PBS KIDS GO! FETCH! with Ruff-Ruffman

SPYTIME MISSION: Slingshot Fling

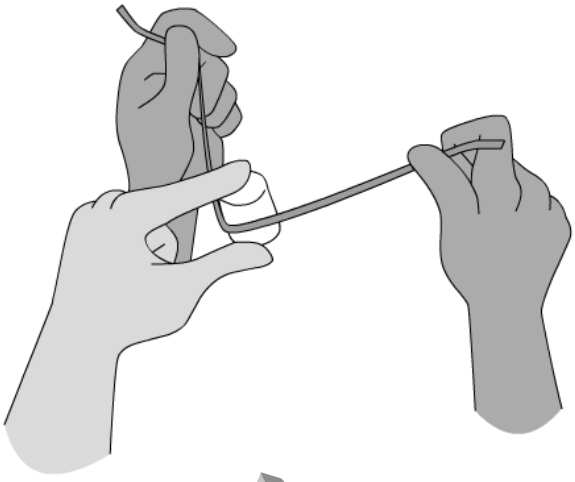
TOP SECRET

The only way for Ruff to get past the lasers, trip wires and pumpkin pie catapults that protect the Chicken Coop is to use a slingshot to fly over the wall.

Your mission is to find the best material for Ruff to use in his Mega-slingster slingshot. **You have 2 days to report back to Ruff.**

1 Get What You Need

- plastic spoons
- mini marshmallows
- a bunch of different rubber bands
- yarn or string
- plastic bags cut into 12" strips
- fabric
- any other material that you think could be used to make a good slingshot



2 Get a Friend and Test Materials for Elasticity

- Ask a friend to help you test materials to make a slingshot. Have them hold each material so that it is tightly stretched and their hands are about 8" apart.
- Cut out and tape the paper cut-out of Ruff to a marshmallow.
- Place a marshmallow in the middle of the material and pull back the marshmellow with the material
- When you test the plastic spoon, hold the handle of the spoon with one hand and pull back on the marshmallow in the bowl of the spoon with the other.
- Release the material and measure how far the marshmellow flies!
- Record the material and the distance on a piece of paper

Chew on This!

A slingshot is a device used to hurl an object. Your slingshot is powered by the elasticity of the material that is stretched between your friend's two hands. When you pull back on the material, potential energy is stored. When you let go, the potential energy is turned into the energy of motion (or kinetic energy), and the marshmallow is flung forward.

3 Target Practice!

- Now that you've chosen the material that shoots the marshmallow the farthest, try hitting a target.
- Try pulling on the material at different angles to see which flings the marshmallow the highest, the lowest, and the farthest.

4 Report back to Ruff

Use the Spy Sketcher to send a photo or a picture of Ruff flying from your favorite slingshot. To use the Spy Sketcher, go to: **pbskids.org/fetch/spyhounds/poodlediamond/**

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