PALEONTOLOGY

Answer Key: Grades 7–8 Lesson Extensions

Notes:

- This answer key should be used as a guide for basic responses to the questions and instructions found in the grades 7–8 lesson extensions. The child should be encouraged to make his or her science journal tidy, beautiful, and exceptionally well-done.
- Encourage the child to answer the questions in his or her own words, with definitions being possible exceptions.
- There are two types of answers provided in this answer key:

  Sample answers: Most questions are open-ended, so the child's answers will not match the provided text exactly or include everything provided in the sample answer. However, some answers should match more closely (for example, vocabulary word definitions, copied charts, etc.).

  Answers will vary: This is used when there will be great variation in the child's answers, which may be due in part to one lesson having more information provided than another lesson. Refer to the text in the lesson to check these answers.

Lesson 1

2. Summarize the information in a paragraph that is at least five sentences long. Then share your summary with a parent or teacher.

Sample answer:

In 2005 a college student made an amazing discovery—a large number of dinosaur bones all preserved in one place. The rock surrounding all of these bones became known as the "megablock." Inside the megablock researchers found bones from more than one type of dinosaur. It is believed that the rock used to be a sandy area where the dinosaurs got stuck and were preserved. Paleontologists have been working on the megablock for several years.

Lesson 2

2. Imagine that you are a paleontologist on a dig, and you come across a rock that you believe might be coprolite. In your science journal, write a field journal entry that describes how you found the rock and five clues you identified that helped you confirm it was a coprolite.

Sample answer:

Field Journal Entry, March 8, 2022: Today while I was hiking, I came across a rock that looked a little different than the others. It looked like it might be a coprolite! So I did an analysis. Here are five things that led me to believe this rock is truly a coprolite: 1) the rock has a tubelike shape, 2) my wet finger sticks to the rock, 3) it seems to contain fragments of small bones, 4) it was found where dinosaur bones have been found before, and 5) the chemical analysis done in my lab matches my hypothesis.

Lesson 3

2. Write a paragraph with 4–5 sentences in your journal that answers this question: What did Barnum Brown contribute to the field of paleontology?

Sample answer:

Dr. Barnum Brown contributed more to the field of paleontology than anyone else has to date. His most famous discovery is the *Tyrannosaurus rex.* He found many other fossils, but that's not all he added to the field of paleontology. His skill, research, and discoveries helped spread the love for and fascination with dinosaurs to the public. Because of this, dinosaur fossils are widely displayed and talked about today.

Lesson 4

2. Draw or write the steps in the polymerization process and two things that can be learned from specimens preserved in amber.

Sample answer (see next page):

The steps in the polymerization process:

1. A plant or insect gets trapped in tree resin.
2. The resin hardens and becomes copal.
3. The copal sits for many years.
4. The copal turns to amber.

Two things that can be learned from specimens preserved in amber:

1. How insects interacted with other insects
2. What the environment was like at the time an air bubble was trapped

Lesson 5

2. In your science journal, create a bullet list of the things scientists learned from this discovery.

Sample answer:

- Oviraptorosaurs sat on nests.
- Oviraptorosaurs tended their nests.
- Oviraptorosaurs used gastroliths to aid digestion.

Lesson 6

2. Summarize the information on this page in a two-minute oral report to your parent or teacher. Write down the points you would like to cover, including what you found most interesting, and practice one or two times before giving your report.

Answers will vary.

Lesson 7

1. Read the information below and complete the closing exercise in your journal. [Closing exercise: Take a look at the "Latin/Greek Guide" to the right. Using the guide, find the meanings of the names of the following dinosaurs and write them in your science journal: Ichthyosaurus, Ornithoraptor, Brachiosaurus, Pachycephalosaurus, and Triceratops.]

Sample answer:

Ichthyosaurus—fish lizard

Ornithoraptor—bird hunter/thief

Brachiosaurus—arm lizard

Pachycephalosaurus—thick-headed lizard

Triceratops—three horns

2. Using the list of Greek and Latin descriptive words, create a name to describe a new dinosaur. Write the name of the dinosaur you discovered and its translation in your science journal. For example, Pentadactylgallussaurus would be a "five-fingered chicken lizard." If you like, you can also draw the dinosaur you discovered.

Answers will vary.

Lesson 8

2. Describe in three or more sentences how LiDAR technology is improving research in the field of archaeology.

Sample answer:

Making archaeological discoveries can take many years, but LiDAR can help shorten this process. LiDAR helps archaeologists discover sites they may not have found otherwise. LiDAR not only helps people discover sites, but it also provides maps of the areas where the sites are found. The more sites people discover, the more we can learn about the past, so LiDAR has made a big impact in archaeology.

Lesson 9

2. Archaeologists have always used the latest technology available to gather as much information as possible about a historical site. Write a paragraph in your journal answering the following question: Why do archaeologists who dig underground try so hard to get the highest aerial view of a site?

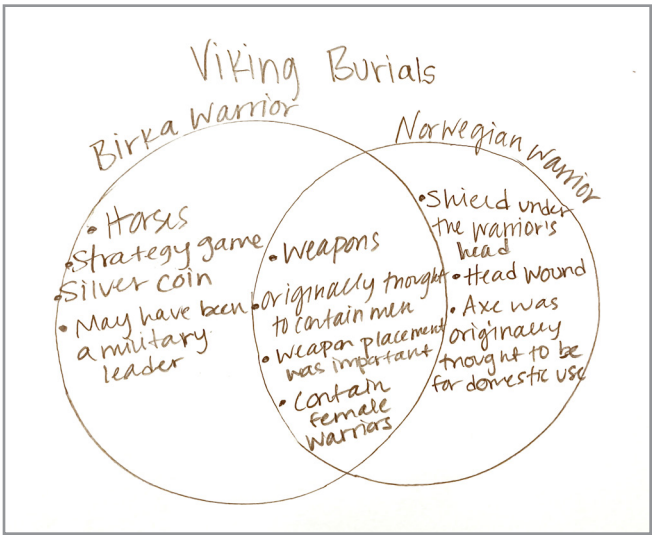
Sample answer:

While information in and on the ground is highly beneficial for archaeologists, that's not the only information they need. An aerial view provides a completely different perspective from the one seen from the ground. Some information that can be seen from the air simply cannot be noticed from the ground. Because of the advanced technology we have now, such as remote sensing, a high-up view can be even more beneficial than it would have been in the past since it can show archaeological features and details that may have been missed from the ground perspective.

Lesson 10

2. Create a Venn diagram in your science journal to compare and contrast the two Viking women burials discussed, including details such as artifacts, methods used to investigate, and conclusions made.

Sample answer (see next page):



Lesson 11

1. Read the information below and complete the closing exercise in your journal. [Closing exercise: So what can you do? Consider your own heritage and any sites that are near you. Write in your journal steps that need to be taken to preserve your heritage or a site near you.]

Answers will vary.

