ENVIRONMENTAL LEARNING PROGRAM
CELEBRATE WILDFLOWERS

#9 WILDFLOWER PARTS

CONTENT	Name, structure and function of plant parts.
GRADE LEVEL	K-6.
OBJECTIVES	Observe and identify the parts of a flower.
PROCESS AND RESEARCH SKILLS	Dissection, observation and reporting.
PRODUCT	An illustration of a wildflower, identifying and labeling parts.
SUGGESTED LOCATION	In the classroom.
TIME REQUIRED	One hour.
MATERIALS	Plant diagram, Activity Sheet 1, a fresh cut flower for each four students (a simple flower like a tulip or lily from the florist or garden), hand lenses, and Activity Sheet 2.
BACKGROUND	Wildflowers bloom for only one purpose - to produce seeds. Their color, size smell and shape contribute to their sucess. A typical flower consists of four sets of flower parts: sepals, petals, stamens, and pistils. The outside most set of flower parts consists of the sepals. Sepals are usually green and leafy texture. They are the parts that enclose the bud. When the flower blooms, the sepals fold back to allow the petals to emerge. On some flowers, the sepals are colored like the petals. All the sepals together are called the calyx. The second set of floral parts is the petals. Petals are colorful and usually larger than the sepals and attract pollinators. All the petals together are called the corolla. Stamens, the third set of floral parts, are the flower's pollen producing organs. Each stamen consists of two parts: 1) anthers that produce the pollen; and 2) a long filament that is the stem of the anther.

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BACKGROUND CONTINUED

The last set of floral parts is the pistil. A flower can have many pistils. Pistils are composed of three main parts: 1) the sticky top called the stigma, which catches pollen grains; 2) the style, a long neck that connects the stigma and the ovary; and 3) the ovary, in which ovules are produced. An ovule is an embryonic plant.

Seed production is a two-step process. The first step is pollination. Pollination is the transfer of pollen from the anthers of one flower to the stigma of another. Once a pollen grain has landed on a stigma, it germinates and produces a pollen tube that grows downward through the style and through the tissues of the ovary until it reaches and fertilizes an ovule. The ovule ripens, or matures, into a seed.

TEACHER WILL

1. Lead class in a discussion of the background information.
2. Review parts of a flower using Activity Sheet #1. One way to do this is to make vocabulary cards of each word. Students can review with questions and answers or a "Jeopardy" quiz format.
3. Divide class into groups of six or fewer students in each group.
4. Distribute one flower (tulip or lily), and hand lens to each group.
5. Coach students to discover the following:
   a) The swollen tip of the stem that the flower rests on is called the receptacle. In some flowers this is more of a location than a structure.
   b) The sepals (calyx), which on a tulip or lily are petal colored. There are 3 sepals and 3 petals on a tulip or lily.
   c) A set of petals above the calyx, known as the corolla.
   d) Above the base of the corolla are the filaments of the stamen with anthers (pollen holding structures) on top. This is the male reproductive structure of the flower.
   e) In the center, protected by all the other parts, is the pistil, with the lowest part at the base called the ovary, and the style rising to support the stigma. This is the female reproductive structure of the flower.
6. Point out that each group of sturctures is in a specific position in relation to the stem and to the other groups.

STUDENTS WILL

1. Read and discuss background information (above).
2. Review parts of the flower using Activity Sheet #1.
3. Carefully pull the flower apart, piece by piece--saving the pieces--to discover receptacle, calyx, sepals, corolla, petals, stamens, filaments, anthers, pistil, ovary, style, and stigma.

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STUDENTS WILL CONTINUED

4. Using the hand lens, examine the tulip's floral parts.
5. Compare the parts of this flower with the chart and learn their relative positions.
6. Review and complete Activity Sheet #1.
7. Draw the flower parts of your dissected flower.

EVALUATION 1

1. Have students draw flowers that have one part missing.
2. Have them challenge the other students in their group to guess which part is missing.

EXTENSION 1

If the season permits, take a walk to look at various kinds of flowers, trying to determine the essential parts of each.

EXTENSION 2

Complete Activity Sheet 2. Discuss.

EXTENSION 3

Complete lesson plans, "Pollinator Field Guides" and "Bees as Pollinators."

