Unit 2/Week 3

Title: Dinosaur Ghosts

Suggested Time: 5 days (45 minutes per day)

Common Core ELA Standards: RI.6.1, RI.6.3, RI.6.5, RI.6.6, RI.6.8; W.6.1, W.6.2, W.6.4, W.6.9; SL.6.1, SL6.4; L6.1, L6.2, L6.3, L6.4

Teacher Instructions

*Refer to the Introduction for further details.*

**Before Teaching**

1. Read the Big Ideas and Key Understandings and the Synopsis. Please do **not** read this to the students. This is a description for teachers, about the big ideas and key understanding that students should take away **after** completing this task.

Big Ideas and Key Understandings

At first it seems to be a text to inform but it is a text to persuade the reader to accept a theory about why the dinosaur, Coelophysis, died at Ghost Ranch.

Synopsis

This story is about a dinosaur find in New Mexico and after many years of information, the paleontologist attempts to persuade the reader about what happened to kill the dinosaur. In order to do so the author gives many ideas and theories but by evaluating evidence, narrows it down to one.

1. Read entire main selection text, keeping in mind the Big Ideas and Key Understandings.
2. Re-read the main selection text while noting the stopping points for the Text Dependent Questions and teaching Vocabulary.

**During Teaching**

1. Students read the entire main selection text independently.
2. Teacher reads the main selection text aloud with students following along. (Depending on how complex the text is and the amount of support needed by students, the teacher may choose to reverse the order of steps 1 and 2.)
3. Students and teacher re-read the text while stopping to respond to and discuss the questions and returning to the text. A variety of methods can be used to structure the reading and discussion (i.e.: whole class discussion, think-pair-share, independent written response, group work, etc.)

Text Dependent Questions

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| **Text Dependent Questions** | **Answers** |
| Reread the text box at the top of page 191. What is the purpose of these three paragraphs? | These paragraphs introduce the piece, *Dinosaur Ghosts*, and outlines the purpose of the story: to answer the question of why so many little dinosaurs **perished** at Ghost Ranch in New Mexico. It also tells the reader when the next section is set – in the summer of 1947. |
| Reread the first two paragraphs under A Big Find of Small Dinosaurs. Who is Edwin Colbert? | Edwin is also known as Ned Colbert and he is a paleontologist from the American Museum of Natural History in New York City. He is in New Mexico on his way to Arizona to hunt for fossils. |
| PG 191-193 What details help support the subheading? | Bones, lots of really small ones, there were so many skeletons that Colbert had to send a telegram for help |
| PG 192 Describe the work of other paleontologists in the Ghost Ranch area. | Charles Camp – discovered Triassic period dinosaurs- kept a diary. Edward D. Cope hired a **fossil** collector – 1880’s – named Coelophysis, found bones and didn’t receive much **publicity**. |
| Reread pages 192 – 193. What did the paleontologist, Colbert do differently than the others? What were his results? | He had an “open mind” and followed a trail of bones up the hill.  This lead to a huge discovery of bones that caused people to be interested and Coelophysis to “become the best-known small dinosaur ever discovered.” |
| PG 194 Using the subheading “Bone Studies” what details can you list that describe the characteristics of the small dinosaur? | Sharp teeth and claws showed it was a meat eater; long, slender leg bones showed it ran upright; thin bones with wide spaces inside showed it was active; different ages of skeletons showed they lived in a family |
| Reread the section titled, “What Happened Here?” beginning on page 195. What evidence does the author give to answer the question? | The bones were found in two different positions: bones still joined together, skeletons lay flat on their sides with tails, hands, and feet all about the same level; neck and head back in a curve toward the tail; some skeletons had missing bones and were separated; necks no longer joined bodies, tails were not attached to hips, ribs did not touch backbones; bones had no unusual breaks or tooth marks; complete ones lay on side, separated ones close together; none of bones cracked from drying in the sun |
| Reread and discuss pages 197 – 204 in small groups. Be ready to explain how the author ties the details of the dinosaur characteristics to the details of the evidence found in bones and the surrounding rocks at the dig site. What is the pattern in the sub-headed sections? | The author poses a question, or hypothesis, giving a scenario worded in present tense, and then presents evidence against the theory.  Stuck in mud?  Volcanic Violence?  Asteroids from Outer Space?  Poisoned Water?  A Fearsome Flood?  Water Worries?  Too Little Water-Then Too Much |
| The sub-headings offering different hypotheses all have question marks after the title. Which one does not and why?  How does the author make use of bold print in each of the subheading hypothesis? | The sub-heading Too Little-Then Too Much does not have a question mark because the author what’s to let you know this is the hypothesis he is trying to persuade you to believe.  The bold print is the hypothesis, the rest is the evidence to support and dispute it. |
| Reread the last paragraph on page 206. How does the author conclude this story? | The author leaves open the possibility that more finds might lead scientists to change their ideas about what happened at Ghost Ranch. The final quote, indicates anyone “with the patience to study them- and the luck…” could change the theory currently accepted as the best one. |

