

Join us as we explore the wonderful world of plants! We'll find out how plants soak up water, grow a plant and make our own plant collage!

What are plants?

Plants are living things that can use energy from the sun to make their own food. There are two main groups of plants based on what they use to reproduce. Seed plants like flowering plants, conifers cycads and ginkgos use seeds to reproduce. Non-seed plants like ferns and mosses, use spores to reproduce. Plants come in all shapes and sizes. Some types of plants include trees, bushes, herbs and vines. Plants have different parts to help them grow and survive. Roots soak up water from the ground, leaves gather the sunlight they need to make their food and stems or branches bring water and food to all the different parts of the plant.

Plants are important because they release oxygen into the air for us to breathe. Some also provide food for us to eat and even cotton for clothing or wood for building houses and furniture. Many things we use every day come from plants!



Sam Noble Home



STEM Activities

For more activities visit samnoblemuseum.ou.edu/samnoblehome

Let's Read



Find a comfortable spot and read about the weather! Here are some ideas to get you started:

- *The Tiny Seed* by Eric Carle
- *Planting a Rainbow* by Lois Ehlert
- *A Seed is Sleepy* by Dianna Aston
- *Tell Me, Tree: All About Trees for Kids* by Gail Gibbons
- *We Planted a Tree* by Diane Muldrow
- *How Plants Grow* by Carrie Branigan and Richard Dunne

You can download digital copies of these books for free from openlibrary.org. Here is how!

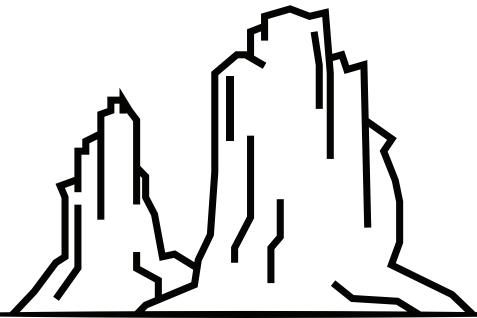
- 1.** Go to openlibrary.org.
- 2.** Click the blue "sign up" button on the top right to create a free account. You will be sent a confirmation email.
- 3.** Sign in.
- 4.** Type the book title and author into the search bar.
- 5.** Find your book and click the blue "borrow" button.
- 6.** Don't forget to return your book when you are finished reading it!

Help a Plant to Grow

What is the life cycle of a plant? Many plants grow from seeds. When seeds are planted, and given water and sunlight, they will grow a tiny root. This is called germination (Jer-meh-nay-shun). With time, the plant will grow into a sprout with a stem and longer roots. Once its first leaves unfold above ground, it's called a seedling. With more time and the right amount of water and sunlight, the plant will grow into an adult and often will grow flowers and then seeds to make new plants. Some plants can reproduce just from pieces (for example, stem or leaf cutting) of the adult plant. Learning how plants grow is important to growing fruits and vegetables and other things we need to survive! Let's grow a plant at home to see its life cycle.

Before you start, you should have:

- A dried bean
- A clear glass jar or cup
- Water
- 3 to 5 sheets of paper towels or 5 to 7 cotton balls

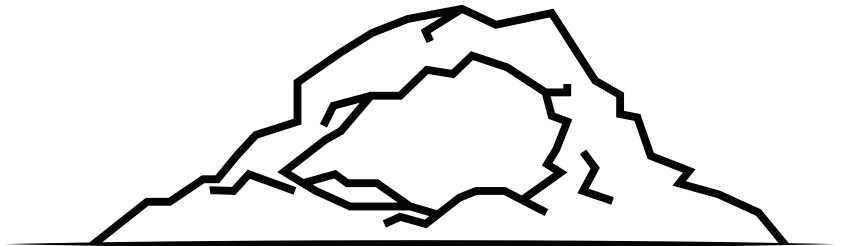


Get started:

To sprout a bean plant:

- 1.** Dampen the paper towels or cotton balls with water. They should only be damp, not soaking wet.
- 2.** Place the bean between paper towels or cotton and the side of the jar so you can see it.
- 3.** Place the jar by a window so it can get sunlight.
- 4.** Keep the paper towels or cotton balls damp. In a few days, you will see your seed sprout!
- 5.** Keep a journal of your plant's life cycle.

You can draw or write about what your plant looks like each day or each week.



