

Wildflower Exploration: Directions for Wildflowers Underground Activity

Materials: Print the Wildflowers Store Food Underground activity sheet. For this lesson you need an onion, a potato, a piece of ginger, a carrot and if possible a gladiolus corm (from Agway). If you don't have any of these fresh items, there are pictures of them on the activity sheet. Other materials needed are scissors and glue. Ask an adult for help cutting the plant parts.

Teacher directed questions and discussions:

Look at each of the plant parts you have collected. Are they alive? How can you tell if they are alive or not? What part of the plant are they? Your choices are roots, stems, or leaves. Roots, stems, and leaves have been modified to store food in many plants. Plants with lots of food stored underground can grow faster than plants starting from seeds that have less stored food. Many woodland wildflowers need to grow rapidly in the spring so they can capture sunlight before the trees leaf out and shade the wildflowers.

Ask for adult to cut each underground storage structure in half. Examine the texture on the cut surfaces. Is the surface moist or dry?

Leaves: Find the plant part that has layers. These layers are modified leaves full of food for the plant. Underground structures made up of modified leaves are called bulbs. An onion is an example of a bulb that we eat. A wild leek is a native wildflower storing food in a bulb underground. Did you realize plants can put leaves underground to store food?

Root: Find the plant part that is solid inside and narrows gradually all along its length. Imagine it growing straight down in your garden. This is a swollen root, called a taproot, storing food for the plant. A carrot is an example of a storage root that we eat. Virginia Bluebells is a native plant with a taproot. The job of thick taproots is to store food while thin roots absorb water.

Stems: The last three underground structures are all modified stems. They are solid inside but have different shapes.

A potato is modified stem called a tuber. Tubers are often round. The native plant, Dutchman's breeches, has tubers underground.

The ginger we eat is a modified stem called a rhizome that grows horizontally in the soil. Our native trilliums store food in modified stems called rhizomes.

A corm is a modified stem that looks like a squashed pumpkin. The water chestnut we eat and the gladiolus we plant grow from corms. Jack-in-the-Pulpit is a native wildflower that stores food in a modified stem called a corm.

Activity: Cut the pictures of the underground structures and glue them in the correct box.

Summary: Perennial plants can store food underground in roots, stems, and even leaves! Many of our spring wildflowers store food underground. The food is protected during the winter and very accessible for quick growth in the spring.

Wildflowers store food underground in modified:

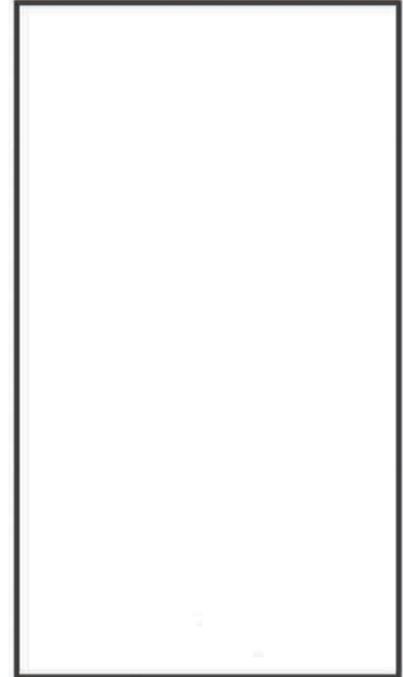
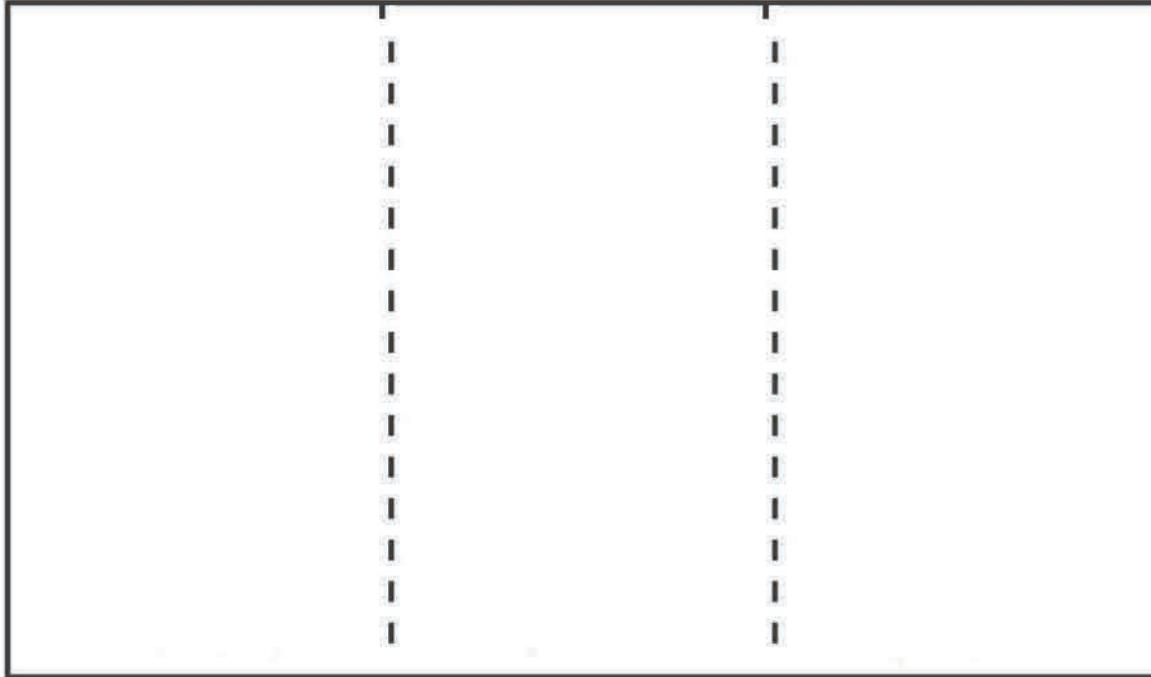
Taproots

Rhizomes

Corms

Tubers

Bulbs



Swollen Root

Solid Stem

Solid Stem

Solid Stem

Layered Leaves

Cut pictures below and paste them in the correct box above.



Ginger



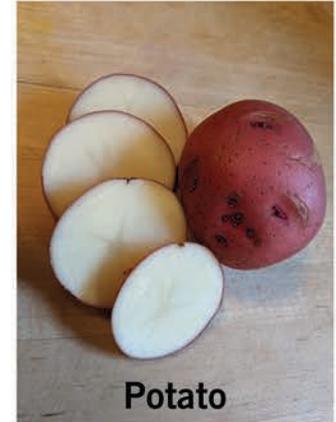
Gladiolus



Carrot



Onion



Potato