

# Grandpa's Garden

## RIF EXTENSION ACTIVITIES FOR EDUCATORS

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

### SCIENCE

#### ROOT INVESTIGATION

Have students go outside and carefully gather a weed for examination. (Watch them to be sure they don't pick anything dangerous like Poison Ivy!) Instruct them to dig up the entire plant system, keeping the roots intact. Have students use magnifying glasses to observe the root system and rulers to measure lengths. They should record their observations and sketch the plant.



### SCIENCE, WRITING

#### TALE OF A HITCHHIKER

Why are there weeds in a garden? Why do dandelions grow in our sidewalks? Discuss with students how different seeds "hitchhike" to find their homes. Have students write a story from the perspective of the hitchhiking seed. Where did the seed begin? What did the seed see on its travels? Where and why did it finally decide to land?

### ENGINEERING, SCIENCE, MATH, WRITING

#### GARDEN BY DESIGN

To begin the design process, have students think about a typical personal or family garden. How big is it? What do all gardens have in common? Each student will design a garden for their favorite book character. Have students list some of the things they think their character would like in the garden. Let students look through garden magazines and seed catalogs for ideas. Students can use graph paper to create an aerial view landscape or blank paper for a simpler representation. Be sure to encourage students to include features such as pathways, benches, fences, etc. When finished, students should identify the character, write a description of the garden, and explain the reasoning behind the design. Why would their character like this garden?

### TECHNOLOGY, SCIENCE

#### THE GREAT PLANT ESCAPE

Visit [www.urbanext.illinois.edu/gpe/gpe.html](http://www.urbanext.illinois.edu/gpe/gpe.html) and let your students help Detective Le Plant find clues, conduct experiments, and solve plant-related problems. (In English and Spanish.)

### ART, MATH

#### SEEDS OF GEOMETRIC PROPORTION

Materials: 8" x 11" piece of heavy poster board, craft glue, paint brush, pencil, dried beans or seeds (brown, green, yellow, white, orange, black)

Draw a geometrical design on poster board. Brush one section of the drawing with glue. Sprinkle beans onto the glue. Clean up any stray beans. Paint glue onto the next section and repeat the process with a different bean color. Continue until design is complete. Let dry and display!

### MATH, SCIENCE

#### SPROUT RACE

Materials: 5 kinds of seeds, 5 small pots or containers, ruler

Begin with the question, "Do all plants take the same amount of time to sprout?" Have students plant five different seeds in separate, labeled containers. Put the containers by a window or in another sunny spot. Let students predict which seed will sprout first and explain their predictions. Have students make daily observations of the seeds. As seeds begin to sprout, record their daily growth. Graph the progress of each plant's growth. Calculate the differences in height and present the information in a chart. After a few weeks, declare the winner!

