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S.T.E.A.M. with Leaves

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
Go outside and see how many different kinds of leaves you can find. Can you tell which tree or plant the leaves came from?	Learn to identify the different parts of a leaf. Can you see the stem? The blade? The veins?	Choose a leaf. Write a list of words to describe your leaf. When you think you are done, challenge yourself to think of 5 more.	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!	Find a place out of the wind and create a piece of art using only leaves. Have an adult take a picture of your art.
This is a great time of year for looking for leaves! How many different colors can you find? Are some left over from winter? Are some new?	Pick a leaf and look at it closely. Can you see all the different veins? Do they make the same pattern or different patterns all across the leaf?	Find 5 or more leaves of different sizes. Put them in order from smallest to largest. Challenge yourself by adding more leaves.	Find a fresh leaf. Place it between two clean pieces of paper. Use a crayon to rub over the leaf. If you press harder, does your artwork get better or worse?	Lay out several leaves. Describe one of the leaves to another person. Can they identify the correct leaf? Add more leaves to increase difficulty.
Collect a small pile of leaves. Sort leaves by width, color, size, shape or texture. Are there any other ways to sort your leaves? Create a leaf graph with your findings.	Fill a bucket or non- breakable bowl with water. Drop in one small leaf. Observe what happens. Repeat several times. Write down your observations or tell an adult.	Collect leaves with long stems. Paint with the leaves, using the leaves as brushes and the stems as handles. Try different types of leaves.	Draw the outline of a leaf on a piece of paper. Then go outside and gather some green plants. Use the plants to "color" in your leaf! Rub the plants on the paper and see what happens.	Take your flashlight outside after dark and find a few leaves larger than your flashlight lens. Shine your light through the leaves. What do you see?
Choose a large leaf. Make a start and finish line. Try to blow your leaf from start to finish. Challenge a family member to a leaf- blowing race.	Fill a bucket or non- breakable bowl with water. Drop in one small leaf. Observe what happens. Can you stack enough leaves to make them sink?	Hold a leaf by only the stem. Wave your hand back and forth slowly. Wave faster. Does the leaf move differently at different speeds?	Find a few fresh leaves. Place them between two clean pieces of paper. Use a rolling pin or a can to crush the leaves and leave marks on the papers.	Go for a walk. How many different shades of green can you find? How many shades of brown? How many colors of leaves can you find?
Collect a few large leaves and tear them up into tiny pieces. You've made leaf confetti! Think of something to celebrate and toss your confetti into the air!	Choose two leaves of the same type and shape. Leave one outside and bring one inside. After a few hours, observe how they are different and the same.	Many bugs eat leaves. Write or tell a story about how leaves might taste and how to choose the best ones for eating if you were a bug.	Using playdoh or clay- like mud, press a leaf firmly into the surface. Does the leaf leave a mark? Try again with the other side of the leaf. What happens if you press harder?	Play leaf tag. Go outside on a windy day. Choose a leaf and try to catch it. Try to catch a leaf of a different size. How many leaves can you catch?



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Kansas College and Career Readiness Science Standards

Grade	KCCRSS	Description	
Kindergarten	K-PS2-2	Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	
	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.	
First	2-PSI-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.	
Second	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.	
	5-PS1-3	Make observations and measurements to identify materials based on their properties	
	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.	
Third	*MS-PS2-2	Plan an investigation to provide evidence that the change in an object's motion depends on the sum o the forces on the object and the mass of the object	
Fourth	*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.	
Fifth		None	
Middle School		None	

^{*} Additional activity/discussion required.