



## Science at Home! Parts of a Plant Crafts

Earth takes care of us in so many ways; providing clean air, food, resources, and beauty in our everyday lives. Each part of the plant plays a special role in helping it stay alive, and we use different parts of the plants in different ways each day. These crafts remind us to appreciate each part of a plant.

### What You'll Need:

#### Flower Bracelet

- Plant parts collected from outside
- Masking or Duct tape
- Scissors (optional)

#### Pressed Flower Bookmark

- Plant parts collected from outside
- Newspaper
- Heavy books
- Clear tape or glue
- Sturdy cardstock paper or cardboard
- Scissors
- String or yarn

### Introduction:

Spring is a beautiful time to see all of nature's beauty. Fruits, leaves, flowers, and seeds abound. Each part of the plant plays an important role in helping the plant receive its nutrients and survive.

**Roots** - Roots keep the plant *rooted* in the ground so the plant stays in place. The roots also act like a large sponge, soaking up the water and nutrients in the soil.

**Stems** - The stem keeps the plant growing upwards to help the leaves get closer to the sunlight. The stems are also like a straw, they transport the nutrients and water from the roots to the rest of the plant.

**Leaves** - Plants are autotrophs, which means they can make their own food. How cool! They do this because leaves have chlorophyll which can turn sunlight into food for the plant.

**Flower** - Not only do flowers look and smell nice to us, but they have the important job of attracting other creatures like bees and butterflies who are pollinators. Pollinators collect nectar and pollen from plants and transfer pollen to a new plant. This allows the plant to make fruits and seeds.

**Fruit** - We love eating fruits because they're sweet and tasty. Animals often eat fruits from plants helping to spread that plant's seeds.

**Seeds** - Seeds are how plants make new plants! Plants have a great diversity of seeds. Some travel by air, some are hidden in fruits, others cling to clothes and fur.

*Note: not all plants have roots, stems, leaves, fruits or flowers. Have you seen any of these types of vegetation in your yard or neighborhood. Moss is a great example. These are called **non-vascular** plants, because they don't have a transport system. They also can't produce seeds, and need water for reproduction.*

## Getting Started:

Take a safe walk outside or spend some time in your yard. Bring a bag or container with you. Pick up interesting plant parts you see on the ground. It's okay to pick a dandelion here or there, but try to only pick up things you find on the ground to leave the beautiful flowers and plants for everyone else to see. Remember not to trespass, and be careful about what you pick up. Once back inside, dissect your plants to get a close look at all the different parts. Group your specimens into the different parts of the plant. Make a pile for the roots, stems, leaves, flowers, fruits, and seeds.

### Flower Bracelet

1. Get help measuring the tape around your wrist and cut the tape to the appropriate length. This will be the base of your bracelet.
2. Tape your bracelet onto the table to keep it secure.
3. Now use your different plant parts to create your own unique design by pressing them onto the tape.
4. Once finished, tape your bracelet on and rock your flower power!



Watch How [Here](#)

## Pressed Flower Bookmark

### Prep: Press Your Flowers

1. Collect your flowers and plant parts from outside, or use leftovers from the flower bracelet.
2. Make a flower sandwich by placing them flat on newspaper or parchment paper and covering with another piece of paper.
3. Place your newspaper flower sandwich inside a book. Stack heavy books on top to press your flowers.
4. Leave for a day or two, when you come back you should have beautiful pressed flowers.



### Making the Bookmark

1. Cut your cardstock or cardboard into the shape you want for your bookmark.
2. Arrange your plant parts onto your bookmark in your desired pattern. If you're using glue, you can gently glue your plant parts onto the bookmark.
3. Measure your clear tape to the length of your bookmark and cut.
4. Carefully tape down your plant parts to secure.
5. Tie your string through the hole at the top and your bookmark is ready to use.



