



STEM Activity

Calendar

**Offline and Online
At Home Enrichment Activities**



www.vivifysystem.com

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Thank You!

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About Vivify

Vivify is a team comprised of two Aerospace Engineer friends, Natasha and Claire, who live in Texas. We met as college classmates and roommates at Texas A&M University and later left engineering careers in the Department of Defense and Air Tractor to pursue our passion for STEM education. Learn more of our story [here](#).

Our goal is to bring engineering to life—to vivify learning—for kids of all ages. Please connect with us so we can learn how to better serve your students!

- Natasha & Claire, The Vivify Team



Connect with us for free STEM resources!

Subscribe to our newsletter and receive access to a library of free STEM resources through www.vivifystem.com. Follow us on social media or listen to “The STEM Space” podcast for more resources and ideas. We also welcome you to join [“The STEM Space”](#) Facebook group to connect with other educators across the world.



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STEM ACTIVITY CALENDAR

Whether a summer break or a school closure, students should continue to stay engaged in learning. Teachers can support parents by providing academic and enrichment activities that are straightforward and accessible to students of all levels with little or no supplies needed. The following resources are intended to supplement core academic subjects with hands-on learning that is engaging and promotes critical thinking, problem solving, and creativity.

This packet includes five versions of a calendar for various grade levels: PreK, K-2, 3-5, 6-8, and 9-12. Each version has a parent letter with free online learning resources along with two versions of an activity chart. The first is all offline activities that can be completed without internet access and limited materials. The second is an online version that requires internet access. Ideally, students will complete one of each set, but disadvantaged families may have limited digital access.

We also recommend providing guidance on how to maintain a structured daily routine to keep children motivated and happy. A schedule can include: academics, physical activity, free play, arts, reading, enrichment activities, and limited screen time. Every family is unique and faces different challenges so families should create a schedule that works best for their situation.

Editable Version: The editable version of this calendar can be found here:

<https://docs.google.com/presentation/d/1Wqn201iNfrfuGGVDDzqDrrESdA1IAAQzC3-Nuei-F-Y/edit?usp=sharing>. Note that you will need to make a copy to your personal drive before editing.

Additional Resources: For more online resources, podcasts, and STEM activities, go to www.vivifystem.com/stem-resources

Overview of STEM Activity Calendar

This packet includes five versions of a calendar for various grade levels: PreK, K-2, 3-5, 6-8, and 9-12. Each includes:

- Parent letter with suggested daily enrichment activities and free online learning resources (websites, apps, and podcasts)
- Offline Activity Chart: 6 weeks of daily enrichment activities that do not require internet access. Each day has a different theme:
 - Create Monday
 - Science Tuesday (High School version is STEM)
 - Active Wednesday
 - Engineering Thursday (High School: Writing)
 - Fun Friday
- Online Activity Chart: 6 weeks of daily enrichment activities that require internet access with a laptop or a phone. Each day has a different theme:
 - Create Monday
 - Science Tuesday (High School: Career)
 - Coding Wednesday
 - Engineering Thursday (High School: Skills to Success)
 - Fun Friday (High School: College)

At-Home Education Resources

Pre-Kindergarten

Dear Families,

When children are out of school, they are missing out on important academic activities as well as losing their daily routines and social interactions. To help support both your child's academic learning and mental health, a structured daily schedule is recommended. A schedule should include: academics, physical activity, free play, arts, reading, enrichment activities, and limited screen time. The following are resources for hands-on enrichment activities to keep students excited and motivated about learning. Challenge your students to complete the daily enrichment activity checklist below. Students with limited internet access can substitute the online activities with art, free play, reading, or a physical activity.

Daily Enrichment Activities

- Physical Activity (walk, ride a bike, play a sport, etc.)
- Read for 30 minutes
- Offline Enrichment Activity: See Activity Chart
- Online Enrichment Activity: See Activity Chart (Requires internet access)

Free Online Learning Resources

Websites

- [PBSkids.org](https://pbskids.org)
- [Breakoutedu.com](https://breakoutedu.com)
- [Spaceplace.NASA.gov](https://spaceplace.nasa.gov)
- [Funology.com](https://funology.com)
- [Scholastic.com/magicschoolbus](https://scholastic.com/magicschoolbus)
- [Storytimefromspace.com](https://storytimefromspace.com)
- [Kids.nationalgeographic.com](https://kids.nationalgeographic.com)
- [Vivifystem.com](https://vivifystem.com)
- [Education.com](https://education.com)
- [Bedtimemath.org](https://bedtimemath.org)
- [Experiments.withgoogle.com](https://experiments.withgoogle.com)
- [NASA.gov/kidsclub](https://nasa.gov/kidsclub)
- [QuickDraw.withgoogle.com](https://quickdraw.withgoogle.com)

