



5555 Zoo Boulevard  
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## S.T.E.A.M. with Plants

Choose a square • Complete the activity • Check it off

*Use this chart however works best for your family. If you need to have daily tasks, follow the calendar. If you want to do a Wednesday activity on Monday, that is perfect too. Activities are perfect for preschool through high school and will help get all students out of the house. Have them take photos of their creations and share the photos with others. The photos can also be a good evaluation tool for parents who are not working from home.*

Monday	Tuesday	Wednesday	Thursday	Friday
Did you know that trees are really big plants? Find a tree in your neighbor and find these parts: the crown, the stem, and the visible roots.	Pick a dandelion (no one will mind) and place it between two pieces of fabric (like an OLD t-shirt) and smash the flower with a hammer or a rock. What happens?	Use a cotton swab to find the pollen in a flower. Carefully insert the swab into the flower and see if you collect any fine yellow dust. That's pollen!	Plants are part of our lives every single day. Can you name 5, 10 or even 15 ways plants have been part of your life today?	Plant cells have a strong outer wall, which is how they can grow tall and not flop over! Ask if you can bring your Legos outside and build a plant. Each Lego is like a plant cell!
Use parts of plants to spell your name. Hint: blades of grass make great straight letter parts and dandelion flowers make great round letter parts!	Mark off a 2 foot by 2 foot square in your yard. See how many different kinds of plants you can find. Be sure to look between the blades of grass!	Some seeds spread in the wind. Stretch your arms high above your head and wait for the wind to blow. When it does, pretend you are a seed moving on the air.	Have you ever seen a maple tree seed? It looks like a single blade of a helicopter rotor. Go on a walk and see if you can find one. Then throw it into the air and watch it spin back to Earth!	Plants are often used in animals' shelters. Pretend you are a bird or a mouse. Look for plants, or parts of plants, you could use to line your nest or borrow.
Draw the outline of a tree on a piece of paper. Then go outside and gather some green plants. Use the plants to "color" in the leaves of your tree! Rub the plants on the paper and see what happens.	Plants can't move but you can! Roll yourself into a little ball on the ground. You are a seed! Now start stretching to show how you grow.	Construct a fairy house from plant parts. Use things like sticks, leaves, moss and flowers to make your pretend friend comfortable. How can you decorate your fairy house?	Choose two plants near your house and measure them every day. Which grows faster? Is the growth up or out? Does a flower develop? Keep notes on your specimens.	Just like animals, plants need water to survive. Ask your adults if you can help water any plants growing in the garden or yard or home.
Make a crown fit for a king or queen! Find plants with long stems or long blades of grass. Carefully tie them together until it is long enough to go around your head.	Plants get water from the ground through their roots. It is similar to water being pulled up a straw. Enjoy a drink with a reusable straw outside with your plant friends.	Piles of leaves are a great habitat for many tiny creatures. Scout out a leaf pile and carefully dig through it to see who's living there.	Trees are plants that offer a lot of value! Food, shade, and even building material. Pay back the favor. Find a tree and read it your favorite story. Give it a hug and a name!	If you have dry beans or plain popping corn in your pantry, then you have seeds! Plant a few beans or kernels of corn outside and watch what happens.
We eat lots of seeds. Keep track of your seed eating habits. What seed is your favorite to eat? Which seed is your least favorite to eat?	Find a flower and carefully "dissect" it. How many different parts can you find? Don't forget to ask permission if taking a flower from a garden!	Grab your favorite animal toys and head outside to make them a habitat with plants from your yard.	Different plants have different smells, not just the flowers. See how many different plant smells you can find. What is your favorite?	Get out your paint and paper. Paint one side of a leaf and lay it on your paper paint side down. Peel it away to see your leaf art!



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### Kansas College and Career Readiness Science Standards

Grade	KCCRSS	Description
Kindergarten	K-PS2-1	Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.
	K-PS3-2	Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.
First	1-PS4-1	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
	1-PS4-3	Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.
Second	2-PS1-1	Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
	2-PS1-3	Make observation to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.
	2-ESS2-1	Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.
Third	3-PS2-1	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
Fourth	*4-ESS3-1	Obtain and combine information to describe that energy and fuels and derived from natural resources and their uses affect the environment.
Fifth	5-PS1-3	Make observations and measurements to identify materials based on their properties
Third-Fifth	3-5-ETS1-1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, and cost.
Middle School	*MS-PS2-2	Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object
	*MS-ETS1-3	Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

\* Additional activity/discussion required.