SIZING UP DINOSAURS

An activity in which students compare their size to actual size drawings of some dinosaurs and make life-size dinosaur sillouettes.

ARIZONA SCIENCE STANDARDS: 1SC-R5, 1SC-R6, 1SC-F2, 4SC-F3, 4SC-F4, 3SC-F1

OBJECTIVES

Students should:
- Compare themselves to a large and small dinosaur.
- Make actual size dinosaur sillouettes.
- Determine the shape of a dinosaur based on its skeleton.

MATERIALS

- Pictures of *T. rex,* Compsognathus and Stegasaurus
- *Transparency masters: T. rex skeleton; Sonorasaurus*
- *Student Handouts* for *T. rex* & Triceratops 1 of each for each student.
- Overhead projector
- Yardstick
- Mural paper
- Pencils
- Scissors
- Crayons
- Markers
- Sidewalk chalk

GETTING READY

Prepare the materials listed on the left.

DOING THE ACTIVITY

SETTING THE STAGE

1) Show a picture of *Tyrannosaurus rex* ("tyrant lizard"). (See the *Resources* list) Explain that this dinosaur was about 40-50 feet long, 15 feet tall and weighed about 6 tons. It lived 68 to 65 million years ago.
2) Show a picture of Compsognathus ("pretty jaw") Explain that this small dinosaur was only 2-3 feet long, weighed 6 pounds and is one of the smallest adult dinosaurs ever found. It lived 150 to 140 million years ago and ate lizards and other small animals.

MAKING THE DINOSAURS

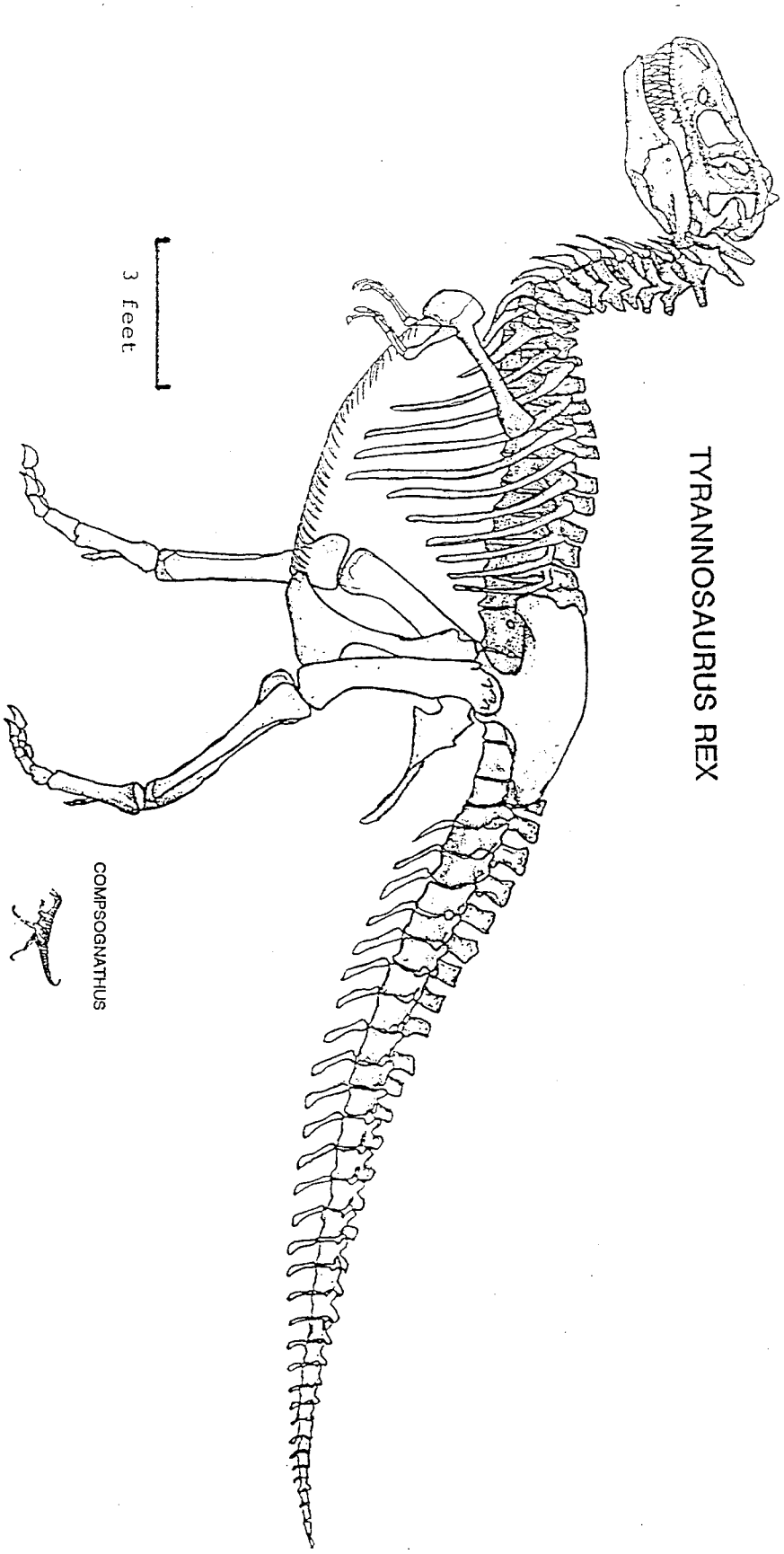
1) Take students to a large room. Bring the 2 skeleton transparencies, an overhead projector, a yardstick, mural paper, pencils and scissors.
2) First, focus the *T. rex* transparency on a blank wall. Then ask a student to hold a yardstick against the 3-foot scale projected on the wall. Now move the projector until the scale exactly covers the yardstick. The dinosaurs on the wall are now actual size.
3) Have students, as a group or individually, compare themselves to the size of the dinosaurs, then compare the size of their bones to those of the big and the small dinosaur.
4) With mural paper, students can (as a group, in teams or individually):
- Trace the outlines and make life-size cut-outs of each dinosaur.
- Use these "patterns" to trace an outline of the two dinosaurs in chalk on the school playground.
- Trace each bone of the skeleton (or a section of the skeleton, such as a whole leg), then cut out the bones and reassemble them on the floor. Students should label bones as a scientist would. Thus, students are recreating the actual process followed by paleontologists when they dig out a skeleton in the field, label and pack the bones separately, then ship everything back to a museum where the skeleton is reassembled for an exhibit.