Apps

- Dino Teach Math Preschool
- LEGO Juniors, Tower, DUPLO Train
- Endless Numbers
- Think & Learn Code-a-pillar
- Toontastic 3D
- ABC Kids - Tracing & Phonics App
- Wonderscope
- iNaturalist
- SkyView
- Drawing For Kids
- Fish School
- The Cat in the Hat Builds That
- Hoopa City
- Monkey Math
- Khan Kids

Podcasts


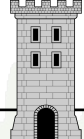

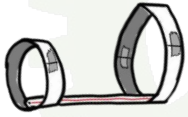
- Bedtime History
- Story Time
- Fun Kids Science Weekly
- Stories Podcast
- But Why
- Ear Snacks
- Story Pirates



Enrichment Activity Chart: *Offline Learning*

Pre-Kindergarten








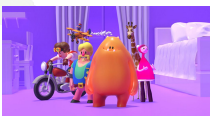











Create Monday	Science Tuesday	Active Wednesday	Engineering Thursday	Fun Friday
<p>Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you like.</p>	<p>Scientists want to understand the world around us. Ask 5 WHY or WHAT questions to learn more about something in nature.</p>	<p>Create an obstacle course. Calculate your time to complete the course. Can you do it faster the second time? Get a family member to try!</p>	<p>Engineers solve problems to improve our lives. Build a bridge with blocks to help your toys cross a small river.</p>	<p>Draw your dream bedroom. What special things would be in it?</p> 
<p>Create a song on the importance of hand washing and how to do it properly.</p> 	<p>Which is the best invisible ink? Draw 3 circles using milk, lemon juice, and vinegar. Allow to dry. Heat up the paper with a blow dryer to see circles appear.</p>	<p>Play some basketball (or trash can ball)! Count how many baskets you make.</p> 	<p>Design and build a table using only newspaper or paper and tape. How much weight can it hold? How can you make it stronger?</p>	<p>With someone's help, make paper airplanes and have a distance contest.</p> 
<p>With the help of an adult, cook lunch or dinner. Help measure ingredients.</p> 	<p>Safely drop two small items at the same time. Which one hits the ground first? Discuss why.</p>	<p>Go for a walk and play "I Spy" using colors or letters. Example: I spy something that starts with "t" for tree.</p>	<p>Use blocks or other items to make a tower as tall as you! How high can you go?</p> 	<p>Use a small bag of candies like M&Ms. Count how many of each color there are in the bag. Which color has the most?</p> 
<p>Make a greeting card using 3D pop up art.</p> 	<p>List 5 non-reusable items in your house. How can you make at least one of them reusable?</p>	<p>Go outside and draw 5 different insects or animals.</p> 	<p>Build a house for a toy figurine. Can you make different rooms? How big does the door need to be?</p>	<p>Draw a picture about your dream vacation.</p> 
<p>Create a hoop glider using a straw and paper strips. How far can you make it go?</p> 	<p>Turn on the water slowly. Brush a plastic comb through your hair 10x. Slowly bring the comb close to the water. What is happening?</p>	<p>Pretend you are a frog. Make paper lily pads to hop everywhere you need to go.</p> 	<p>Create a boat out of foil that floats in the bathtub. Can it hold a toy without sinking? How many toys or Legos can it hold?</p> 	<p>Create a cup and string phone by poking the ends of a long string through the bottoms of two cups. Talk to a family member through your phone.</p>
<p>Create a senses scavenger hunt! Find one thing that smells good, sounds good, feels good, tastes good, and looks good to you.</p>	<p>Sprinkle pepper into a dish of water. Dip one finger into dish soap then touch the surface of the water. What happens?</p>	<p>Create your own dance. Teach to a family member.</p> 	<p>Turn your favorite toy into a superhero. Create a cape and then make a supercar or plane for your superhero.</p>	<p>Play "Magic Rock" with a partner. Curl up like a rock, then the other person tells you to turn into an animal like a lion. Saying "magic rock" turns you back into a rock.</p>