Vocabulary

|  |  |  |
| --- | --- | --- |
|  | **KEY WORDS ESSENTIAL TO UNDERSTANDING** | **WORDS WORTH KNOWING**  General teaching suggestions are provided in the Introduction |
| **TEACHER PROVIDES DEFINITION**  not enough contextual clues provided in the text | Ancient, p. 196  Asteroids, p. 199  Element, p. 200 | Prehistoric, p. 191  Publicity, p. 192  Agility, p. 194  Catastrophes, p. 199  Fateful, p. 206 |
| **STUDENTS FIGURE OUT THE MEANING**  sufficient context clues are provided in the text | Perished, p. 191  Fossil, p. 192  Paleontologist, pg. 192  Excavation, p. 193  Specimens, p. 193  Hypotheses, p. 197  Evidence, p. 197  Extinct, p. 199  Theory, p. 200  Drought, p. 204 | Tangle, p. 191  Emerged, p. 194  Carnivore, p. 194  Flexible, p. 194  Technician, p. 194  Treacherous, p. 197  Traces, p. 199  Collapsed, p. 200  Seeped, p. 200  Churning, p. 203  Burrowing, p. 204  Surge, p. 204 |

Culminating Task

* Re-Read, Think, Discuss, Write

1. *Make a chart showing the theories presented in the test. List details that match the character traits of the Coelophysis presented in the text along with the arguments as to what part of the theory they support, and which part of the theory they dispute.*

Answer:

Theory Support Refute

Stuck in mud? Many in one place bones not dried out

Volcanic Violence? Fall down, buried in mud No volcanic ash

Asteroids from Outer Space? Weak fall down would be scattered No iridium and pack together

Poisoned Water? Arsenic in bones fish found with them could not survive poison

A Fearsome Flood? Tangled position, good condition of found on sides neck curved

Bones,

Water Worries? Rock with mud cracks, skeletons curved bones not cracked by drying in sun

Fish found underneath

Too Little Water-Then Too Much some dropped in tangles, some lie alone,

Some separate, new rain and mud covers

bones and keeps them from drying out

1. *Scientists often build on work of other scientists. What other scientific work assisted the author in drawing the conclusion about how the dinosaurs died at Ghost Ranch?*

*First, Colbert stopped in New Mexico because fossils had been collected there years earlier by other paleontologists. One of them, Charles Camp, kept a diary. Edward D. Cope was the scientist that named Coelophysis. Edwin Colbert made the huge find of bones that other paleontologists have been studying for 50 years. They are the ones that figured out all the details in the Bone Studies section. Geologists have helped by studying the rocks found around the bones and scientists Walter and Luis Alvarez contributed the theory of asteroids causing the dinosaurs to become extinct. Scientists are “always ready to change their ideas to fit what they learn.”*

Additional Tasks

* *Discuss the use of text features such as subheadings, highlighting, illustrations, captions and bold print. How does it help the reader understand the theories presented?*

Answer: The piece is organized with the opening text box revealing the purpose of the story. The headings organize the information presented, first about the background of the “find”, the bones found and then different theories of how the dinosaurs died. The bold print and present tense language signal the hypotheses presented, followed by the comments on or refuting of the theory. The photos, illustrations and captions help the reader visualize the different scenarios presented in the text.

Note to Teacher

* The pattern of text features set up in the text is very helpful to comprehension. Guide students to notice and use those features to outline the evidence given for each theory. Help students understand that multiple theories are given in order to confirm the one they believe is correct based on the evidence collected so far.

Supports for English Language Learners (ELLs)

to use with Basal Alignment Project Lessons

When teaching any lesson, it is important to make sure you are including supports to help all students. We have prepared some examples of different types of supports that you can use in conjunction with our Basal Alignment Project Lessons to help support your ELLs. They are grouped by when they would best fit in a lesson. While these supports reflect research in how to support ELLs, these activities can help ALL students engage more deeply with these lessons. Note that some strategies should be used at multiple points within a lesson; we’ll point these out. It is also important to understand that these scaffolds represent options for teachers to select based on students’ needs; it is not the intention that teachers should do *all* of these things at every lesson.

**Before the reading:**

* Read passages, sing songs, watch videos, view photographs, discuss topics (e.g., using the [four corners strategy](http://www.theteachertoolkit.com/index.php/tool/four-corners)), or research topics that help provide context for what your students will be reading. This is especially true if the setting (e.g., 18th Century England) or topic (e.g., boats) is one that is unfamiliar to the students.
* Provide instruction, using multiple modalities, on selected vocabulary words that are *central to understanding the text*. When looking at the lesson plan, you should note the Tier 2 words, particularly those words with high conceptual complexity (i.e., they are difficult to visualize, learn from context clues, or are abstract), and consider introducing them ahead of reading. For more information on selecting such words, go [here](https://achievethecore.org/page/3167/selecting-and-using-academic-vocabulary-in-instruction). **You should plan to continue to reinforce these words, and additional vocabulary, in the context of reading and working with the text. (See additional activities in the During Reading and After Reading sections.)**

**Examples of Activities:**

* Provide students with the definition of the words and then have students work together to create [Frayer models](http://www.theteachertoolkit.com/index.php/tool/frayer-model) or other kinds of word maps for the words.
* When a word contains a prefix or suffix that has been introduced before, highlight how the word part can be used to help determine word meaning.
* Keep a word wall or word bank where these new words can be added and that students can access later.
* Have students create visual glossaries for whenever they encounter new words. Then have your students add these words to their visual glossaries.
* Create pictures using the word. These can even be added to your word wall!
* Create lists of synonyms and antonyms for the word.
* Have students practice using the words in conversation. For newcomers, consider providing them with [sentence frames](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion) to ensure they can participate in the conversation.
  + Practice spelling the words using different spelling practice strategies and decoding strategies. Students could take turns spelling with a partner.
* Use graphic organizers to help introduce content.

