

How big were dinosaurs?



Learn about the relative size and scale of different dinosaurs.

Setting: Outdoors

Time: 30 minutes

Concepts: Dinosaur; relative size

Skills: Observing, measuring

Subject(s):

- ✓ Earth Sciences
- ✓ Mathematics

Ages:

- ✓ 6-8
- ✓ 9-11

Materials:

- Measuring tape
- Observation Chart (see below)
- Pencil
- Measuring tape



Safety First!

Be very cautious around roads and parking lots with moving vehicles.

What to do!

1. Find the length of a few dinosaurs by doing some research on the internet, at the library or in a museum of natural history and record your findings in your Observation Chart. You can find the size of many dinosaurs on the following website: <http://www.nhm.ac.uk/discover/dino-directory/name/d/gallery.html> and in the following table:

Name	Length
Compsognathus	0.8 m
Gallimimus	4 m
Centrosaurus	6 m
Albertosaurus	8 m
Stegosaurus	9 m
Ankylosaurus	10 m
Parasaurolophus	10 m
Tyrannosaurus	13 m
Brachiosaurus	23 m
Diplodocus	30 m

2. While at home, at school or on a walk in your neighbourhood, look for various objects that could be the size of different dinosaurs. For smaller objects, you can use a measuring tape to determine their exact length or height.

Observation Chart			
Dinosaur name	Length		Observed Object
Diplodocus	26m	is as long as	2 city buses put together
Dromiceiomimus	3.5m	is as long as	The width of the average road lane
		is as long as	
		is as long as	
		is as long as	

What's happening?

The word "Dinosaur" comes from the Greek meaning "Terrible Lizard". Scientists have studied dinosaurs since their fossils were discovered in 1841. Since then, over 900 different types of dinosaurs have been discovered. Dinosaurs lived on Earth for approximately 150 million years, from about 225 million years ago until about 65 million years ago, when they became extinct. Dinosaurs varied in size but they all had the following characteristics: had either two or four legs, had legs under their bodies, laid eggs, could not live in water, had no fur, had long tails, had small ears and are extinct. Also they could not fly. The flying creatures often mistaken for dinosaurs are actually in a separate class known as Pterosaurs (the "P" is silent).

Why does it matter?

Although dinosaurs are now extinct, if they were alive today they would take up a lot of room! In fact, a Tyrannosaurus Rex was approximately as long as seven people lying down in single file, and as tall as a three storey building. Because they were so big, dinosaurs would have needed a lot of food to survive. Based on this, some scientists believe that a major loss of plants and vegetation (among many other factors) could have contributed to the extinction of dinosaurs. After the extinction of dinosaurs, mammals continued to evolve and increase in population, eventually leading the way for humans.



Investigate further!

- Visit a science museum or archeological museum that has dinosaur fossils or models of dinosaurs on display. You can also take virtual tours of some museums through the following websites:
 - Royal Tyrell Museum: <http://www.dinosaurvalley.ca/virtual-tours.html>
 - Royal Ontario Museum: <http://www.rom.on.ca/en/visit-us/maps-tours/virtual-tours>
 - Smithsonian Institution: <http://paleobiology.si.edu/dinosaurs/interactives/tour/main.html>
 - American Museum of Natural History: <http://www.amnh.org/exhibitions/dinosaurs-among-us>
- Search for fossils in rocks and stones when you go for walk. What kinds of fossils can you find?