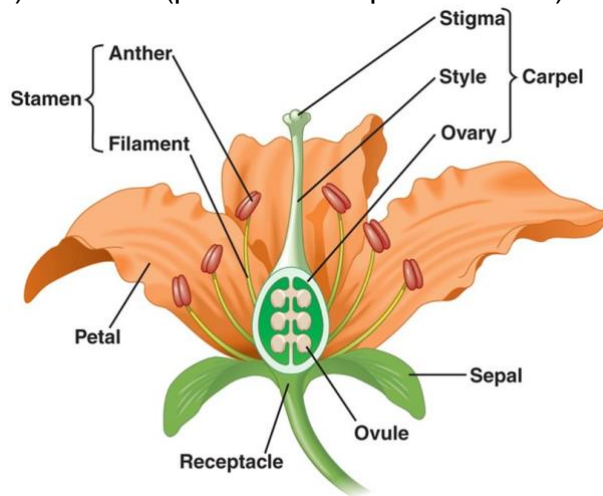
## Diving Deeper:

### Edible Plant Parts

Have you ever eaten a leaf? What about a root or flower? If you've eaten broccoli or cauliflower, you've eaten a flower. If you've had lettuce, spinach, or kale, you've eaten leaves. If you've had carrots, beets, or radishes you've eaten roots! Look at the food in your kitchen and list what part of a plant it belongs to. See if you can find all the parts of the plant.

### Examining the Parts of a Flower

The flower has the important job of creating seeds and pollen to help create new plants! Dissect a flower to examine the different parts of a flower. Find the stamen: this is where pollen is produced in the flower. The stigma is where pollen from other plants collects when it's dropped by pollinating bees and butterflies. From there the pollen travels down to the ovary. Once pollen reaches the ovary, the plant can start making new seeds! Compare the flowers of two different plants if available. How do their lengths, shapes, and number of petals differ? Can you identify if you have monocots (petals in multiples of 3) or dicots (petals in multiples of 4 or 5)?



### Average Leaf Size

Plants' leaves help them capture sunlight to turn into energy. Plants are autotrophs, so can make their own food. How do you think the different shapes of leaves help them absorb more sunlight? Some leaves in the rainforest have *huge* leaves because they have to compete with so many other plants for sunlight on the forest floor. Measure the length of some of your different leaves and compare the sizes. To find the average leaf size for plants in your area, add the totals of your leaf sizes then divide by the number of leaves you measured. For example, if the total length of your leaves is 120 inches and you measured 5 leaves, your equation will be 120 divided by 5.



## Diversity of Plant Parts

Plants adapt to their environment. Why do cactus grow well in a desert? Because they're adapted to living in dry, hot climates. Watch the videos of some of the world's most interesting plants and compare their adaptations. How does each plant get what it needs to survive in its habitat?

[Desert: Welwitschia](#)   [Rainforest: Strangler Fig](#)   [Swamps/Marshes: Carnivorous Plants](#)

## Additional Resources

[Understanding the Parts of a Plant](#)

[Studying Plants](#)

[Amazing Giant Water Lilies](#)

[Talking Trees](#)

[How Plants Defend Themselves](#)

## Standards Covered

SKL2. Obtain, evaluate, and communicate information to compare the similarities and differences in groups of organisms.

b. Construct an argument supported by evidence for how plants can be grouped according to their features.

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals.

a. Develop models to identify the parts of a plant—root, stem, leaf, and flower.

S2L1. Obtain, evaluate, and communicate information about the life cycles of different living organisms.

c. Construct an explanation of an animal's role in dispersing seeds or in the pollination of plants.

S5L1. Obtain, evaluate, and communicate information to group organisms using scientific classification procedures.

b. Develop a model that illustrates how plants are sorted into groups (seed producers, non-seed producers) using data from multiple sources

S7L1. Obtain, evaluate, and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.

a. Develop and defend a model that categorizes organisms based on common characteristics.

SBO2. Obtain, evaluate, and communicate information to delineate the plant divisions based on current plant phylogenetic and taxonomic principles.

a. Construct an explanation based on evidence to compare nonvascular to vascular plants and seedless to seed plants.

SBO5. Obtain, evaluate, and communicate information to analyze the diversity of plant adaptations and responses to changing environmental conditions.

a. Construct an explanation to describe the diversity of plants and their adaptations in relation to differing ecosystems and changing environments, both long term (climate) and short term (seasonal and diurnal). (Clarification statement: Instruction should focus on climatic, seasonal, and diurnal changes.)

b. Construct an argument based on evidence to predict which plant adaptations increase survival in different stressful environments (i.e., water extremes, saline environment, and extreme temperature).