**Examples of Activities:**

* Have students fill in a [KWL chart](http://www.nea.org/tools/k-w-l-know-want-to-know-learned.html) about what they will be reading about.
* Have students research setting or topic using a pre-approved website and fill in a chart about it. You could even have students work in groups where each group is assigned part of the topic.
* Have students fill in a bubble map where they write down anything that they find interesting about the topic while watching a video or reading a short passage about the topic. Then students can discuss why they picked the information.

**During reading:**

* Read the text aloud first so that ELLs can hear the passage read by a fluent reader before working with the text themselves.
* Allow ELLs to collaborate in their home languages to process content before participating in whole class discussions in English. Consider giving them the discussion questions to look over in advance (perhaps during the first read) and having them work with a partner to prepare.
* Encourage students to create sketch-notes or to storyboard the passage when they are reading it individually or with a partner. This will help show if they understand what they are reading as they are reading it.
* Ask questions related to the who, what, when, why, and how of the passage. For students that may need a little more help, provide them with [sentence stems](https://achievethecore.org/page/3159/ell-supports-for-writing-and-discussion).
* Continue to draw attention to and discuss the words that you introduced before the reading.

**Examples of Activities:**

* Have students include the example from the text in their glossary that they created.
* Create or find pictures that represent how the word was used in the passage.
* Practice creating sentences using the word in the way it was using in the passage.
* Have students discuss the author’s word choice.
* Use graphic organizers to help organize content and thinking.

**Examples of Activities:**

* Have students fill in a chart to keep track of their 5ws while they read to help them summarize later and figure out the central idea of a passage.
* It may again be beneficial to have somewhere for students to store new words that they encounter while reading the text. Students could use a chart to keep track of these new words and their meanings as they read.
* If you had students fill in a KWL, have them fill in the “L” section as they read the passage.
* Utilize any illustrations or text features that come with the story or passage to better understand the reading.
* Compare/contrast the passage with what the illustrations convey about the passage. Have students consider if the illustrations look the way they visualized the passage in their own minds or if the passage matches their predictions based on the illustrations.
* Identify any text features such as captions and discuss how they contribute to meaning.

**After reading:**

* Present directions for any post-reading assignments orally and visually; repeat often; and ask English Language Learners to rephrase.
* Allow ELLs to use English language that is still under development. Students should not be scored lower because of incorrect spelling or grammar (unless the goal of the assignment is to assess spelling or grammar skills specifically). When grading, be sure to focus on scoring your students only for the objective(s) that were shared with students.
* Scaffold questions for discussions so that questioning sequences include a mix of factual and inferential questions and a mix of shorter and more extended responses. Questions should build on each other and toward inferential and higher-order-thinking questions. There are not many factual questions already listed in the lesson instructions, so you will need to build some in as you see fit. More information on this strategy can be found [here](https://achievethecore.org/aligned/creating-sequencing-text-dependent-questions-support-english-language-learners/).
* Reinforce new vocabulary using multiple modalities

**Examples of activities:**

* Using the words that you had students work with before reading, have students write sentences in reference to the passage that you just finished reading.
* Require students to include the words introduced before reading in the culminating writing task.
* For newcomers, print out pictures that represent the words that you focused on and have students match the words to the pictures.
* Based on different features of the words, have the students sort them into different categories and explain their choices. For example, the students could sort the words by prefixes, suffixes, connotation, etc.
* After reading the passage, continue to examine important sentences (1–2) in the text that contribute to the overall meaning of the text. Guide students to break apart these sentences, analyze different elements, and determine meaning. More information on how to do this, including models of sentence deconstruction, can be found [here](https://achievethecore.org/page/3160/juicy-sentence-protocol).
* Provide differentiated scaffolds for writing assignments based on students’ English language proficiency levels.

**Examples of Activities:**

* For all students, go over the prompt in detail, making sure to break down what the prompt means before having the students get to work. Then have the students explain the directions back to you.
* Have students create an evidence tracking chart during reading, then direct them to look back over their evidence chart and work with a group to see if their evidence matches what the rest of the class wrote down. If some of the chart does not match, students should have a discussion about why.
* For students who need more support, model the proper writing format for your students and provide them with a properly formatted example for reference.
* For newcomers, you may consider creating sentence or paragraph frames to help them to write out their ideas.
* To further discussion about the passage, have students create their own who, what, when, where, why, and how questions related to the passage to ask each other and have students pair up and practice asking each other the questions. If available, pair students of the same home language to support the use of language still under development.