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. 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. |
| 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 |
| 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**. |
| 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.” |
| 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?” 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 |
| 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. |
| 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

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|  | **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  Asteroids  Element | Prehistoric  Publicity  Agility  Catastrophes  Fateful |
| **STUDENTS FIGURE OUT THE MEANING**  sufficient context clues are provided in the text | Perished  Fossil  Paleontologist  Excavation  Specimens  Hypotheses  Evidence  Extinct  Theory  Drought | Tangle  Emerged  Carnivore  Flexible  Technician  Treacherous  Traces  Collapsed  Seeped  Churning  Burrowing  Surge |

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.