

Feel the Force!

RIF EXTENSION ACTIVITIES FOR EDUCATORS

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

SCIENCE

MAGIC MARBLE

Use with "Bobbing Along"

Materials: clear jar with lid, water, cooking oil, rubbing alcohol, dropper, food coloring

Fill the jar half full of water. Add a few drops of food coloring. Add 3 droppers full of cooking oil. Watch as the oil forms a circle in the middle of the jar. Why does this happen? Next, add 4 droppers full of rubbing alcohol. Observe what happens to the cooking oil. Place the lid on the jar to preserve the "magic marble."

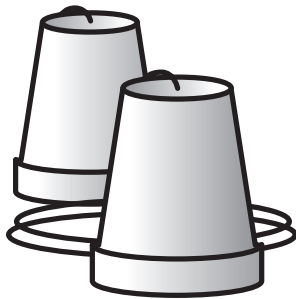
TECHNOLOGY, SCIENCE

WIRELESS PHONE

Use with "Sounds Great"

Materials: paper cups, long string, 2 paper clips, pin

Discover how sound waves travel with this classic experiment. Punch a hole in the bottom of each cup. Tie a paper clip to each end of string. Insert the paper clips through the holes and pull the string taut so each paper clip is flat against the inside bottom of the cup. In pairs, take turns talking into and listening into the cups. Can you hear your partner?

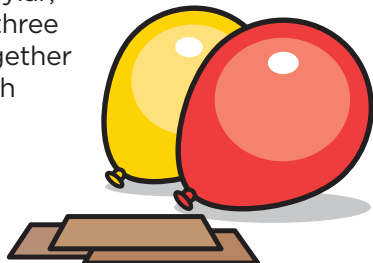


ENGINEERING, SCIENCE, MATH, ART CREATIVE KALEIDOSCOPIES

Use with "Shine a Light"

Materials: used mylar balloons, cereal boxes, tape, construction paper, markers, stickers

Cut cereal boxes into 3" x 6" sections. Cut the mylar balloons into 4" x 8" sections. Cover one side of each cardboard piece with mylar; secure with tape. Tape three pieces of cardboard together in a triangular prism with the mylar on the inside. Cover the outside with construction paper and decorate.



ART, SCIENCE

MAGNETIC MASTERPIECES

Use with "Magnetism"

Materials: magnetic wands, magnetic marbles, cardboard, paint, paper

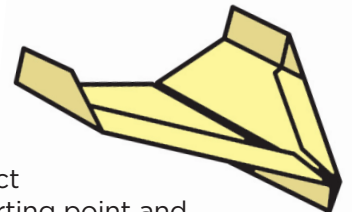
Attach paper to cardboard. Elevate the cardboard so it is accessible from underneath. Put a spoonful of paint on the paper. Place a magnetic marble in middle of paint. Use a magnet wand under the cardboard to move the marble around to create a one-of-a-kind magnetic masterpiece!

MATH, SCIENCE, ENGINEERING FORCE IT TO FLY

Use with "Forcing It"

Materials: paper, pencils, recording chart

Have each student construct a paper airplane. Pick a starting point and let students fly their planes. Measure the distance flown in feet and inches. Which airplane flew the farthest? Look at the plane construction; what do the most successful planes have in common? For an added challenge, have students convert measurements from inches into centimeters.



SCIENCE, MATH, ENGINEERING RAMP IT...DOWN?

Use with "Feel the Friction"

Materials: wood or heavy cardboard, toy cars, cotton balls, toothpicks, rubber bands, paper towels, craft sticks, yarn, straws

Put students into teams and have them build a ramp for a car to travel down. They must then decide how to slow their car down using the listed materials. The car must travel all the way down the ramp. In this case, the slowest car wins the race! Have students time each trial and record and analyze the data.

