



Year of the Goat

BALANCING GOAT

Goats are well known for their climbing and balancing skills. This activity shows how adjusting the centre of mass of an object helps it balance!

You'll need

A bottle with a lid
5 wooden skewers
4 Marshmallows or play dough
A Carrot

Instructions

Cut a small piece of carrot and insert a wooden skewer approximately 2 inches long into the bottom. Most of the skewer should be outside the carrot.

Attach the card goat - optional.

Place the skewer on the top of the bottle, it will fall over.

Push the pointed end of two skewers into opposite sides of the carrot, and push a marshmallow onto the end of both.

Place the carrot onto the bottle lid. It should now balance!

Add two more marshmallow skewers to the carrot and see if it still balances.

Experiment by moving the marshmallows up and down the skewers.

Why does it work

The carrot (goat) stays balanced when its centre of mass is directly above the skewer. Gravity pulls downwards, and if the centre of mass isn't lined up over the skewer at the bottom, it creates a turning force that tips the carrot over.

