

SECOND GRADE SCIENCE AND ENGINEERING KITS

Designing Hand Pollinators (engineering kit)

Marianna wants to be an agricultural engineer and help pollinate plants that the insects have forsaken in the Dominican Republic. Explore the properties of various materials (pipe cleaners, marbles, aluminum foil, erasers, pompoms, etc.) to determine which are most suited for picking up a powder and transferring it. Design and test hand pollinators for four different shaped flowers.

For use in conjunction with FOSS Insects. This is a stand alone kit and does NOT need any materials from the FOSS kit. Kit includes teacher's guide, read aloud book, and materials needed to make and test hand pollinators.

Air and Weather (science kit)

Monitor daily weather (temperature, wind speed, rainfall, and clouds) using instruments and recording in a weather journal. Observe night sky over a month (homework). Look for patterns in the weather using graphs. Use syringes and tubes to discover that air takes up space and builds up pressure when compressed. Optional lessons to construct devices that use moving air to function including propellers, gliders, streamers, pinwheels, wind socks, balloon rockets, kites and whirligigs. Includes a Book Kit with a selection of books to supplement the hands on lessons.

Parachutes (engineering lessons included in Air and Weather kit)

The cat in *Hot Air Henry* needs a safe way to return to earth. Make simple parachutes from paper, plastic, and cloth. Explore how the material and size affect the speed of descent. Design and test parachutes to find the best trade-off between cost of materials and a safe ride. The materials and instructions for these engineering lessons are included in the Air and Weather kit.

Insects (science kit)

Observe mealworms as they grow, molt, pupate and turn into beetles, which mate, lay eggs, and die. . Observe painted lady butterflies as they progress through their life cycle. Learn to care for these insects by providing an appropriate habitat. Go local with lessons about insect "friends and foes" in the garden and "Compost Critters." Analyze health of local stream with Aquatic Insects lesson. Includes a Book Kit with a selection of books to supplement the hands on lessons.

Solids and Liquids (science kit)

Explore solid objects and their properties; sort the objects according to properties and construct structures using the properties inherent in the materials. Investigate the properties of liquids (water, corn syrup, and oil) and compare their behavior. Examine the interaction between solids and water; create tests to determine whether a variety of substances are a solid or a liquid. Includes a Book Kit with a selection of books to supplement the hands on lessons.