



Summer STEM Activities:

JULY

| Math Monday | Outdoor Tuesday | Science Wednesday | Engineering Thursday | Fun Friday |
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| Wait for a summer storm to do this activity: count the seconds between the lightning and sound of thunder. Divide by 5 to get the number of miles away from you the storm is. | Download a star app like Star Walk. Can you find a planet or constellations in the night sky? * | Create your own experiment using baking soda & vinegar. What happens when you combine both ingredients? * | Make a catapult with household items. Test your accuracy and precision. How often are you able to hit your target successfully? * | Pick 3 objects to place in a bag. Have a friend guess the objects with only touching. You can do the same with only smelling. |
| Make a floor plan of your room on grid paper. Measure the dimensions and draw items to scale. Calculate the area. What percentage of your room is your bed? | Design and build a bird feeder. How many birds can you attract? What design improvements can you make to attract more birds? * | Fill a clear container $\frac{3}{4}$ with vegetable oil. Fill the rest with water and add 10 drops of food coloring. Drop in an Alka-Seltzer tablet. You have created a lava lamp! * | Find your favorite doll or action figure and design a zip lineto get them from one level to another. (tree to ground, table to floor, etc...) | Mix up dish soap and water. Dip a bubble hoop into the mixture and blow. What else could you use to create a bubble hoop? What is the biggest bubble you can blow? |
| Measure your heart beat for 10 seconds. Convert to beats per minute. Go out and run around and then measure again. What is the percentage of increase? | Plant something, such as a flower or an herb, in the backyard or a small pot. Watch it grow over the summer. What does it need to grow? | Predict how many pennies can be placed in a full glass of water before it overflows. Fill a glass to the rim. Add pennies one by one. Keep count until it overflows. | Design a way to keep an ice cube from melting as long as possible. Compete with a friend. Who's ice cube lasted the longest? Why? | Create an obstacle course outside. Calculate your average time to complete the course over a series of 5 attempts. Get a friend to try! |
| Run one lap ($\frac{1}{4}$ mile) and keep the time. Calculate how long it would take to run $\frac{1}{2}$ mile, 1 mile, and 5 miles at the same pace. | Create your own ant farm! Find a diagram at m.wikihow.com/Build-an-Ant-Farm . Be sure to have permission. What do you observe? * | Stretch out a balloon. Pour 40 ml water into a soda bottle. Add a tsp of baking soda and stir. Add lemon juice and quickly place the balloon over the mouth of the bottle. | Make a treasure box to keep your secrets safe. Design a system that will set off an alarm or a reaction to keep prying eyes away. | Design a math scavenger hunt for a friend. Have them find numbers around your home that are equal to equations that you write as clues. |
| Calculate the gas mileage of your family's car. After filling up with fuel, divide the distance traveled since the last fill-up by the amount of gas added. How far can you drive on one tank? | Find flowers and leaves outside. Use clay or playdough and make impressions of your finds. Keep a catalogue of your finds. | Boil shredded red cabbage for a few minutes. Use the leftover liquid as a pH indicator. Test baking powder, lemon juice, other substances, etc... green/yellow = basic purple/red = acid * | Make a wind-powered sail car. Create a car with wheels and add a sail like a sailboat. Use a fan, blow with your mouth, or use the breeze to see how far or fast it can go. | Make a sundial to tell what time it is. Put a stick in the ground through a paper plate. Make its shadow mimic the location of the hour hand on a clock. Draw the numbers on a plate. |

* Denotes Adult Supervision May Be Needed for this activity.