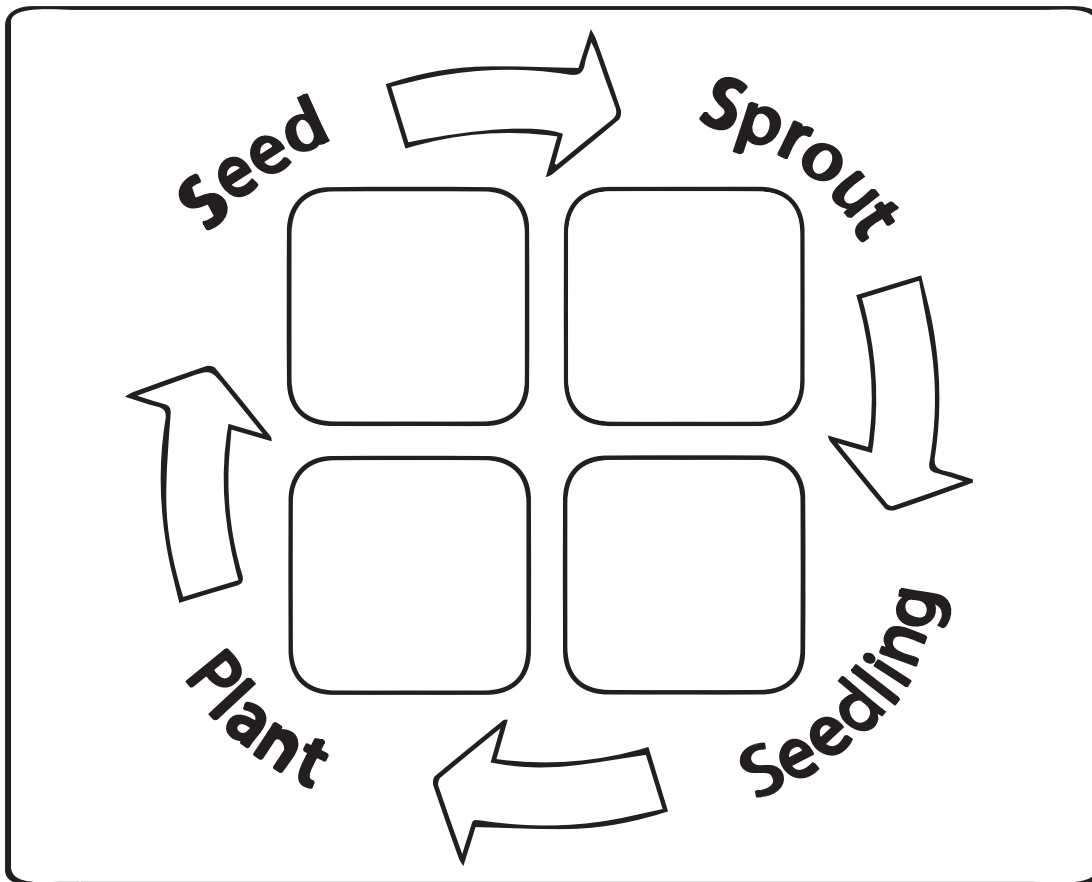
Keep going!

Plant your seedlings in a pot of soil or a garden and continue to watch them grow.

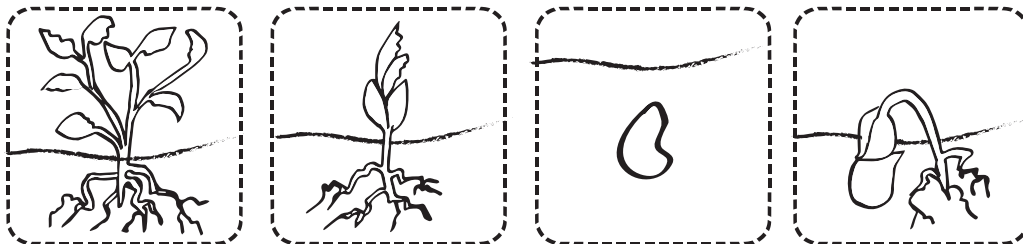
Print the Help a Plant to Grow activity sheet. Cut out the plant life cycle steps at the bottom and put them in order. Or, look at the activity sheet and make your own life cycle steps with paper and art supplies! (Help the Plant to Grow activity sheet is on page 3)

Help the Plant to Grow!

A Plant Life Cycle



Directions: Color and cut out the plant life cycle stages. Glue them in the correct order!



More Information on plant parts and lifecycles

<https://www.dkfindout.com/us/animals-and-nature/plants/parts-plant/>

<https://www.bing.com/videos/search?q=roots+and+stems+of+plants+for+kids&docid=608036698669256685&mid=DCD61600B016263925D7DCD61600B016263925D7&view=detail&FORM=VIRE>

<https://www.natgeokids.com/za/discover/science/nature/the-life-cycle-of-flowering-plants/>

For more activities visit samnoblehome.ou.edu/samnoblehome



Thirsty Plants

How do plants drink water? Many plants soak up water in the ground through their roots. The roots are attached to tiny straw-like tubes in many plants called xylem (Zie-lum). The xylem take water from the root to the branches, leaves and flowers of the plant. Plants need water to survive just like you do! How much water they need depends on the kind of plant.

Before you start, you should have:

- Celery stalk with leaves attached, or white flower such as a rose or carnation
- Water
- Vase, jar or other tall glass to hold celery stalk or flower
- Food coloring: red works best but you can use any color other than green or yellow (they won't show up as well)

Get started:

- 1.** Fill the vase or jar halfway with water.
- 2.** Add 3 to 5 drops of food coloring to the water and stir.
- 3.** Cut about a half inch off the bottom of the flower stem or celery stalk.
- 4.** Place the flower or celery stalk in the water and leave it overnight.
- 5.** You will begin to see the color spread up the stalk of the celery and into the leaves.
If you are using a flower, it may take a couple days for the leaves or petals to change color.

