



Sizing 'em up

8th Grade

Duration

Museum Visit: 30 minutes

Post Visit: 45 minutes

Location

Dinosaur Hall

Supplies

- Worksheet
- Pencil
- Clipboard (optional)
- Ruler
- Calculator

Standards

[S+E Practices](#)

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[CA State](#)

Math 2.0, 2.1

Vocabulary

Measure

Inches/Feet

Proportion

Scale

Concepts

- Scientists use graphs to solve problems involving proportions.
- Scientists analyze proportional relationships and use them to solve real problems.

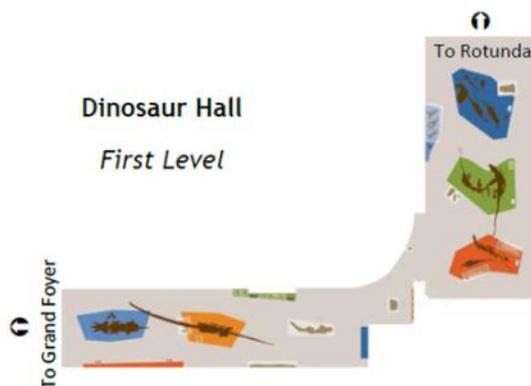
Objectives

- Students will measure the length and width of a dinosaur and estimate it's height.
- Students will convert measurements into U.S. units and use those to draw the dinosaur to scale.

Outline

1. This lesson assumes students have already been introduced to conversion of units and what it means to draw something to scale.
2. At the Museum students will choose a dinosaur of their choice to measure. Remind students that specimens cannot be touched, so they will be estimating measurements with their feet, and converting those estimates into real units.
3. Back in the classroom or as homework, students will draw their dinosaur to scale, using their worksheet as reference. Drawings

should include a key that indicates the scale used.



Pick a Dinosaur

Measure the length and width by putting one foot directly in front of the other, heel-to-toe to count the number of “feet” long and the number of “feet” wide it is. Next each measurement into both units of (actual) feet and inches in the boxes below—be sure to show your work!

Conversion Units:

My Foot = _____ inches

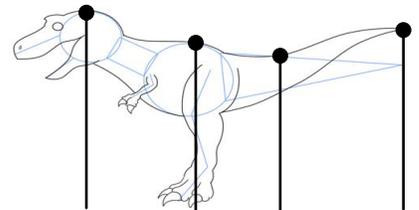
12 inches = 1 foot

Dinosaur:

Length	Width

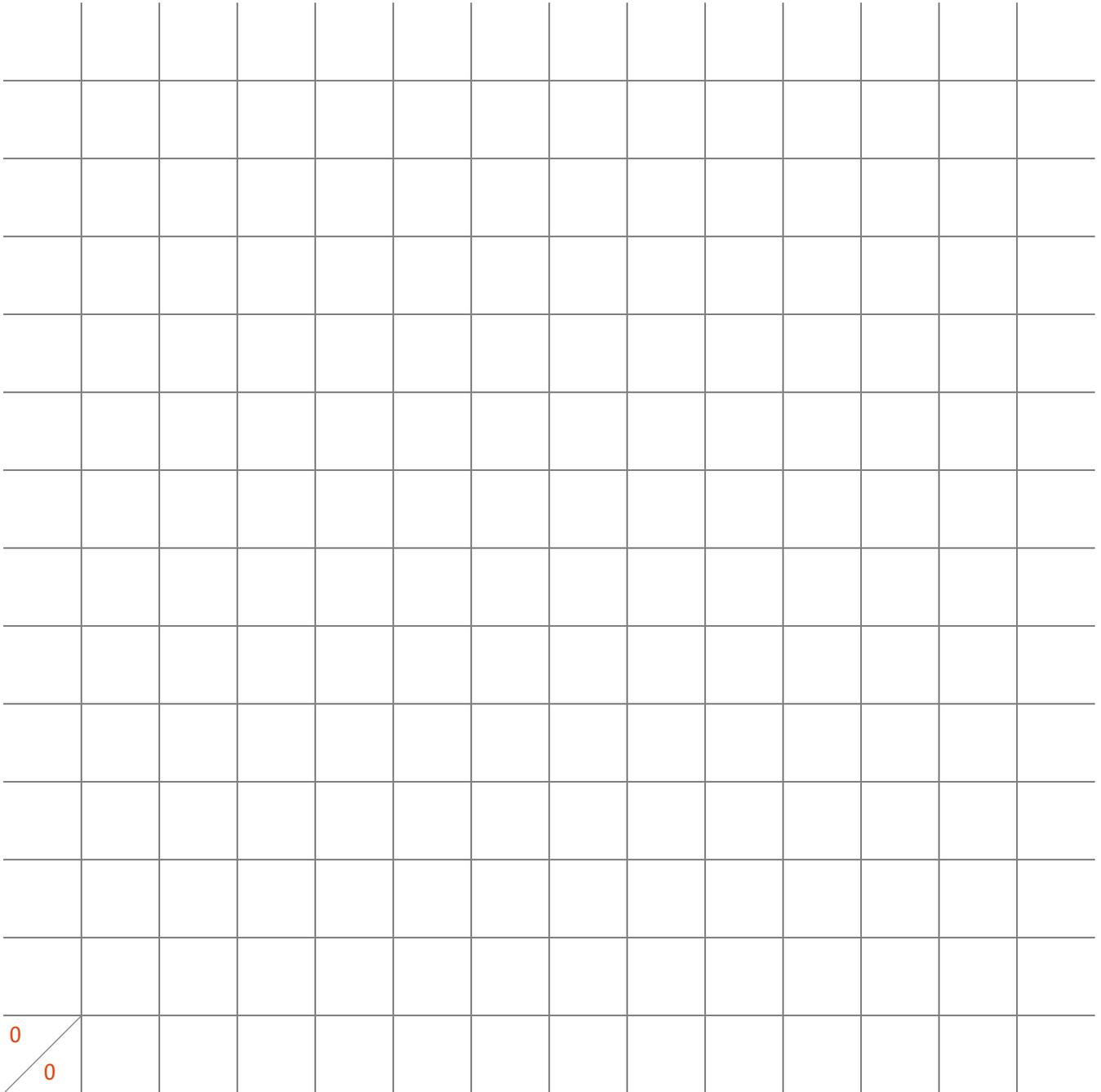
Estimate the Height

Sketch a quick outline of the dinosaur and pick 4 points along the top of the body where you will estimate height. One point should be at the tallest part of the dinosaur, and one should be the shortest. The other two should fall in between.



Estimate the Height Continued

Use your calculations to graph the length and width below. Label the x and y axis with the appropriate measurement (length or width), unit (feet or inches) and which increments you use.



Now estimate and record the height of the marked points on your sketched outline using the above proportions as reference. Does the dinosaur look tall as it is long or wide? Somewhere in between?

Draw your Dino

Using all your information, on a separate piece of paper draw this dinosaur to scale. Include a reference that indicates your scale. For example, if you scale your dinosaur so that 10 feet is represented by 1 inch, your key would look like:

 10 ft