Enrichment Activity Chart: *Online Learning*

Pre-Kindergarten



Create Monday	Science Tuesday	Numbers Wednesday	Engineering Thursday	Fun Friday
<p>Create beats using sounds from the everyday world. experiments.withgoogle.com/drum-machine</p>	<p>Listen to a podcast from But Why.</p> 	<p>Play a number game at Education.com/games/preschool</p>	<p>Build apartments for LEGOs with the <i>LEGO Tower</i> app.</p> 	<p>Time to explore the night sky! Download the <i>SkyView</i> app. Can you find a planet or constellations?</p> 
<p>Bring a drawing to life with the <i>DRAWING FOR KIDS Games! Apps 2</i> app</p> 	<p>Build a window greenhouse and watch your plants grow. Learn more here: bit.ly/vivifylifescience</p> 	<p>Count the fish using the <i>Fish School</i> App, then make your toys into the numbers.</p> 	<p>Use the build activity spinner for an engineering challenge: pbskids.org/designsquad/build/spinner/</p>	<p>Download the <i>Wonderscope</i> app and read a story as it comes to life.</p> 
<p>Create letters using the <i>ABC Kids - Tracing & Phonics</i> App.</p> 	<p>Listen to a podcast from Fun Kids Science Weekly.</p>	<p>Play a game on the <i>Monkey Math: games & practice</i> app.</p>	<p>Explore the NASA website: nasa.gov/kidsclub/. Find out about the Mission to the Moon.</p>	<p>Listen to a storybook read by an astronaut: storytimefromspace.com/</p>
<p>Build and drive a vehicle in the <i>Lego Juniors</i> app.</p> 	<p>Create a bee hotel. Learn more here: bit.ly/vivifylifescience</p> 	<p>Play a game on the <i>Dino Teach Math PreSchool Kids</i> app.</p>	<p>Use the <i>Hoopa City</i> app to design a city!</p> 	<p>Listen to a story from the <i>Story Pirates</i>. storypirates.com/podcast</p>
<p>Create your own animated cartoon by downloading the <i>Toontastic</i> App</p> 	<p>Play a science game from breakoutedu.com/funathome</p>	<p>Play a game on the <i>Think & Learn Code-a-pillar</i> app.</p> 	<p>Build and test an invention with <i>The Cat in the Hat Builds That</i> app.</p> 	<p>Can the computer guess your drawing? quickdraw.withgoogle.com/</p>
<p>Create your own train with the <i>LEGO® DUPLO® Train</i> App.</p> 	<p>Use the <i>iNaturalist</i> app to learn about a new plant or creature.</p> 	<p>Complete a math activity at bedtimemath.org/fun-math-capybara/</p>	<p>Can you cook using the heat of the sun? Learn how to build a solar oven: bit.ly/vivifysolaroven</p> 	<p>Search “virtual museum tours” to explore famous exhibits from around the world.</p> 

At-Home Education Resources

Lower Elementary (K - 2)

Dear Families,

When children are out of school, they are missing out on important academic activities as well as losing their daily routines and social interactions. To help support both your child's academic learning and mental health, a structured daily schedule is recommended. A schedule should include: academics, physical activity, free play, arts, reading, enrichment activities, and limited screen time. The following are resources for hands-on enrichment activities to keep students excited and motivated about learning. Challenge your students to complete the daily enrichment activity checklist below. Students with limited internet access can substitute the online activities with art, free play, reading, or a physical activity.

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- Physical Activity (Walk, ride a bike, play a sport)
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- Online Enrichment Activity: See Activity Chart (Requires internet access)

Free Online Learning Resources

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- [PBSkids.org](https://pbskids.org)
- [Breakoutedu.com](https://breakoutedu.com)
- [Sciencejournalforkids.org](https://sciencejournalforkids.org)
- [Smoremagazine.com](https://smoremagazine.com)
- [Spaceplace.NASA.gov](https://spaceplace.nasa.gov),
[NASA.gov/kidsclub](https://nasa.gov/kidsclub)
- [Funology.com](https://funology.com)
- [Scholastic.com/magicschoolbus](https://scholastic.com/magicschoolbus)
- [Kids.nationalgeographic.com](https://kids.nationalgeographic.com)
- [Vivifsystem.com](https://vivifsystem.com)
- [Experiments.withgoogle.com](https://experiments.withgoogle.com)
- [Scratch.mit.edu](https://scratch.mit.edu)
- [Blockly.games](https://blockly.games)
- [EGFI-k12.org](https://egfi-k12.org)
- [Funbrain.com](https://funbrain.com)
- [QuickDraw.withgoogle.com](https://quickdraw.withgoogle.com)

Apps

- LEGO Juniors
- LEGO Life
- Weird But True
- Robot Factor
- Mathtopia
- Wonderscope
- Flight Pilot Simulator 3D
- Drawing for Kids
- Stop Motion Animation Studio
- Toontastic 3D
- Cargo-Bot
- iNaturalist
- Tami's Tower
- SkyView
- Khan Academy Kids
- Tynker Junior

Podcasts









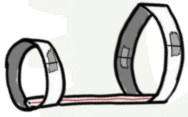

- Bedtime History
- Story Pirates
- Fun Kids Science Weekly
- Stories Podcast
- But Why
- KiDNuZ
- What If World
- Wow in the World
- BrainsOn
- Tumble



Enrichment Activity Chart: *Offline Learning*

Lower Elementary (K-2)



