



TALES OF THE DEAD

GRADE LEVEL: 6 - 12

TIME REQUIRED: Two class sessions

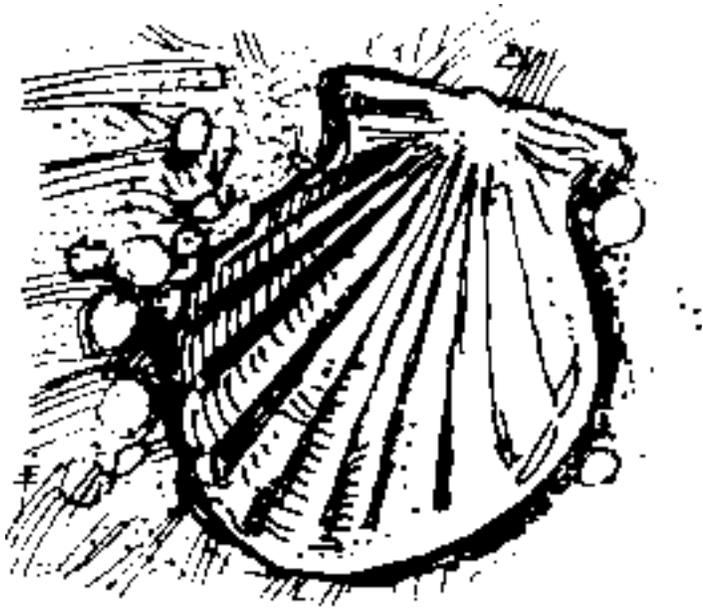
SETTING: Classroom or outdoors

GOAL: Examine a fossil. Record several observations and inferences concerning the fossil and the environment in which it existed.

OUTCOMES: At the end of this lesson the student will:

- define paleontology,
- define observation and inference and give an example of each, and
- use knowledge of present environment to make inferences concerning the fossils.

KERA GOALS: Meets KERA goals 1.1, 1.2, 1.3, 1.4, 1.10, 1.11, 2.1, 2.2, 2.4, 2.5, 2.6, 2.11, 2.13, 3.4, 3.7, 4.1, 4.2, 4.6, 5.1, 5.3, 5.4, 5.5, 6.1, 6.2, 6.3



BACKGROUND INFORMATION

Fossils are strange and fascinating records buried within the earth. These records or pieces of the past are exposed through earth changes. Some fossils look like their modern relatives. Others look like something from outer space. Occasionally a rare find will produce the entire animal or tree. Unfortunately signs of ancient life are rare. Most life disappears without a trace. However, when conditions are right, bits and pieces are preserved.

Paleontologists = scientists who study fossils. They put the pieces together in a logical manner. By observing present-day environments they make inferences about the past.

Observation = seeing and recording a fact

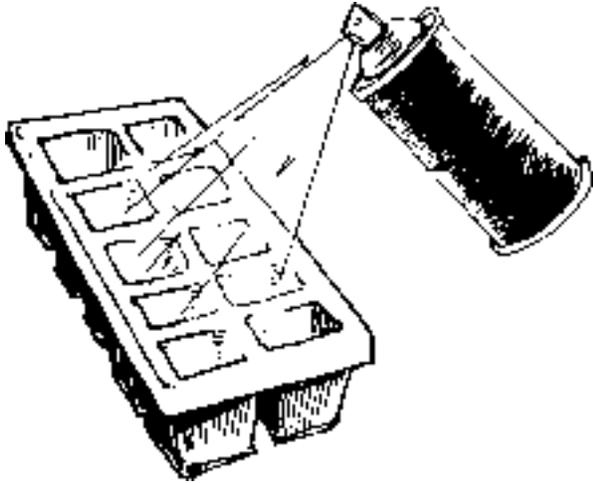
Inference = assumption based on an observation

Paleontologists use two principles, observation and inference, to determine what the past was like. Most fossils are nothing more than fragments. Paleontologists reconstruct the missing parts by making inferences of how the whole plant or animal might have looked. They use their knowledge of modern plants and animals to draw conclusions about the ancient environment.

MATERIALS NEEDED

- Plaster of Paris
- Ice cube trays
- Non-stick spray or petroleum jelly
- Materials from which to create fossils: sea shells, leaves, nuts, cast of animal tracks, ferns, etc.
- Paper and pencil
- "Tales of the Dead - Student Worksheet"

TALES OF THE DEAD



PROCEDURE

Each student should create a fossil from modern-day materials. Note: the teacher may prefer to construct fossils ahead of time.

Make the fossils:

1. Spray an ice cube tray with a non-stick spray, or coat it with petroleum jelly.
2. Select a variety of materials found in our modern environment (sea shells, leaves, ferns, nuts, animal tracks, etc.). Coat the selected items with petroleum jelly, or spray with a non-stick spray, to prevent the item sticking to the plaster.
3. Prepare a stiff mixture of Plaster of Paris.
4. Place Plaster of Paris in ice cube trays.
5. Make a variety of casts, molds, and imprints. For example, some students may gently press a leaf, fern, or seashell into the plaster, gently remove the item, and leave behind an impression of the article. Other students should press and leave a small item in the plaster so only a section of the object can be seen. (Items might include the edge of a seed, the pattern of an acorn cap, the stem of a leaf, a small portion of a seashell, or a fragment of a chicken bone.) The remaining students might fill animal tracks with plaster to produce three-dimensional impressions.
6. Allow the plaster to harden.
7. Remove from trays.

Observations and Inferences: (using worksheet)

1. Divide students into small groups or allow them to work as individuals.
2. Give one fossil to each student or small group. Be certain that each group or individual has a fossil they did not make.
3. The students should:
 - Describe in detail and make at least two observations of the type of fossil they are given.
 - Make the following inferences:
 - What it might have been.
 - Where it lived.
 - Describe its environment.
 - Draw a picture of their conclusion. This picture should contain elements of the environment as well as showing what the original plant or animal looked like.

TALES OF THE DEAD – STUDENT WORKSHEET

1. Describe your “fossil” in detail, making at least two observations. Determine the type of fossil you were given.

2. Make the following inferences:

- What might your fossil have been?

- Where might your fossil have lived?

- Describe your fossil’s environment.

3. Draw a picture of your conclusion. The drawing should contain elements of your fossil’s environment. It should also show what the original plant or animal looked like (use an additional sheet of paper if necessary).