PRETTY PETALS

BENCHMARKS and TASK

SC.A.1.1.1 The student knows that objects can be described, classified, and compared by their composition (e.g., wood or metal) and their physical properties (e.g., color, size, and shape).
SC.F.1.1.5 The student compares and describes the structural characteristics of plants and animals.

- The student observes and analyzes each part of a plant (seeds, roots, stems, leaves, flowers and/or fruit) and correlates it to a specific function.

KEY QUESTION

How does a flower help a plant?

BACKGROUND INFORMATION

The flower is the reproductive part of a plant. Most flowers have four main parts: the **sepals**, **stamen**, **petals,** and **pistil**. **All flowers have the same basic function – to produce seeds in order to preserve the species.** The colors, shapes, and scents of flowers all help the plant to reproduce itself.
Plants need pollen for fertilization so flowers can make more seeds. Bees, wasps, birds, water, man, and the wind carry the pollen from flower to flower. When an animal touches the pollen in a flower, it sticks to the animal. The next time the animal touches a flower, the pollen sticks to that flower. This is **pollination**.

MATERIALS

Teacher

chart paper or board space prepared for two class graphs
I Can Count the Petals of a Flower by Wahl (NCTM)

Per pair

flower
newspaper

Per student

crayons
pencil
drawing paper
magnifier
science journal

TEACHING TIPS

1. Let your grocery store, flower shop, or plant nursery know ahead of time that you will need some old or discarded flowers on a specific day.
2. If possible, obtain a wide variety of flowers.

ENGAGE

Brainstorm with the students the names of flowers. Record on a Circle Map.

Ask:

Why do you think plants have flowers?

How are new plants made?

EXPLORE

1. Have students cover their work area with newspaper. Distribute flowers, magnifiers, drawing paper, and crayons.
2. Give students time to use magnifiers to closely examine the flowers. Encourage students to use their senses of smell, sight, and touch to make observations. Have students draw in their science journals a detailed sketch of the flower, showing the color, the number of petals, and any other distinguishing characteristics.
3. Collect the data and make two class graphs, showing the color of petals and number of petals.

Color of Flower Petals

Number of Plants							
6							
5							
4							
3							
2							
1							
	purple	red	yellow	white			

Colors

Number of Petals

Number of Petals					
6					
5					
4					
3					
2					
1					
	Tulip	Pansy	White Daisy		

Flowers

EXPLAIN

1. Discuss student drawings and observations.
   Ask:
   Are all of the flowers we observed the same color?

How many different colors did you discover?
How do you think bees and butterflies find flowers? List all responses.
Why do you think so many flowers are bright colors?
Do you think bright colors would make flowers more attractive to bees and butterflies? Why?
How many petals did your flower have?
Was the number of petals an even or an odd number?
Did all of the flowers have the same number of petals?

2. Discuss pollination (refer to background information).
   Ask:
   Did your flower have a scent (smell)? If so, what part of the flower had the scent?
   Would a pleasant scent attract insects or keep them away?
   How would an unpleasant odor protect a flower from insects?
3. Read and discuss *I Can Count the Petals of a Flower.*

EXTEND/APPLY

1. Take students to the playground or field and have them sit quietly. Ask them to observe their surroundings. Tell them to look for insects and observe their behavior.
   Ask and discuss:
   Do the insects seem be attracted to certain flowers or plants more than others?
   Do you notice some plants that do not seem to attract any insects?
2. Bring in a small pot of marigolds. Marigolds have an unpleasant scent. This offensive odor may be beneficial to the marigold.
   Ask and discuss how people may use marigolds to help other plants in their gardens. (Many people plant marigolds to repel harmful insects from nearby plants.)

EXTENSIONS

As a demonstration, dissect one flower and display the four main parts (sepals, stamen, petals, and pistil). (Tulips, gladioli and lilies are easy to dissect.)

ASSESSMENT

Teacher observation and completion of student journal entries.