

How Did Dinosaurs Balance?

Observe and investigate how dinosaur body structures were symmetrical and balanced. Prehistoric dinosaurs, like all animals - including humans - had to keep their *center of gravity* between their feet.

What you need:

Ruler, paper or lab sheets for recording observations
Marshmallows, large and small
Plastic drinking straws; plastic coffee stir-sticks
Dinosaur illustrations

What to do:

1. Discuss and demonstrate center of gravity by balancing ruler on your finger.
2. Build a model of the hips, legs and feet of a typical bipedal dinosaur (i.e. Tyrannosaurus rex), using one straw cut in two and 3 marshmallows. Check the balance.
3. Using additional straw pieces and marshmallow, add a head to your model. What happens?
4. Add a tail. What happens? Why is this final structure more stable?
5. Repeat the above experiment by creating a quadruped (i.e. Brachiosaurus).
6. Write down your observations.

Discussion:

Look at dinosaurs in books and websites. What differences did they have besides body structure? What did they eat? What was the size and structure of their teeth? How did they attack or defend?

Alternatives:

For more permanent models and more design creativity, use homemade modeling dough -- Mix 1 cup flour, 1 tablespoon cream of tartar, and $\frac{1}{2}$ cup salt. Add 1 cup water, 1 tablespoon vegetable oil, 1 tablespoon vanilla, and a few drops of food coloring. Cook over medium heat until dough is the consistency of mashed potatoes. Knead until smooth and evenly colored. Oatmeal or cornmeal may be added for unique textures.