5) Project the transparency of Sonorasaurus. Explain that the dark parts represent the bones found in 1994 near Sonoita by Rich Thompson, an undergraduate U of A student. He alerted Desert Museum staff who got approval to begin digging. Photos of the bones were identified as belonging to a sauropod dinosaur, and a member of the brachiosaurus family. It lived about 100 million years ago. Sauropods were the largest dinosaurs which walked on four legs. Based on the recovered bones, the rest of the dinosaur was reconstructed. Paleontologists believe it weighed 20 tons, was about 50 feet long and 20 feet tall!
6) Repeat part or all of the process used for the T. Rex tranparency.

EXTENSION

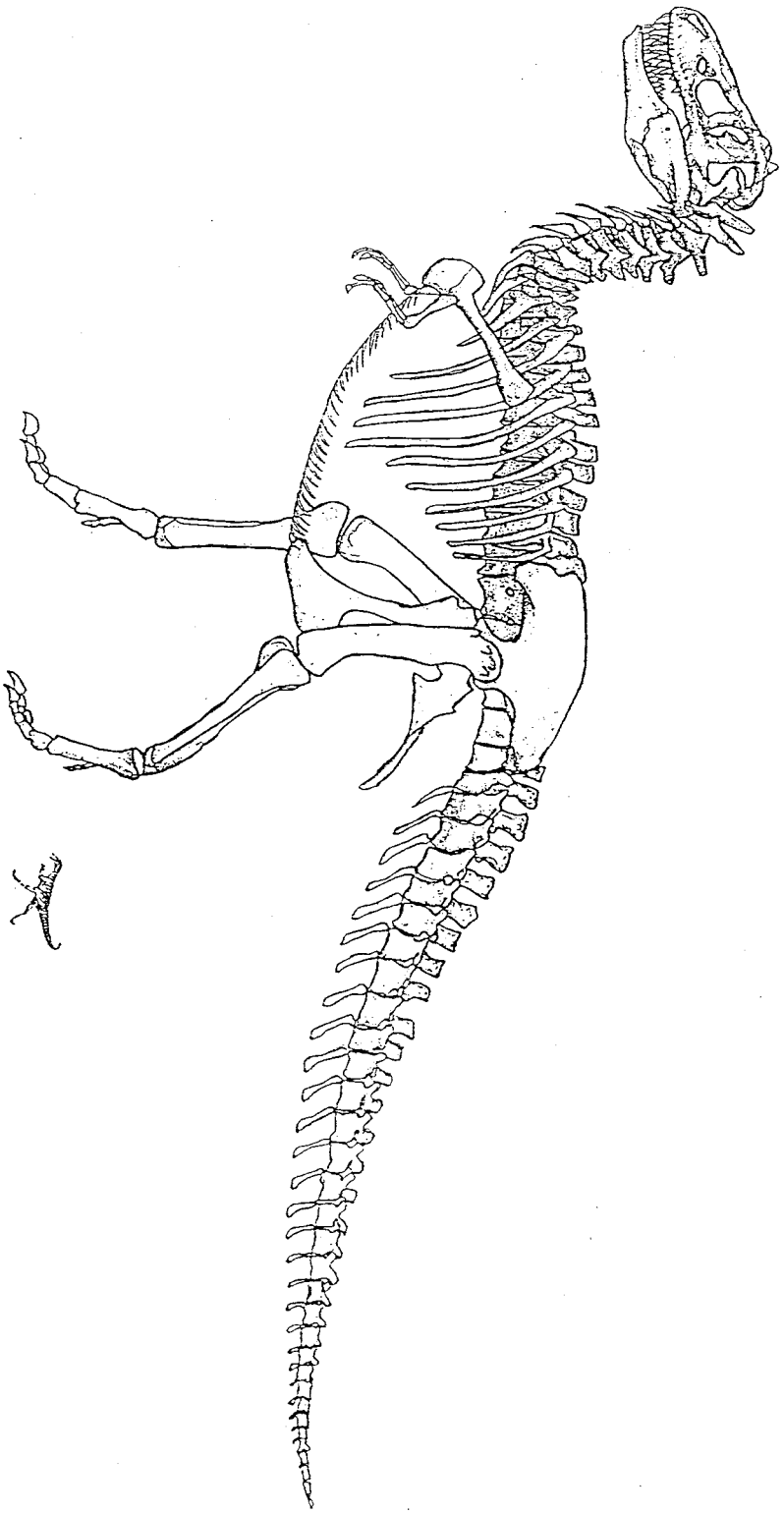
Using the *Student Handouts - T. rex and Triceratops Skeletons,* have students draw the outline of the animal around the skeleton. (They have already seen a picture of *T. rex*, so their pictures of that dinosaur will probably be fairly accurate.)Then, show pictures of both dinosaurs depicting what paleontologists think they looked like. How do the students' drawings compare?