Keep going!

Try doing the experiment again but split the center of the stem of the flower or stalk of the celery lengthwise, starting at about halfway up the stem and split downward. Place each side of the stalk or stem in a cup with a different color of water. Your plant will have one color on one half and another color on the other half!

More Information on plants:

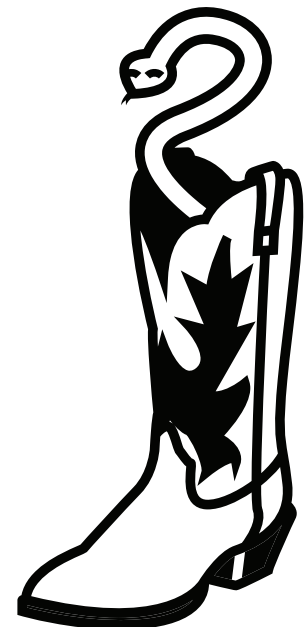
<https://www.natgeokids.com/uk/teacher-category/plants/>



<https://www.fs.fed.us/wildflowers/kids/index.shtml>



<https://www.bbc.co.uk/bitesize/guides/zqgtw6f/revision/3>



Plant Collage

What are the parts of a plant? Plants have different parts to help them get what they need to survive. These include roots for “drinking” water, leaves for gathering sunlight, stems to give the plant structure and carry water to the leaves and other areas of the plant, and sometimes flowers and seeds to help make new plants! Plant parts have many shapes, sizes and colors. They are fun to look for and even more fun to make art with!

Before you start, you should have:

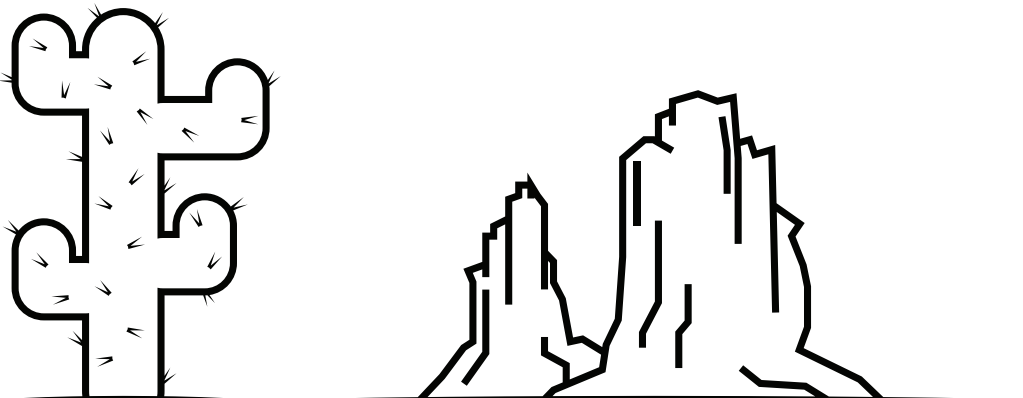
- Different kinds of leaves, flowers, seeds, etc. from outside. If you can't go outside, draw different shapes and sizes of leaves, flowers, seeds and other plant parts, then cut them out, or look through magazines to find plant parts to cut out.
- Paper
- Tape or glue
- Optional: Crayons, markers, colored pencils and/or paint

Get started:

- 1.** Collect different kinds of plant parts from around your house. Look for pieces of bark, leaves, seeds and flowers already on the ground. Be careful not to pull anything from a living plant. If you can't go outside, look up some plant parts online and draw them on paper and cut them out, or cut plant parts out of magazines.
- 2.** Once inside, group what you found by color, shape or how they feel.
- 3.** Think about what kind of picture you want to make. You can make a cool new type of plant, a pattern, a scene or anything else you want!
- 4.** Glue or tape the plant pieces onto the paper.

Keep going!

Add more color or different shapes to finish your collage with your paint, colored pencils, markers or crayons. Share your finished picture with a buddy or family member!



Let's Play: Plant Yoga

Exercise yoga is a combination of stretching, breathing and posing that is good for your body! Plants stretch as they grow too. Because plants use sunlight to make their own food, they grow the best when their leaves face the sun. Plants will even grow in the direction of a sunny window when inside. Let's see if we can stretch into some plant shapes!

Before you start, you should have:

- A yoga mat, towel or blanket
- A space big enough for you to stretch in every direction

Get started:

- 1.** Find a place inside or outside where you have enough room to stretch in every direction.
- 2.** Think about the plant words below. Stretch and pose your body into each one as you stand or sit on your towel or yoga mat. Be creative!
- 3.** Once you are in position, hold each pose for several seconds, and take some deep breaths before moving to the next!
- 4.** Do the best you can with each one and have fun.
- 5.** Try each one and then do them as many times as you want.

- Tree
- Flower
- Seed
- Sprout
- Leaf
- Roots
- Stem

Keep going!

Make up your own! Think of some other plants or plant words and come up with a new pose or stretch for them.

Way to go Partner!

You've been deputized!

Carefully cut out your badge and wear it with pride!