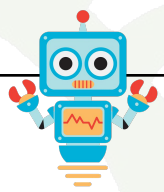




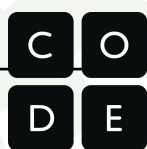












Create Monday	Science Tuesday	Active Wednesday	Engineering Thursday	Fun Friday
<p>Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you are passionate about.</p>	<p>Scientists want to understand the world around us. Write 5 WHY or WHAT questions to learn more about something in nature.</p>	<p>Create an obstacle course. Calculate your time to complete the course. Can you do it faster the second time? Get a family member to try!</p>	<p>Engineers solve problems to improve our lives. Brainstorm an invention that can improve your life. Draw how it will work.</p>	<p>Draw your ideal future city. What areas will keep citizens healthy and happy? What laws will you have?</p> 
<p>Create a skit or poster on the importance of hand washing and how to do it properly.</p> 	<p>Which is the best invisible ink? Write 3 messages using milk, lemon juice, and vinegar. Allow to dry. Heat up the paper with a blow dryer to see message appear.</p>	<p>Play some basketball (or trash can ball)! Measure how many baskets you make out of 10. Do it again. How many more/less did you get than the first trial?</p>	<p>Design and build a table using only newspaper or paper and tape. How much weight can it hold? How can you make it stronger?</p>	<p>Host a paper airplane contest.</p> 
<p>With the help of an adult, cook lunch or dinner. Measure out the ingredients. How would you double or halve the recipe?</p>	<p>Place a small ball on top of a large ball and drop them together. Watch how energy is transferred!</p>	<p>Find a quiet place in nature. Bring a journal and record everything you see.</p> 	<p>Design and build a catapult with household item to knock over a tower of cups. Calculate percentage accuracy.</p>	<p>Use a small bag of candies like M&Ms, make a bar graph showing how many of each color are in the bag.</p> 
<p>Make a greeting card using 3D pop up art.</p> 	<p>List 5 non-reusable items in your house. How can you make at least one of them reusable?</p>	<p>Go outside and record as many different insects and mammals as possible.</p> 	<p>Design and build a roller coaster from paper, paper plates, and tape. How long can you keep a ping pong ball moving?</p>	<p>Draw or write a story about your ideal vacation.</p> 
<p>Create a hoop glider using a straw and paper strips. How far can you make it go?</p> 	<p>Turn on the water slowly. Brush a plastic comb through your hair 10x. Slowly bring the comb close to the water. What is happening?</p>	<p>Measure your heart beat for 10 seconds. Run around and then measure again. How many beats more did you count in 10 seconds?</p>	<p>Create a zip line for a small action figure to travel down from at least your shoulder height. Count how many seconds it takes. Make it move faster or slower.</p>	<p>Survey your family for these genetic traits: dimples, attached earlobes, ability to roll tongue, and right thumb goes on top when clapping hands.</p>
<p>Peter Piper picked a peck of pickled peppers. Write your own tongue twister.</p>	<p>The tongue map theory states that different areas of your tongue sense different tastes. Look-up this theory. Create an experiment to prove or disprove it.</p>	<p>Create your own dance workout routine. Teach to a family member.</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>With a family member, discuss a significant historical event that happened to them. How did this event impact their life? What did they learn?</p>



Enrichment Activity Chart: *Online Learning*

Lower Elementary (K-2)



Create Monday	Science Tuesday	Coding Wednesday	Engineering Thursday	Fun Friday
<p>Create beats using sounds from the everyday world. experiments.withgoogle.com/drum-machine</p>	<p>Check out the latest issue of Smore Magazine: smoremagazine.com</p>	<p>Play a coding game at hourofcode.com/us/learn</p> 	<p>Explore engineering careers at EGFI-k12.org</p> 	<p>Time to explore the night sky! Download the <i>SkyView</i> app. Can you find a planet or constellations?</p> 
<p>Bring a drawing to life with the <i>DRAWING FOR KIDS Games! Apps 2</i> app</p> 	<p>Build a window greenhouse and watch your plants grow. Learn more here: bit.ly/vivifylifescience</p> 	<p>Download the <i>Cargo-Bot</i> app and program your Bot.</p>	<p>Use the build activity spinner for an engineering challenge: pbskids.org/designsquad/build/spinner/</p>	<p>Listen to a story from the Story Pirates. www.storypirates.com/podcast</p>
<p>Conduct an orchestra from your computer. semiconductor.withgoogle.com/</p>	<p>Read a science article at sciencejournalforkids.org/</p>	<p>Play a coding game on the <i>Scratch Jr</i> app.</p> 	<p>Explore the NASA website: nasa.gov/kidsclub/. Find out about the Mission to the Moon.</p>	<p>Try out the <i>Flight Pilot Simulator 3D</i> app and conquer the skies.</p> 
<p>Create a movie using a <i>Stop Motion Animation studio</i> app.</p> 	<p>Conduct and record an experiment using SciJournal: sciencejournal.withgoogle.com/experiments/</p>	<p>Play a coding game at studio.code.org</p>	<p>Create a design in <i>LEGO Life</i> app.</p> 	<p>Choose 1 book to read. funbrain.com/books</p> 
<p>Create your own animated cartoon by downloading the <i>Toontastic</i> App.</p> 	<p>Play a science game from breakoutedu.com/funathome</p> 	<p>Play a coding game at blockly.games</p> 	<p>Build and test a tower with the <i>Tami's Tower</i> app.</p> 	<p>Can the computer guess your drawing? quickdraw.withgoogle.com/</p>
<p>Create your own ant farm! Find a diagram at m.wikihow.com/Build-an-Ant-Farm. What do you observe?</p> 	<p>Use the <i>iNaturalist</i> app to learn about a new plant or creature and share it with the scientific community.</p> 	<p>Check out the projects at scratch.mit.edu then create your own game!</p>	<p>Can you cook using the heat of the sun? Learn how to build a solar oven: bit.ly/vivifysolaroven</p> 	<p>Search "virtual museum tours" to explore famous exhibits from around the world.</p> 

