

How Big is a Dinosaur?

Science Standard IV

Objective 1

Connections

Science Standard IV:

Students will understand how fossils are formed, where they may be found in Utah, and how they can be used to make inferences.

Objective 1:

Describe Utah fossils and explain how they were formed.

Intended Learning Outcomes:

1. Use Science Process and Thinking Skills
2. Manifest Science Interests and Attitudes
3. Understand Science Concepts and Principles

Content Connections:

Math III-2

Background Information

Dinosaurs are a group of animals descended from reptiles and the ancestors of birds. They were different from their reptile ancestors in that they have an S shaped neck and feet held directly beneath their bodies, as well as several other features. They lived on land, grew both big and small, and died out 65 million years ago.

We know of over 300 kinds of dinosaurs, half of those from a single tooth or bone. A reliably new kind of dinosaur is found every seven weeks on average. There were probably thousands of kinds of dinosaurs, but most haven't been found yet. We don't get a great sample because fossils are usually only made in lowland areas where bones get covered over by mud, even though dinosaurs lived all over. And we only find fossils where rock from dinosaur times is now near the surface, and when the bones were preserved—many bones are weathered soon after the animal dies. Many places have dinosaurs but they are deep in the ground; in other places the weather wasn't right to turn dinosaurs into fossils.

More species of plant-eating dinosaurs (herbivores) have been found than carnivores, because there are always more herbivores than carnivores in any animal population. One such plant eater was the stegosaurus. The stegosaurus was a dinosaur that lived in Utah and surrounding states. It weighed three tons, was nine feet tall and 15 feet long. It had plates that it used for protection as well as to control body temperature. The stegosaurus had a curved beak and very small teeth. These teeth were too weak to chew food, so the plants were torn off by the beak, swallowed in large pieces, and digested in the stomach.

Invitation to Learn

Ask: How big were dinosaurs that lived in Utah? Could we enlarge a picture to represent the size of a dinosaur?

Instructional Procedures

1. Mark a grid on the wall using string. The grid should be seven squares long by four squares high. Each square in the grid should be one square foot.
2. Give each child a *Stegosaurus Grid* (p. 5-18).
3. Using coordinates, assign each child one of the squares on the grid in which there is a part of the stegosaurus outline.
4. Give each child a one foot square piece of paper. Using a marker, have him/her transfer the lines from his/her assigned square of the stegosaurus onto the large sheet of paper.
5. Have each child locate and mount his/her paper in the correct spot on the wall grid to form an outline of a stegosaurus.
6. Add blank paper to the wall grid to fill in the stegosaurus.

Materials

- String
- 12 x12 inch paper
- Stegosaurus Grid*
- Markers

Possible Extensions/Adaptations/Integration

Math

Using coordinates, find the correct region on a grid.

Art

Interpret and apply visual arts in relation to history and all learning.

Assessment Suggestions

- Each student should have successfully placed his/her drawing in the correct location on the wall grid. The drawing should be enlarged to replicate the original drawing.

Family Connections

- Encourage students to share information on dinosaurs with family members. Ask students to research information on a dinosaur that lived in Utah. If possible, have students and their families visit a dinosaur museum or quarry close to their home.

