



# Nature-Watch Activity Kit

## Flower Bookmark

(Nature Watch Kit #127)

### Kit Contents

<u>Item:</u>	<u>Kit Size</u>	
	<u>25</u>	<u>100</u>
Contact Paper Strips	25	100
Ribbon Lengths	25	100
Pink Larkspur	25	100
Yellow Viola	25	100
Purple Viola	25	100
Red Verbena	25	100
Cardstock with Flower	1	5
Instructor Manual	1	1
Contact Paper Strips	25	100

*This page includes the Next Generation Science Standards (NGSS) mapping for this kit and Science, Technology, Engineering, and Math (STEM) extensions (on back) to use in adapting and extending this activity to other subject areas.*

**See Back for  
STEM Extensions**

### Next Generation Science Standards Alignment

- 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.
- 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
- 2-ESS2-1. Compare multiple solutions designed to prevent wind or water from changing the shape of the land.
- 3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.
- MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.
- MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristics animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.
- MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
- MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

*This Nature Watch Activity Kit contains an Instructor Manual and materials to implement the curriculum. The kit was designed to be used with adult supervision only. Unsupervised use is not recommended.*



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## STEM Extensions

### Science

Make a scrapbook of flowers that you collect from your neighborhood. After you collect them, press them and affix them to the scrapbook pages with craft glue. Arrange the flowers by color or size and write descriptions of the flowers. Use a plant identification book or the Internet to identify each one. Label the parts of a few of the flowers, using the vocabulary from the diagram on page 3.

In areas that are susceptible to drought like the American Southwest and parts of Australia, residents are encouraged to use xeriscaping, which is a landscaping approach that minimizes the amount of water needed to maintain the plants. Find out more about the plants that are used in xeriscaping and the principles that guide it. Present an information session to a local garden club or other interested groups.

For the state flowers listed on page 3, find out what pollinators are involved in their propagation. Which pollinators are most common among the state flowers? Which colors and flower shapes are common among the state flowers for attracting these pollinators? Make a creative painting that shows the colors that each pollinator likes, based on the state flowers they pollinate.

### Technology

Use a microscope to look closely at the parts of a flower. What do you notice that you could not see with the naked eye? What differences do you see among different flowers?

Many people suffer from allergies to pollen. Look up “pollen count” or “pollen forecast” online to see the different kinds of online tools that inform people of the pollen levels in their region. Which tool do you like the best, and why? How would you improve the tool to make it even more useful for people with allergies?

### Engineering

Design a plant with features that would allow it to survive in any land habitat. Draw a diagram of the plant and its flowers, and describe how it is equipped to survive in the various habitats, such as tundra, desert, tropical rainforest, etc.

Biomimicry is the imitation of living things to solve human challenges. Plant features have inspired the development of Velcro, dirt-repelling paint, beautiful architecture, and more. Using a plant you find in your area, develop a new idea for a product that imitates some feature of the plant.

### Math

When you do Additional Activity #2 on page 2, plot out the garden on graph paper, to scale. Start by outlining the total area of the garden, then assign specific areas of it for certain kinds of plants. Keep this handy as a garden map for visitors.

Go to a flower shop and take a close look at the flower arrangements. Do you see any patterns in how the flowers are arranged within a bouquet? What are the ratios of one flower type or color to another?