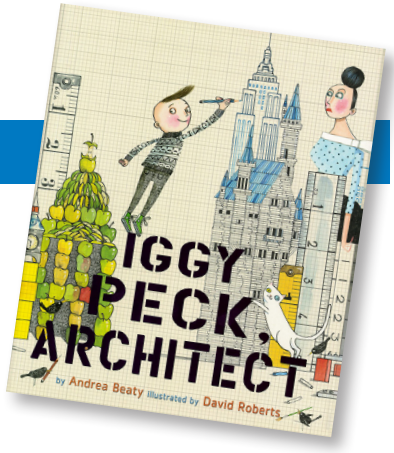
Iggy Peck, Architect



RIF EXTENSION ACTIVITIES FOR EDUCATORS

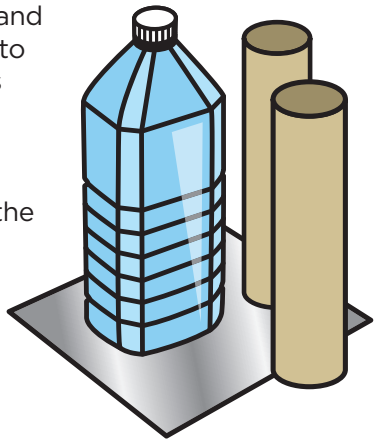
STEAM-THEMED: SCIENCE, TECHNOLOGY, ENGINEERING, ART, MATH

SCIENCE

MATERIALS WORLD

Materials: scrap materials (e.g., paper towel rolls, plastic bottles, foil, paper, cloth)

Architects study building materials to figure out what materials they should use to build different structures. Have students investigate different kinds of materials. Encourage students to touch, bend, stretch, crumble, and bounce these materials to observe their properties (e.g., hard, soft, flexible, brittle, bendable, round, etc.). Students should make a chart to record the properties of each material.



TECHNOLOGY

TESTING, TESTING

Let students visit **https://www.sciencekids.co.nz/gamesactivities/materialproperties.html** to extend their exploration of material properties. What kinds of buildings or structures would each of these properties be useful in creating? Older students can visit **www.architectstudio3d.org** to design a house online.

ENGINEERING

WHATEVER FLOATS YOUR BOAT

Materials: scrap items (foil, toilet paper rolls, plastic silverware, plastic bottles, etc.), scissors, tape, pennies, sink or tub of water

Try to use many of the same materials from the previous two activities. Students should apply what they learned about material properties in designing and evaluating their boats.

Have each child design and build a boat. Let them test out their boats in a sink or large container of water. How well does each boat float? Which floats best? Which travels fastest? Place pennies in each boat to see which one holds the most pennies without sinking. Make a chart to keep track of how well each boat performs in each category. Discuss the results. Which materials make the best boat? Why?

ART

NATURAL WONDERS

Materials: clipboard, paper, pencil, crayons or markers

Many architects are inspired by nature. Take your class outside and have them sketch a few natural items they find interesting or inspirational. When you return to class, have students design a building or structure based on one of those sketches. Students should explain their inspiration and design process.

MATH

SHAPE UP/SCALE DOWN

For younger students: Ask students to observe the architecture of your school or classroom. How many shapes can they find? Have each student keep track of the shapes they find. Compare results. Who found the most? Compile results into a class chart. Which shape was most common? Why do you think?

For older students: Since they can't draw life-sized blueprints, architects have to worry about *scale*, or proportion, when they draw plans for a building. Have students practice drawing to scale using graph paper and a ruler. Students should measure the dimensions of 2 or 3 objects in the classroom. Then, have students draw those objects on the graph paper using 1 square to indicate 1 inch. Can they represent the scale of their drawings using fractions?