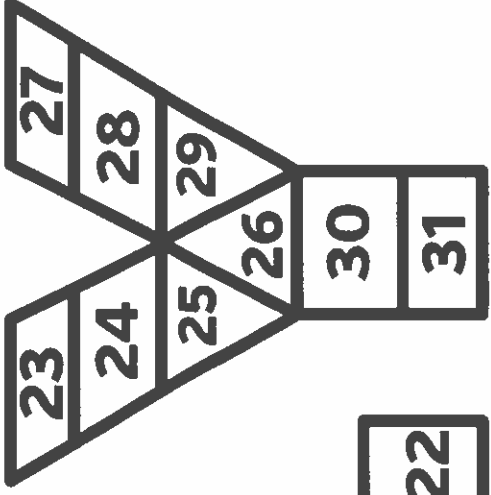
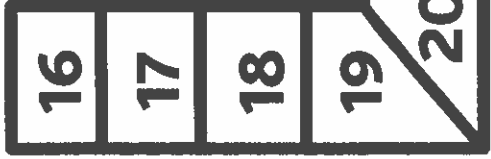
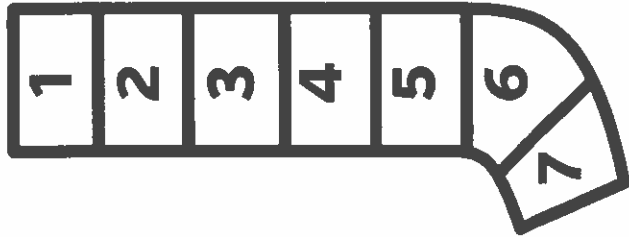


Summer STEM Activities: AUGUST

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| <p>Find 5 coupons for items you want. Calculate the savings from the coupon.</p> | <p>Create a compost pile. Chart the temperature as it decomposes. Use it as fertilizer when it no longer smells and the temperature matches the dirt's temperature.</p> | <p>Turn on the water slowly. Brush a plastic comb through your hair ten times. Slowly bring the comb close to the water. * What happens?</p> | <p>Build a tower as tall as possible using only sheets of newspaper. No tape or glue allowed!</p> | <p>Watch a TV show or documentary show about science. Science fiction doesn't count!</p> |
| <p>Look up the salary for your dream job. Ask your parents how to approximate federal and state taxes. How much money do you have per month after taxes? *</p> | <p>Imagine you are going camping or actually go camping. How will you keep your food away from hungry bears? * What can you design?</p> | <p>Design your own experiment! Come up with a hypothesis, design an experiment, and record the results. *</p> | <p>Imagine you only have one leg. Design a prosthetic leg using household items. Test it out! How do you make it comfortable? How would it attach to your body?</p> | <p>Get a bag of M&Ms. Predict the % of red, blue, green, and brown. Open and record the actual numbers. What is the probability you will get a green M&M from the bag?</p> |
| <p>You are a pirate and have to walk the plank! The plank is 5 feet long and you take 8 equal steps. How long it each step so that you don't fall off? 10 or 12 steps?</p> | <p>Pick a flower. Take it apart and sketch its different components. Describe the textures and colors. Why do you think it was made this way?</p> | <p>The tongue map theory suggests that different areas of your tongue sense different tastes. Look up this theory. Create an experiment to prove/disprove it.</p> | <p>Build a house made of playing cards. What configurations are the strongest? Why?</p> | <p>Create a piece of artwork using tessellations. (A tessellation is a pattern of polygons with no spaces in between them.)</p> |
| <p>Measure the length of your hand. Now you have your own personal ruler! Go out and measure everything.</p> | <p>Go outside and look for rocks. Can you find different types? Research rocks local to your area and see if you can find them.</p> | <p>Drought is a common problem that farmers face. Research how rain forms and think of ways that you could increase local rain. Look up "cloud seeding".</p> | <p>Select a manufactured item in your home and investigate how it works. Describe the item in writing and with a labeled diagram.</p> | <p>Which 3 jobs would you like to have when you grow up? Find someone to speak to that has one of those jobs.</p> |
| <p>Find a recipe for homemade ice cream. Make a batch. What quantities of ingredients would you need if you doubled or tripled the recipe? *</p> | <p>Spread a blanket out in the grass. Close your eyes and listen to the creatures around you. Make a list of what you've heard.</p> | <p>Build a contraption that will protect an egg from cracking when dropped from a height. Test it out! What could you change to make it better? *</p> | <p>Create a chain reaction with dominos. How long can you make it? Watch this cool video for inspiration. https://video.link/w/UUFvd</p> | <p>Create your own rainbow. What can you use to create a rainbow - a hose, spray bottle, something else? Which worked better? Why?</p> |