At-Home Education Resources

Upper Elementary (3 - 5)

Dear Families,

When children are out of school, they are missing out on important academic activities as well as losing their daily routines and social interactions. To help support both your child's academic learning and mental health, a structured daily schedule is recommended. A schedule should include: academics, physical activity, free play, arts, reading, enrichment activities, and limited screen time. The following are resources for hands-on enrichment activities to keep students excited and motivated about learning. Challenge your students to complete the daily enrichment activity checklist below. Students with limited internet access can substitute the online activities with art, free play, reading, or a physical activity.

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- Read for 30 minutes
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- Online Enrichment Activity: See Activity Chart (Requires internet access)

Free Online Learning Resources

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- [PBSkids.org](https://pbskids.org)
- [Breakoutedu.com](https://breakoutedu.com)
- [Smoremagazine.com](https://smoremagazine.com)
- [Sciencejournalforkids.org](https://sciencejournalforkids.org)
- [Tinkercad.com](https://tinkercad.com)
- [Funology.com](https://funology.com)
- [Kids.nationalgeographic.com](https://kids.nationalgeographic.com)
- [Vivifsystem.com](https://vivifsystem.com)
- [Experiments.withgoogle.com](https://experiments.withgoogle.com)
- [Scratch.mit.edu](https://scratch.mit.edu)
- [EGFI-k12.org](https://egfi-k12.org)
- [NASA.gov/kidsclub](https://nasa.gov/kidsclub)

Apps

- Hopscotch Programming
- JigSpace
- Stop Motion Animation Studio
- SkyView
- Cargo-Bot
- Tynker Junior
- iNaturalist
- Flight Pilot Simulator 3D
- Bridge Constructor FREE

Podcasts




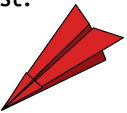

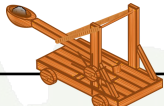





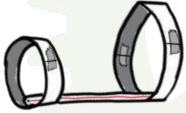

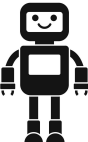

- Fun Kids Science Weekly
- Stories Podcast
- But Why
- KiDNuZ
- What If World
- Wow in the World
- BrainsOn
- Tumble



Enrichment Activity Chart: *Offline Learning*

Upper Elementary (3-5)



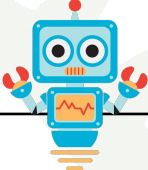


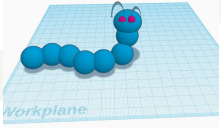













Create Monday	Science Tuesday	Active Wednesday	Engineering Thursday	Fun Friday
<p>Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you are passionate about.</p>	<p>Scientists want to understand the world around us. Write 5 WHY or WHAT questions to learn more about something in nature.</p>	<p>Create an obstacle course. Get a family member to try! What is the shortest amount of time it takes to get through the course?</p>	<p>Engineers solve problems to improve our lives. Brainstorm an invention that can improve your life. Draw how it will work.</p>	<p>Make leaf art! Place a leaf under a sheet of paper and rub a crayon over the leaf to reveal its print.</p> 
<p>Create a skit or poster on the importance of hand washing and how to do it properly.</p> 	<p>Which is the best invisible ink? Write 3 messages using milk, lemon juice, and vinegar. Allow to dry. Heat up the paper with a blow dryer to see message appear.</p>	<p>Play some basketball (or trash can ball)! Measure how many baskets you make out of 10.</p> 	<p>Design and build a table using only newspaper or paper and tape. How much weight can it hold? How can you make it stronger?</p>	<p>Host a paper airplane contest.</p> 
<p>With the help of an adult, cook lunch or dinner. Measure out the ingredients. How would you double or halve the recipe?</p>	<p>Place a small ball on top of a large ball and drop them together. Watch how energy is transferred!</p>	<p>Find a quiet place in nature. Bring a journal and record everything you see.</p> 	<p>Design and build a catapult with household item to knock over a tower of cups.</p> 	<p>Use a small bag of candies like M&Ms, find the ratio of each color to the total candies in the bag.</p> 
<p>Make a greeting card using 3D pop up art.</p> 	<p>Find a leaf on a plant, wrap it in a plastic bag and secure it with a rubber band. After a few hours water will appear! This is the plants version of sweating.</p>	<p>Go outside and record as many different insects and mammals as possible.</p> 	<p>Design and build a roller coaster from paper, paper plates, and tape. How long can you keep a ping pong ball moving?</p> 	<p>Draw or write a story about your ideal vacation.</p> 
<p>Create a hoop glider using a straw and paper. How far can you make it go?</p> 	<p>Take a pencil and scribble in a square to create a graphite "ink pad". Press your finger in the graphite and then on a sheet of paper to look at your fingerprint!</p>	<p>Measure your heart beat for 10 seconds. Do jumping jacks and then measure again. What is the difference?</p>	<p>Create a zip line for a small action figure to travel down from at least your shoulder height.</p> 	<p>Survey your family for these genetic traits: dimples, attached earlobes, ability to roll tongue, and right thumb goes on top when clapping hands.</p>
<p>Draw a robot invention. What would it do?</p> 	<p>Go outside and write down your weather observations. What do the clouds look like? Can you tell what direction they are moving?</p>	<p>Create your own dance workout routine. Teach to a family member.</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>With a family member, discuss a significant historical event that happened to them. How did this event impact their life? What did they learn?</p>