Additional Resources

Video

Dinosaurs, by Bill Nye

Web sites

Utah Dinosaur Facts

<http://www.enchantedlearning.com/usa/states/utah/>

Utah Dinosaur Tracks

<http://scienceviews.com/dinosaurs/dinotracks.html>

Dinosaur Math Activity

<http://www.enchantedlearning.com/subjects/dinosaurs/activities/math/size>

Utah Museum of Natural History

<http://www.umnh.utah.edu/museum/departments/paleontology>

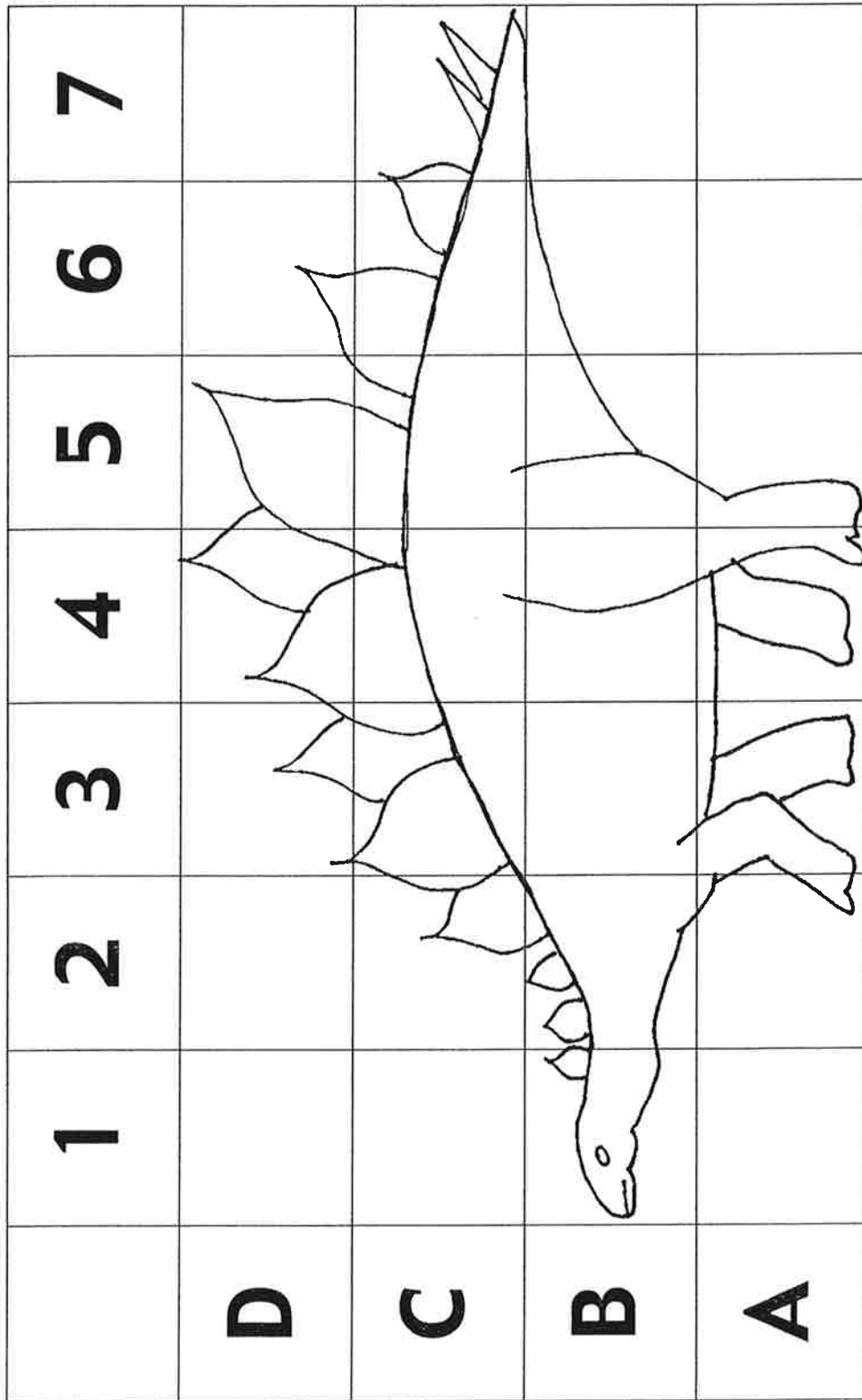
Dinosaurs and Fossils, Utah Geological Survey

