

Wildflower Exploration: Directions for Wildflower Life Cycle Activity

Materials: You need colored pencils or crayons for this activity. Also print the Life Cycle of a Perennial Wildflower worksheet below.

Directions: In this activity, we are going to think about a flowering plant, its life cycle stages and strategies to help it survive in our Northeast climate.

Life Cycle This is the study of a wildflower life cycle. What do you think of when you hear the words life cycle? Life is something that is living and cycle you know from bicycle—2 round wheels that cycle around and around. Look at your worksheet. What is the shape of the diagram on the activity sheet? Color in “It is a cycle-repeat.”

Dormancy Move clockwise in your worksheet to find the next section, Plant Dormancy. Do you know what dormancy means? It has the same root as dormitory—a place where students sleep. So when a plant is not actively growing it is said to be dormant or in dormancy. Most of our woodland wildflowers in Northeast are dormant over the winter season. The underground part of the plant stays alive but dormant all winter and well protected underground. What are they protected from? They are protected from the extreme temperature changes and animals like deer that might eat them if they were above ground. This drawing is our native wildflower called bloodroot with its dormant underground stem with roots growing from it. Color the stem orange and roots white. The soil that protects the plant in the winter can be colored brown.

Sprouting Move clockwise to find Plant Sprouting on your worksheet, the next stage in the lifecycle. The warming temperatures initiate growth and the plant uses the food stored in its underground stem to grow rapidly in spring. Many of our NE woodland wildflowers use this strategy to store food so they can quickly grow in the spring, capturing sunlight before the tree canopy fills in with leaves shading them. Color in the sprout. What color do you think it would be?

Leaf Growing Continue around the circle to find the leaf starting to grow. Green leaves (and stems) can make more food using energy from the sun. They use the energy from the sun to make sugars for the plant in a process called photosynthesis. Color the leaf and word photosynthesis green.

Flowering If a wildflower has enough food, it can use this stored energy to make a flower. Why are flowers so important? The flowers develop into a fruit with seed(s) inside so that plant can make more of the same kind of plants. Color the bloodroot leaf green so it can make more food for the plant. Bloodroot flowers are white but feel free to use any flower color you like.

Pollinating Continue clockwise to find insect pollinating. Flowering plants produce pollen in the male part called stamens. When pollen moves from one flower to another flower of the same kind it is called pollination. The bee is gathering the pollen intentionally but leaves some on the next flower by accident. How else can pollen get moved? Pollen can be moved by other insects, birds, bats, mammals and wind. Color the flower and the bee.

Fruit Forming Fruit develop in the center of flower, the part we call the pistil. The pollen grain that falls on top of the pistil starts to grow a tube down to base of the pistil called the ovary. Male cells move down the tube to fertilize the ovules. The ovules grow into seeds. Once the ovules are fertilized, petals often drop off as they have done their job. So you are left with a growing ovary that matures into a fruit containing seeds. Color the bloodroot fruit and the seeds inside green or brown.

Seed Dispersing. If all the seeds that a plant made fall underneath that plant there would be lots of competition for light, water and minerals. Who do you think would win? So the fruit becomes like a suitcase for the seeds, protecting the seeds while moving them away from the parent plant. The movement of seeds away from parent plant is called dispersing or dispersal. Any ideas how fruits can help with seed dispersal? Bloodroot seeds have a special fatty body that ants are attracted to. The seeds fall to the ground and ants pick up the seeds and carry it back to the ant colony. The ants eat the fatty body but leave the hard seed alone. The seeds germinate away from the parent plants in the rubbish piles of the ant nests. As the above ground parts of the parent plant wither, the food and nutrients in them are moved to the underground parts that will go dormant until next spring when the cycle over again. Color the withering leaf and seeds brown and the underground food storage organ orange.

Above is the life cycle of a perennial plant that overwinters as an individual plant over many years. New plants can start from seed and it might take years before they have enough food stored to make a flower. Most of our woodland flowers are perennials. Two other plant growth strategies are annual and biennial. Annual plants start with seeds every year. The annual plant must make a fruit with seeds inside all within 1-year period. Seeds start the cycle over again each year. Do you know of any annual plants? Annual plant usually grow in soils that are disturbed by cutting trees, gardening, etc. Biennial plants usually germinate, grow roots and leaves the first year. Usually in the second year a biennial plant flowers, makes fruits with seeds inside and then dies.

Name

The Life Cycle of a Perennial Wildflower