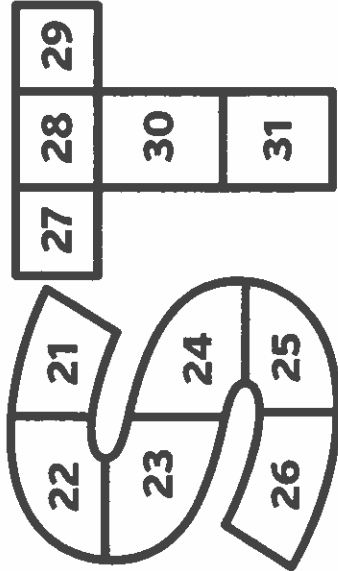
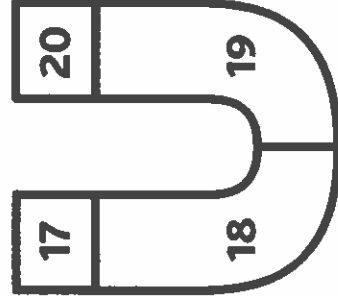
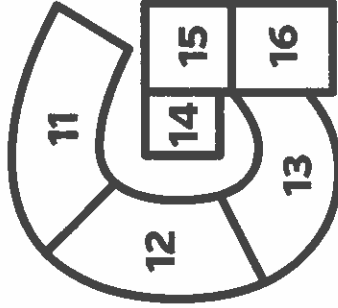
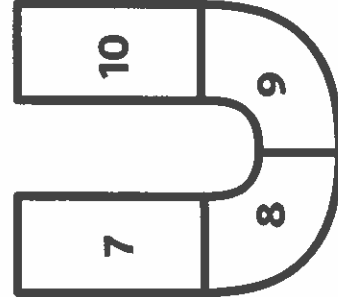
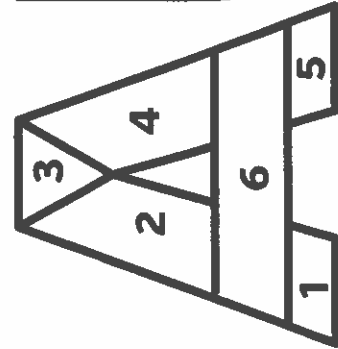
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READ 20 MINUTES EVERY DAY IN THE MONTH OF



TRACK YOUR READING WITH THIS BOOKMARK. COLOR IN EACH BLOCK AS YOU READ 20 MINUTES (OR MORE) EACH DAY OF THE MONTH.

READ 20 MINUTES EVERY DAY IN THE MONTH OF




TRACK YOUR READING WITH THIS BOOKMARK.

COLOR IN EACH BLOCK AS YOU READ 20 MINUTES
(OR MORE) EACH DAY OF THE MONTH.

Name _____

Summer WRITING CHOICE BOARD



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| <p>Writing with Details Pick a flower or find an unusual rock. Write a paragraph describing the object in great detail.</p> | <p>Mystery Story An urgent message appeared in the sky during a firework show. Write a mystery story about what happened next.</p> | <p>Persuasive Letter What is your summer bedtime? Write a letter to your parents convincing them to let you stay up later during the summer months.</p> | <p>Would You Rather Would you rather visit a theme park and ride a rollercoaster or go to a waterpark and ride a waterslide? Explain your choice.</p> |
| <p>Nonfiction Report Research to find 5 facts about your favorite ocean animal. Write a paragraph using your research and draw a picture.</p> | <p>Sensory Writing What colors, scents, and tastes remind you of summer? Write about everything that comes to mind.</p> | <p>Opinion Writing July is National Ice Cream Month. Write a paragraph describing your favorite ice cream flavor and explain why it's the best.</p> | <p>Concrete Poetry Write a concrete (shape poem) about riding in a hot air balloon. The words can fill the shape of a hot air balloon or outline it.</p> |
| <p>Restaurant Review Choose your favorite restaurant and write an honest review about your experience eating there.</p> | <p>Campfire Story Write a scary campfire story that takes place at night. Include action and suspense, vivid verbs, and onomatopoeias (sound words)!</p> | <p>Creative Writing Write a story using the following as your first sentence: <i>One day, I ate a watermelon seed and...</i></p> | <p>Journal Entry If you saw a shooting star, what would you wish for and why?</p> |
| <p>Funny Story Write a funny story about being trapped in an amusement park overnight.</p> | <p>Realistic Fiction Write a story about someone waking up on a rainy day in the summer. What does your character do to beat the rainy day blues?</p> | <p>Summer Top 10 List your top 10 favorite things to do in the summer. Write a sentence for each activity explaining why it's your favorite.</p> | <p>Free Write Write about anything that comes to mind!</p> |