T. REX SKELETON - *TRANSPARENCY MASTER*



STUDENT HANDOUT - TYRANNOSAURUS REX

Name _____



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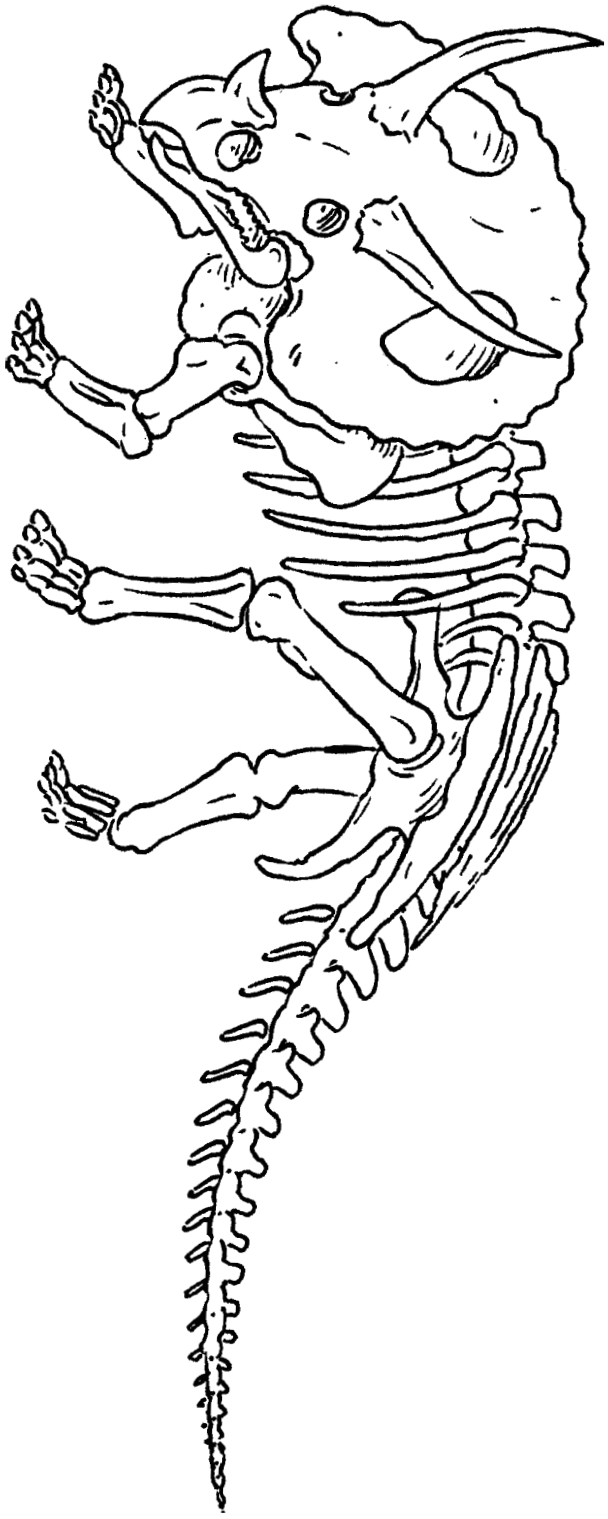

SONORASAURUS - *TRANSPARENCY MASTER*