

Whoosh!

LONNIE JOHNSON'S SUPER-SOAKING STREAM OF INVENTIONS

RIF EXTENSION ACTIVITIES FOR EDUCATORS

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

SCIENCE, ENGINEERING, ART, MATH A BLOWING BLASTOFF!

Materials: pencil, paper, scissors, tape, markers, straw

Fold an 8.5x11 inch sheet of paper into fourths. Cut 1/4 out and wrap firmly around the pencil for the body of the rocket. Secure with tape. Use the additional paper to create a cone for the rocket top and any other body parts desired. Decorate with markers. Once complete, remove rocket body from pencil and insert straw into rocket. Blow into the straw to launch the rocket.

Whose rocket travelled the farthest? What factors may have contributed to the greater distance? Conduct multiple trials and record and compare results.



TECHNOLOGY, ART BACKGROUND INFORMATION

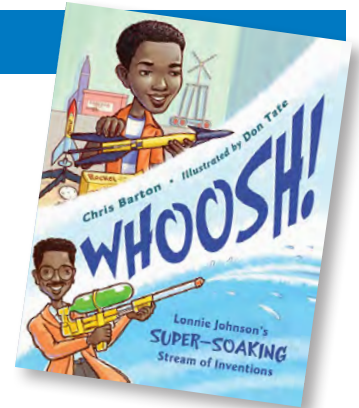
Visit the illustrator's link to find out how he researched Lonnie Johnson to make sure his illustrations were as accurate as possible: <http://dontate.com/2016/05/whoosh-research-texting-lonnie-johnson>. How would you research someone you wanted to write or illustrate a book about? Pick a famous person and write a step-by-step plan for how you would research their life, including a list of some places you might go to look, sources you might use, and people you might ask for help.

ENGINEERING, SCIENCE, MATH BOOMERANG BANG!

Materials: multi-colored craft sticks (green, blue, yellow, red)

Give each student four craft sticks. Place the tip of the green stick on top of the tip of the blue stick at a 45° angle. Place the tip of the yellow stick on the other tip of the blue stick, with the opposite end resting in the middle of the green stick. Tuck the red stick under the middle of the blue stick, with its length across the top of the yellow stick. Tuck the

tip of the red stick under the tip of the green stick. If there's space, let students practice throwing their creations. While these will not come back to you, they do explode on impact. Ask students how they think this discovery was made.



ART, ENGINEERING SCRATCH PAD

Materials: pencil, paper

Using the sketches on the inside cover as inspiration, students should draw their own inventions. Encourage students to think about the design process and to draw the invention from multiple angles and include a sketch that shows the inner workings of the invention. Students may number the working parts as an additional challenge. Have each student write or explain what their invention does.

MATH, SCIENCE, ENGINEERING POWER POPPER

Materials: sturdy paper cup, balloon, scissors, pom poms, mini marshmallows

Cut the bottom out of cup. Tie a knot at end of balloon and cut off 1/2 inch from bottom. Stretch balloon over cut out portion of cup; secure with tape if needed. Place pom pom in cup, pull back balloon, and let fly. How far did the pom pom go? Try a mini marshmallow. Which went farther? Does pulling back more or less on the balloon make a difference? Have students experiment, measure, and record how far their objects fly!



Reading Is Fundamental