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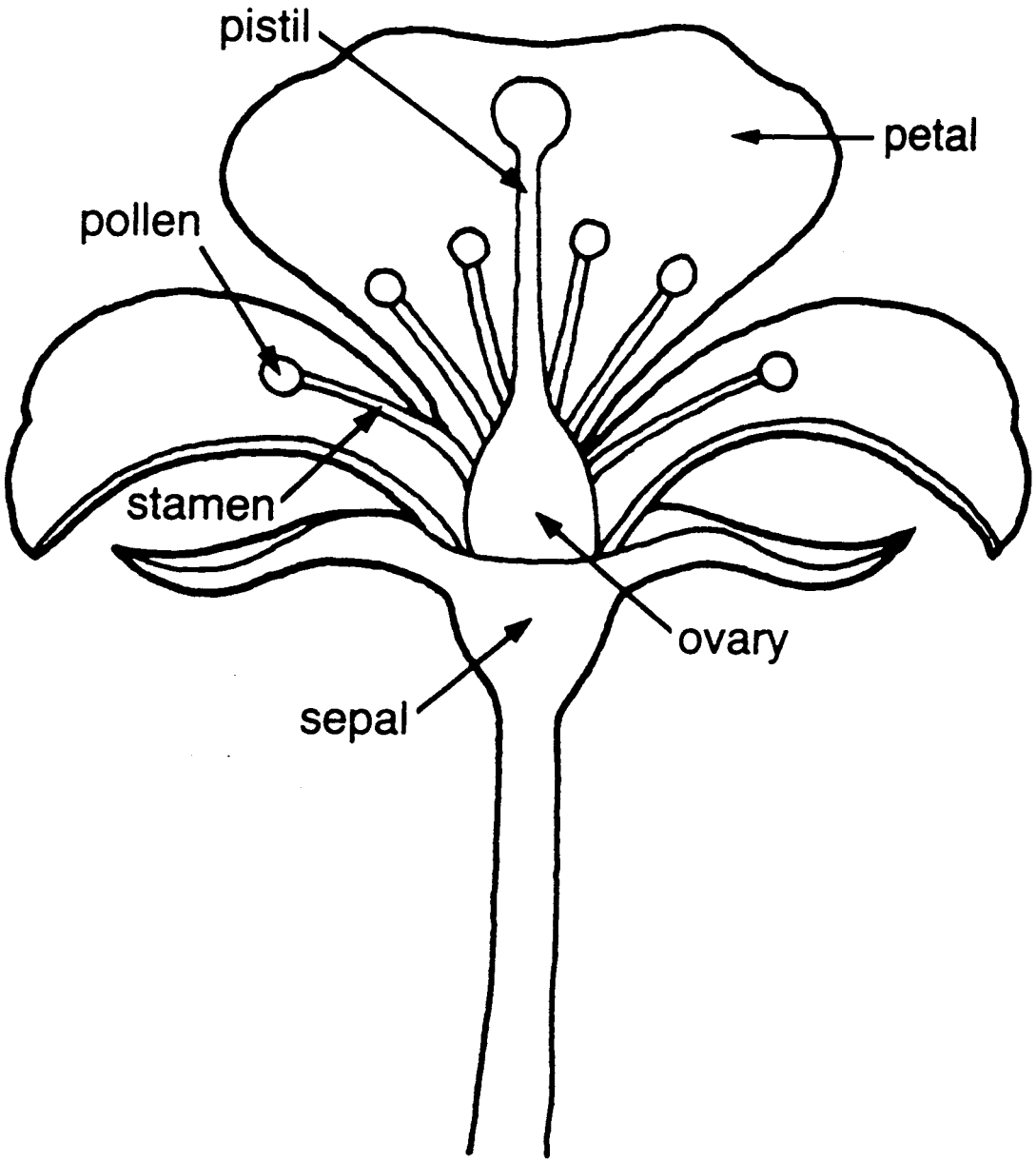
FLOWER DIAGRAM



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ACTIVITY SHEET 1

You will need:
newspaper
large simple flower
pencil or crayons
hand lens

1. Spread newspaper on your desk and place the flower on it.
2. Draw the flower in the box below. Show and label all the parts you can see.
3. Examine and count the petals. Remove the petals.

   How many petals are there? _____

   What color are the petals? _____
4. Remove a stamen. Look at the end with the hand lens.

   What do you see? _____
5. Touch the end of the pistil. Then rub a stamen on the pistil. Look at the pistil through the lens.

   What does the pistil feel like? _____

   What happens when you rub the stamen on the pistil? _____
6. Locate the ovary. Split the ovary open with your fingernail.

   Are there eggs inside? If so, how many? _____

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ACTIVITY SHEET 2

Can you identify the different plant parts we eat? Pretend you are on a food scavenger hunt. Name as many edible plants as you can that fit into the categories below. Write the names in the appropriate columns. Some samples have already been done for you.

roots	stems	leaves	flowers	ovaries or fruit	seeds
carrots	celery	parsley thyme	broccoli	peaches tomatoes	nuts