Enrichment Activity Chart: *Online Learning*

Upper Elementary (3-5)



Create Monday	Science Tuesday	Coding Wednesday	Engineering Thursday	Fun Friday
<p>Create beats using sounds from the everyday world. experiments.withgoogle.com/drum-machine</p>	<p>Read the latest issue of Smore Magazine: smoremagazine.com</p>	<p>Play a coding game at hourofcode.com/us/learn</p> 	<p>Explore engineering careers at EGFI-k12.org</p> 	<p>Time to explore the night sky! Download the SkyView app. Can you find a planet or constellations?</p> 
<p>Create your own 3D design on www.tinkercad.com</p> 	<p>Build a window greenhouse and watch your plants grow. Learn more here: bit.ly/vivifylifescience</p> 	<p>Download the Cargo-Bot app and program your Bot.</p>	<p>Use the build activity spinner for an engineering challenge: pbskids.org/designsquad/build/spinner/</p>	<p>Try out the Flight Pilot Simulator 3D app and conquer the skies.</p> 
<p>Conduct an orchestra from your computer. semiconductor.withgoogle.com</p>	<p>Listen to this science show about space bit.ly/supernova8</p>	<p>Play a game at hourofcode.com/us/learn</p>	<p>Explore the NASA website: nasa.gov/kidsclub/. Find out about the Mission to the Moon.</p>	<p>Choose 1 book to read. funbrain.com/books</p> 
<p>Create a movie using Stop Motion Animation studio app.</p> 	<p>Download the JigSpace app to learn about the solar system.</p> 	<p>Play a coding game at studio.code.org</p> 	<p>Build and test bridges with the Bridge Constructor FREE app</p> 	<p>Create a song! creatability.withgoogle.com/keyboard/</p>
<p>Read this story and then draw your own robot creation. bit.ly/robotstory7</p>	<p>Play a science game from breakoutedu.com/funathome</p> 	<p>Build a game on the Tynker Junior app.</p>	<p>Download the JigSpace app to learn how a quadcopter (drone) works!</p> 	<p>Can the computer guess your drawing? quickdraw.withgoogle.com</p> 
<p>Watch the video "Inventions from Nature" and create a poster to advertise your own animal inspired invention. bit.ly/animalinvention</p>	<p>Use the iNaturalist app to learn about a new plant or creature and share it with the scientific community.</p> 	<p>Check out the projects at scratch.mit.edu then create your own game!</p>	<p>Can you cook using the heat of the sun? Learn how to build a solar oven: bit.ly/vivifysolaroven</p> 	<p>Search "virtual museum tours" to explore famous exhibits from around the world.</p> 

At-Home Education Resources

Middle School

Dear Families,

When children are out of school, they are missing out on important academic activities as well as losing their daily routines and social interactions. To help support both your child's academic learning and mental health, a structured daily schedule is recommended. A schedule should include: academics, physical activity, free play, arts, reading, enrichment activities, and limited screen time. The following are resources for hands-on enrichment activities to keep students excited and motivated about learning. Challenge your students to complete the daily enrichment activity checklist below. Students with limited internet access can substitute the online activities with art, free play, reading, or a physical activity.