<http://www.ugs.state.ut.us/utahgeo/dinofossil/index.htm>

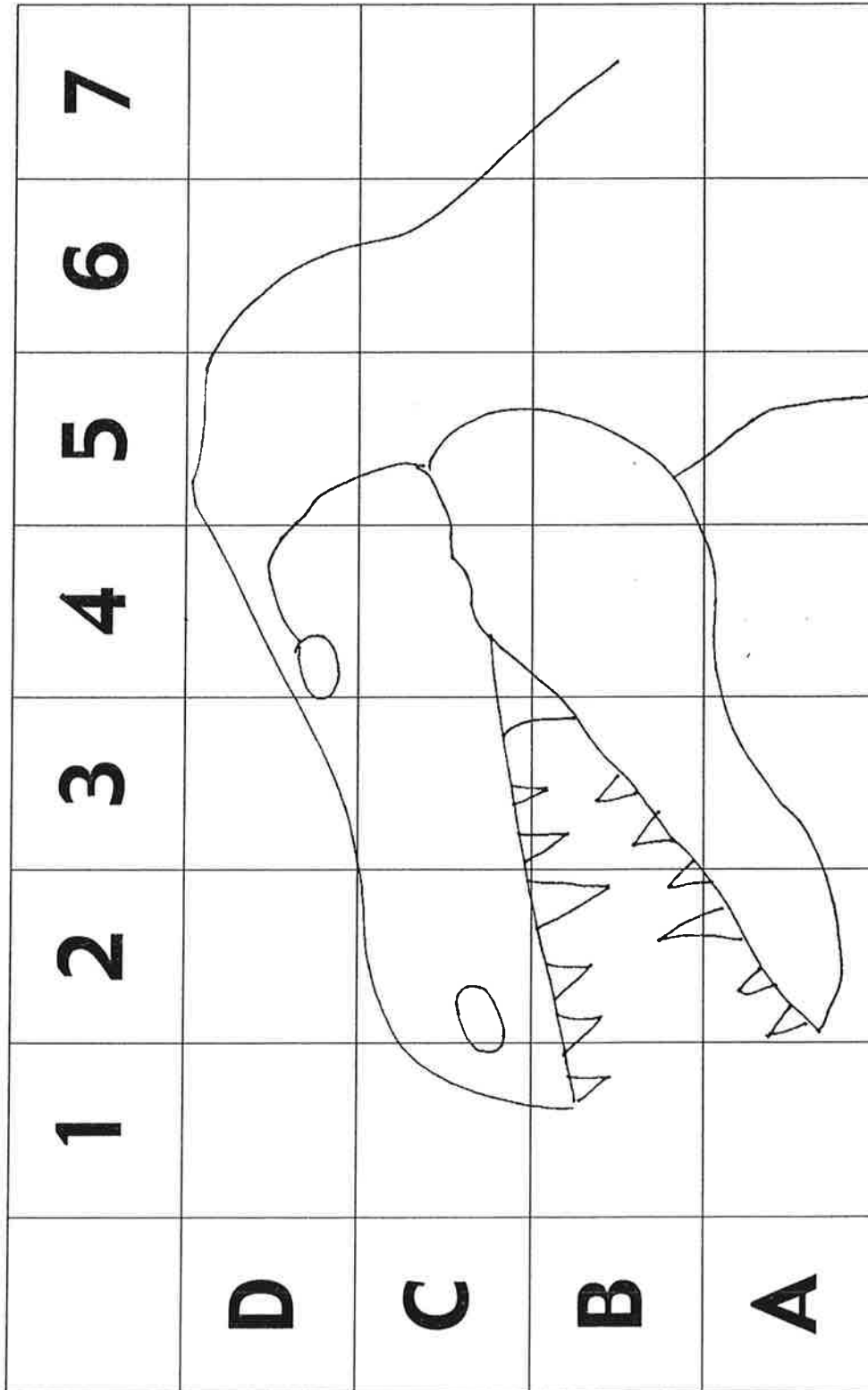
Grid Paper

	1	2	3	4	5	6	7	
D								
C								
B								
A								

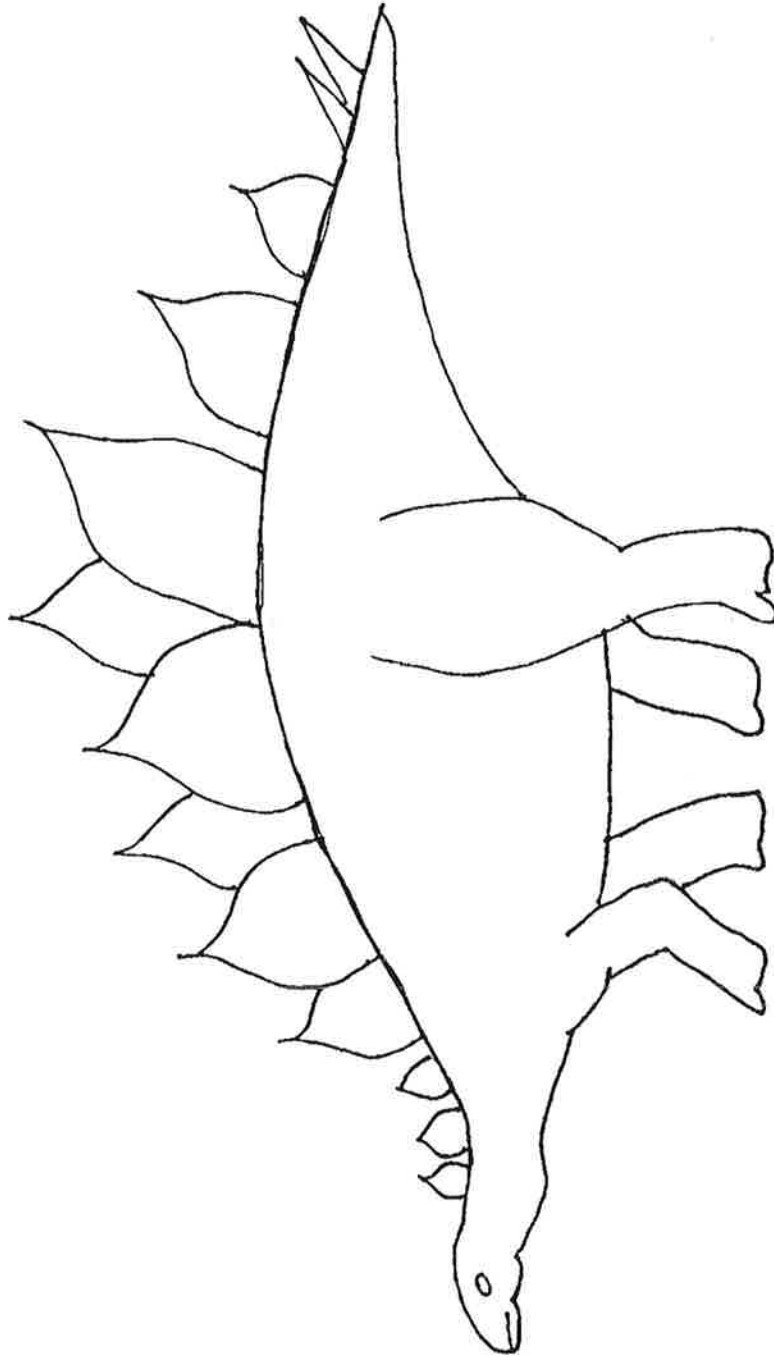
Stegosaurus Grid



Tyrannosaurus Rex Grid



Stegosaurus Outline



Tyrannosaurus Rex Outline

