A Balloon for Isabel

RIF EXTENSION ACTIVITIES FOR EDUCATORS

STEAM-THEMED: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH

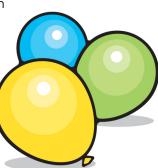
SCIENCE, TECHNOLOGY, ENGINEERING, MATH

BALLOON ROCKET

Materials: fishing line, straws, 2-3 balloons of different sizes, tape

Thread a straw onto fishing line so it can move back and forth. Attach fishing line between two points (e.g., two chairs spaced apart) with tape. Push straw

to one end. Blow up a balloon but don't tie it off. Attach balloon to straw with tape and release balloon opening. How far did the straw travel? Record or mark distance. Repeat with a different size balloon. Does balloon size affect distance? If so, why?



BALLOON IN A BOTTLE

Materials: balloons, plastic bottle

Place a balloon in a plastic bottle but fold the balloon opening around the bottle's lip. Try to blow it up. What happens? Punch a small hole in bottom of bottle. Try again. What changes do you see? What is allowing for the changes? Explain.

BALLOON BUDDIES

Materials: Mylar balloon and latex balloon (both inflated with helium)

Bring in one inflated Mylar and one inflated latex balloon. Ask students to predict what each balloon type will do over time. Record the height of each balloon on day one. Continue each day until balloons no longer float. Were predictions accurate?

SCIENCE, TECHNOLOGY, MATH POWER OF PLAY

Have students log on to the following sites to practice problem solving skills in a fun format!

Lower Grades: www.pbskids.org/games/problem solving.html

Upper Grades: www.sciencekids.co.nz/games activities/math/problemsolving.html

ENGINEERING, ART BALLOON SCULPTURES

Materials: balloons, two-sided tape

Create cooperative groups. Challenge groups to build a balloon sculpture by sticking balloons together and forming shapes using two-sided tape. Groups should explain the inspiration behind their sculpture, challenges with its execution, and ideas for improvements.

ART COMMUNICATIONS CREATIONS

Create cooperative groups of 3 to re-create predrawn designs. Have students decide who will be

drawn designs. Have students decide who will be the drawer, viewer, and talker. Draw a design on a flip chart. Have viewer look at the design. Students must follow the guidelines for each role to complete the design.

Drawer: Attempts to re-create the pre-drawn design without seeing it. Can only listen to talker and draw.

Talker: Attempts to describe the design to drawer using non-verbal cues from the viewer.

Viewer: Only person to see design. No talking; must communicate non-verbally. Viewer may not draw design in the air.

Show groups design on flip chart and compare re-creation.

ENGINEERING, MATH GEOMETRICAL GUMDROPS



Materials: paper plates, toothpicks, gumdrops

Have students create geometric gumdrop designs. Like porcupine quills, toothpicks have sharp ends and should only be poked into gumdrops. Pass out 10 toothpicks, 10 gumdrops, and 1 plate per student. Challenge students to make different geometric shapes. How many shapes can the class identify?



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