



Nature-Watch Activity Kit

Fossil Find

(Nature Watch Kit #106)

Kit Contents

<u>Item:</u>	<u>Qty</u>
Trilobites	25
Cleaning Brushes	5
Trilobite Information Cards	25
Baggies	25
Fossil Collection Set	1
Geology Wall Chart	1
Book about Fossils	1
Instructor Manual	1

Items Requiring Replacement for Future Take-Home Project:

- Trilobites
- Trilobite Information Cards

Next Generation Science Standards Alignment

3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.

4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.

MS-LS4-1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

MS-ESS1-4. Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

**See Back for
STEM Extensions**

This page includes the Next Generation Science Standards (NGSS) mapping for this kit and Science, Technology, Engineering, and Math (STEM) extensions (on back) to use in adapting and extending this activity to other subject areas.

This Nature Watch Activity Kit contains an Instructor Manual and materials to implement the curriculum. The kit was designed to be used with adult supervision only. Unsupervised use is not recommended.



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STEM Extensions

Science

- Trilobites have long been extinct, but there are animals alive today that resemble trilobites. Go online to learn more about trilobites and also to find out about isopods, chitons, and water pennies. What similarities do you see between trilobites and those other animals? How are they different from trilobites?
- Write a short story, draw a comic, or write a play about extinction. Choose an animal that is alive today and in your creative work, show how that animal could end up going extinct.
- Imagine you are a paleontologist digging in the Mississippi Delta and you find a bone from an animal that no one has ever seen before. What would you do to try to learn more about the animal? (Think about digging more but also beyond that!) What tools and resources might you need? Whose help would you need? How would you tell the public about it?

Technology

- Make a WebQuest about the geologic periods. Come up with five questions about the geologic periods to stump your friend, and have your friend do the same for you. Then give each other 15 minutes to find the answers to the other's questions by searching online. (Sample questions: During which period did the earliest birds appear? During which period did oxygen in the atmosphere reach its current levels?) What are some reliable and informative websites with information about the geologic periods?
- When you complete the "Go on a fossil hunt at your facility" activity on page 3, try a virtual version. Instead of hiding real objects around your physical space, create a scene using a paint program on the computer where you hide fossils behind other objects in the picture. See if a classmate can find the hidden fossils by uncovering parts of the picture.

Engineering

- (Younger) Experiment with various materials to see which yields the best fake fossils. Some that you can try are plaster of Paris, play-dough, clay, and recipes that you can find online if you search for "make your own fossil".
- (Older) After experimenting to see which material yields the best fake fossils, think about the types of materials you tried and come up with your own recipe. Try it out a few times and make changes to it to try to perfect it.

Math

- (Younger) Using the Geologic Time Line on page 4, calculate how long each geologic period was. Then, write the answers in descending order. Which geologic period lasted the longest? The least amount of time?
- (Older) Using the Geologic Time Line on page 4, calculate how long each geologic period was. Write each of those answers on a small scrap of paper and turn all the scraps over. Have a classmate pick one and then try to quickly do the reverse calculation to determine which geologic period it refers to.