Daily Enrichment Activities

- Physical Activity (walk, ride a bike, play a sport, etc.)
- Read for 30 minutes
- Offline Enrichment Activity: See Activity Chart
- Online Enrichment Activity: See Activity Chart (Requires internet access)

Free Online Learning Resources

Websites

- [Code.org](https://code.org), [Hourofcode.com](https://hourofcode.com)
- [PBSlearningmedia.org](https://pbslearningmedia.org), [PBSkids.com/designsquad](https://pbskids.com/designsquad)
- [TryEngineering.org](https://tryengineering.org)
- [Breakoutedu.com](https://breakoutedu.com)
- [EGFI-k12.org](https://egfi-k12.org)
- [Sciencejournalforkids.org](https://sciencejournalforkids.org)
- [Smoremagazine.com](https://smoremagazine.com)
- [Projects.raspberrypi.org](https://projects.raspberrypi.org)
- [Tinkercad.com](https://tinkercad.com)
- [Sciencejournal.withgoogle.com](https://sciencejournal.withgoogle.com)
- [Vivifsystem.com](https://vivifsystem.com)
- [Experiments.withgoogle.com](https://experiments.withgoogle.com)
- [Scratch.mit.edu](https://scratch.mit.edu)
- [CodeCombat.com](https://codecombat.com)
- [Thrively.com](https://thrively.com)

Apps

- Cargo-Bot
- Star Chart, Sky View
- Brain It On!
- iNaturalist
- Flight Pilot Simulator 3D
- Human Body Lite by TinyBop
- Truss Me!
- Stop Motion Animation Studio

Podcasts








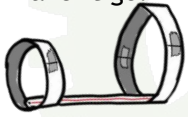



- Tumble Science
- The Show About Science
- Science Friday
- How it Works
- This American Life
- KiDNuZ
- Book Club for Kids
- Wow in the World
- Brains On
- Tumble



Enrichment Activity Chart: *Offline Learning*

Middle School






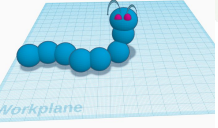


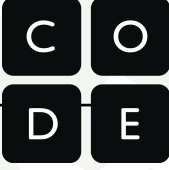



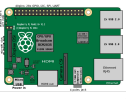






Create Monday	Science Tuesday	Active Wednesday	Engineering Thursday	Fun Friday
<p>Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you are passionate about.</p>	<p>Scientists want to understand the world around us. Write 5 WHY or WHAT questions to learn more about something in nature.</p>	<p>Create an obstacle course. Calculate your average time to complete the course over a series of 5 attempts. Get a family member to try!</p>	<p>Engineers solve problems to improve our lives. Brainstorm an invention that can improve your life. Draw how it will work.</p>	<p>Draw your ideal future city. What areas will keep citizens healthy and happy? What laws will you have?</p> 
<p>Create a skit or poster on the importance of hand washing and how to do it properly.</p> 	<p>Which is the best invisible ink? Write 3 messages using milk, lemon juice, and vinegar. Allow to dry. Heat up the paper with a blow dryer to see message appear.</p>	<p>Play some basketball (or trash can ball)! Measure how many baskets you make out of 10. Calculate your percentage accuracy.</p>	<p>Design and build a table using only newspaper or paper and tape. How much weight can it hold? How can you make it stronger?</p>	<p>Host a paper airplane contest.</p> 
<p>With the help of an adult, cook lunch or dinner. Measure out the ingredients. How would you double or halve the recipe?</p>	<p>Place a small ball on top of a large ball and drop them together. Watch how energy is transferred!</p>	<p>Players must keep two balloons up in the air with just one hand and the other hand is kept behind their backs. The last player with two balloons still going wins.</p>	<p>Design and build a catapult with household item to knock over a tower of cups. Calculate percentage accuracy.</p>	<p>Use a small bag of candies like M&Ms, find the ratio of each color to the total candies in the bag.</p> 
<p>Make a greeting card using 3D pop up art.</p> 	<p>List 5 non-reusable items in your house. How can you make at least one of them reusable?</p>	<p>Go outside and record as many 10 different insects and mammals.</p> 	<p>Design and build a roller coaster from paper, paper plates, and tape. How long can you keep a ping pong ball moving?</p>	<p>Draw or write a story about your ideal vacation.</p> 
<p>Create a hoop glider using a straw and paper. How far can you make it go?</p> 	<p>Find a quiet place in nature. Bring a journal and record everything you see.</p> 	<p>Measure your heart beat for 10 seconds. Convert to beats per minute. Run around and then measure again. What is the percentage increase?</p>	<p>Create a zip line for a small action figure to travel down from at least your shoulder height. Calculate the speed (distance divided by time) of the zip line.</p>	<p>Survey your family for these genetic traits: dimples, attached earlobes, ability to roll tongue, and right thumb goes on top when clapping hands.</p>
<p>Peter Piper picked a peck of pickled peppers. Write 2 of your own tongue twisters.</p>	<p>The tongue map theory states that different areas of your tongue sense different tastes. Look-up this theory. Create an experiment to prove or disprove it.</p>	<p>Create your own dance workout routine. Teach to a family member.</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>Design a device to keep a water balloon or egg from breaking when thrown against a wall or dropped from a second story.</p> 



