Genie Grabber

Meet my genial genie

Observe, predict, and test explanations for some magical behavior.

Materials and Preparation
Erlenmeyer flask
rubber super ball (should just fit through the neck of the flask)
masking tape
things for the genie to hold onto: pencil w/ paper clip, string, paper, etc.

Push the rubber ball into the flask. You may need to use Vaseline to get it through. Once the ball is wedged in the neck of the flask, you can also submerge the bottom of the flask in ice water to make it easier to push the ball through.

Wrap the entire flask in masking tape.

To do and notice

Introduce your genie to the students. Tell them that s/he likes to hold onto things. If students are doubtful, tell them they must prove what *is* inside or else be resigned to believe it is indeed a genie. Start with a pencil with an unfolded paper clip stuck into the eraser. Stick the paper clip end in. Roll the ball (hidden) towards the mouth of the flask until it wedges between the pencil and the flask. Let go of the flask and suspend it from the pencil. Undo it and ask what students saw. Students will think you hooked the clip onto something. Ask them how you could test that. Test different things using the same method of rolling the ball towards the neck and wedging it between the object and the flask. Continue with this line of questioning until students come up with other things to test. Continue until they discover the secret behind the genie…

What's going on?

The history of science is littered with examples of untested assumptions that were dictated as facts (the earth is flat, etc.). This activity can be done at the beginning of the year to introduce the scientific process to students. Resist temptation and do not tell them what is inside until they have a way to test it. Until then, it must be a genie!

Extra fun: leave an empty flask wrapped up in masking tape on your desk one day and casually walk out of the room.