary? • Which instructional strategies are suggested for each text? How will I sequence them within the literacy block?	

Question 4: What makes the text complex?

You are now ready to prepare at the lesson level. To do this, revisit the individual text. Review the text complexity analysis and read the desired understandings for the reading.	
• What aspects of this text (structure, features, meaning/purpose, and knowledge) are the most complex? • What aspects of the text are most critical for students to comprehend to ensure they arrive at the desired understanding(s) for the reading? • Where might you need to spend time and focus students' attention to ensure they comprehend the text?	

Question 5: How will I help students access complex texts during daily instruction?

Review the question sequence and reflect on how the questions support students in accessing the text.	
• How does the question sequence support students in accessing the text and developing the desired understanding(s) of the reading? • How does the question sequence attend to words, phrases, and sentences that will support students in building vocabulary and knowledge? • How are the questions skillfully sequenced to guide students to the desired understanding(s) of the reading? • How will you ensure all students engage with the questions that are most essential to the objectives of the lesson? (Consider structures such as turn and talk, stop and jot, etc.) • How will you consider additional texts, or additional reads of the text, to ensure students fully access and deeply understand the text? • Are there any additional supports (e.g., modeling, re-reading parts of the text) that students will need in order to develop an understanding of the big ideas of the text and the enduring understandings of the unit?	

Question 6: How will students demonstrate their learning during the lesson?

Review the daily task for the lesson to determine what students will be able to do at the end of the lesson.	
• How does the task require students to demonstrate their new or refined understanding? • How does the task call for students to use appropriate details and elaborate on their thinking sufficiently? • How does the task prompt student thinking and writing that reflects the grade-level expectations? • How does this task build on prior learning in the unit/prepare students for success on the end-of-unit task? • How will students demonstrate their learning during other parts of the lesson? • What is the criteria for success on this task? What does an excellent response look/sound like?	

Question 7: What do my students already know, and what are they already able to do?

Consider what your students already know and what they are already able to do to support productive engagement with the resources in the Unit Starter.	
• What knowledge do my students need to have prior to this unit? • What do my students already know? What are they already able to do? • Given this, which/what components of these texts might be challenging? Which/what components of these tasks might be challenging? • What supports will I plan for my students (e.g., shifting to a different level of cognitive demand, adding or adjusting talking structures, adding or adjusting accountable talk stems into student discussions, providing specific academic feedback, or adding or adjusting scaffolded support)? • How can the questions and tasks provided in the Unit Starter inform adjustments to upcoming lessons?	

Question 8: What content do I need to brush up on before teaching this unit?

Determine what knowledge you as the teacher need to build before having students engaged with these resources.	
• What knowledge and understandings about the content do I need to build? • What action steps can I take to develop my knowledge? • What resources and support will I seek out?	

APPENDIX B: LESSON PREPARATION PROTOCOL

Question 1: What will students learn during this lesson?

Review the desired understanding(s) for the reading. Then, read the daily task and the desired student response.	
• What is the desired understanding(s) for this reading? • How does this desired understanding build off what students have already learned? What new understandings will students develop during this reading? • How will my students demonstrate their learning at the end of the lesson? • How does the desired understanding for this reading fit within the larger context of the unit?	

Question 2: How might features of the text help or hold students back from building the disciplinary and/or enduring understandings?

Read and annotate the lesson text and review the associated text complexity analysis.	
• Where in the text will students be asked to make connections to what they already know? Where in the text will students build new knowledge? • What aspects of the text (structure, features, meaning/purpose, knowledge) might help or hold students back from building the disciplinary and/or enduring understandings? • Where do I need to focus students' time and attention during the read aloud/shared reading?	

Question 3: How will I support students in accessing this text, so they can build the disciplinary and/or enduring understandings?

Read through the question sequence and the desired student responses.	
• Which questions are crucial and most aligned to the desired understandings? What thinking will students need to do to answer the most important questions? • Which questions target the aspects of the text that may hold students back from building the desired disciplinary and/or enduring understandings? • Are there adjustments I need to make to the questions or their order to meet the needs of my students while assuring students are still responsible for thinking deeply about the content? • What do I expect to hear in students' responses? How will I support to students who provide partial or incomplete responses in developing a fuller response?	

APPENDIX C: USEFUL PROCEDURAL EXAMPLES FOR EXPLICIT VOCABULARY INSTRUCTION

Example 1:

- Contextualize the word for its role in the text.
- Provide a student-friendly definition, description, explanation, or example of the new term along with a nonlinguistic representation and a gesture.
- Provide additional examples, and ask students to provide their own examples of the word.
- Construct a picture, symbol, or graphic to represent the word.
- Engage students in lively ways to utilize the new word immediately.
- Provide multiple exposures to the word over time.

-Beck et al., 2002; Marzano, 2004

For a specific example, see the shared reading webinar presentation found here.

Example 2:

- Say the word; teach pronunciation.
- Class repeats the word.
- Display the word with a visual, read the word, and say the definition using a complete sentence.
- Have the class say the word and repeat the definition.
- Use the word in a sentence: the context of the sentence should be something students know and can connect with.
- Add a gesture to the definition, and repeat the definition with the gesture.
- Students repeat the definition with the gesture.
- Have student partners take turns teaching the word to each other and using the word in a sentence they create.
- Explain how the word will be used in the text, either by reading the sentence in which it appears or explaining the context in which it appears.

- Adapted from *50 Nifty Speaking and Listening Activities* by Judi Dodson