Enrichment Activity Chart: *Online Learning*

Middle School



Create Monday	Science Tuesday	Coding Wednesday	Engineering Thursday	Fun Friday
<p>Create beats using sounds from the everyday world. experiments.withgoogle.com/drum-machine</p>	<p>Read the latest issue of Smore Magazine: smoremagazine.com</p>	<p>Play a coding game at hourofcode.com/us/learn</p> 	<p>Explore engineering careers at EGFI-k12.org</p> 	<p>Time to explore the night sky! Download SkyView. Can you find a planet or constellations?</p> 
<p>Create your own 3D design on www.tinkercad.com</p> 	<p>Build a window greenhouse and watch your plants grow. Learn more here: bit.ly/vivifylifescience</p> 	<p>Download the Cargo-Bot app and program your Bot.</p>	<p>Use the build activity spinner for an engineering challenge: pbskids.org/designsquad/build/spinner/</p> 	<p>Try out the Flight Pilot Simulator 3D app and conquer the skies.</p>
<p>Conduct an orchestra from your computer. semiconductor.withgoogle.com/</p>	<p>Read a science article at https://sciencejournalforkids.org/</p>	<p>Play a coding game at studio.code.org</p> 	<p>Take a virtual field trip of Johnson Space Center in Houston: boeingfutureu.com/virtual-field-trip</p>	<p>Discover your strengths by taking this quiz: thrively.com/registration</p> 
<p>Create a movie using Stop Motion Animation studio app.</p> 	<p>Conduct and record an experiment using SciJournal: sciencejournal.withgoogle.com/experiments/</p>	<p>Check out the projects at scratch.mit.edu then create your own game!</p>	<p>Watch these Rube Goldberg examples: bit.ly/rubegoldexample Create your own!</p>	<p>Build a new eco-friendly city wallaceandgromit.com/games/sustainable-shaun</p> 
<p>Create digital art, a website, or a game: projects.raspberrypi.org</p> 	<p>Play a science game from breakoutedu.com/funathome</p> 	<p>Build a game on the Tynker app.</p> 	<p>Watch: bit.ly/NASAartemis Explore NASA's Mission to the Moon: nasa.gov/joinartemis/activities-videos.html</p>	<p>Can the computer guess your drawing? quickdraw.withgoogle.com/</p>
<p>Create your own ant farm! Find a diagram at m.wikihow.com/Build-an-Ant-Farm. What do you observe?</p> 	<p>Use the iNaturalist app to learn about a new plant or creature and share it with the scientific community.</p> 	<p>Create a free account on Code Combat and play the game: www.codecombat.com</p>	<p>Can you cook using the heat of the sun? Learn how to build a solar oven: bit.ly/vivifysolaroven</p> 	<p>Search "virtual museum tours" to explore famous exhibits from around the world.</p> 

At-Home Education Resources

High School

Dear Families,

When children are out of school, they are missing out on important academic activities as well as losing their daily routines and social interactions. To help support both your child's academic learning and mental health, a structured daily schedule is recommended. A schedule should include: academics, physical activity, free play, arts, reading, enrichment activities, and limited screen time. The following are resources for hands-on enrichment activities to keep students excited and motivated about learning. Challenge your students to complete the daily enrichment activity checklist below. Students with limited internet access can substitute the online activities with art, free play, reading, or a physical activity.

Daily Enrichment Activities

- Physical Activity (walk, ride a bike, play a sport, etc.)
- Read for 1 hour
- Offline Enrichment Activity: See Activity Chart
- Online Enrichment Activity: See Activity Chart (Requires internet access)

Free Online Learning Resources

Websites

- [Code.org](https://code.org), [CodeAcademy.com](https://codecademy.com)
- [TryEngineering.org](https://tryengineering.org)
- [DiscoverE.org](https://discovere.org)
- [BigFuture.CollegeBoard.org](https://bigfuture.collegeboard.org)
- [Onetonline.org](https://onetonline.org)
- [Breakoutedu.com](https://breakoutedu.com)
- [Makezine.com](https://makezine.com)
- [Sciencejournalforkids.org](https://sciencejournalforkids.org)
- [Projects.raspberrypi.org](https://projects.raspberrypi.org)
- [Tinkercad.com](https://tinkercad.com)
- [S2sacademy.org](https://s2sacademy.org)
- [Sciencejournal.withgoogle.com](https://sciencejournal.withgoogle.com)
- [KhanAcademy.com](https://khanacademy.com)
- [Msichicago.org/play/goreact](https://msichicago.org/play/goreact)
- [Experiments.withgoogle.com](https://experiments.withgoogle.com)
- [Vivifsystem.com](https://vivifsystem.com)

Apps

- NASA
- Star Chart, Sky View
- Khan Academy
- Anatomy 4D
- Flight Pilot Simulator 3D
- Truss Me!
- K12 Periodic Table of the Elements
- Google Science Journal
- StopMotion

Podcasts







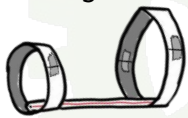


- Tumble Science
- The Show About Science
- Science Friday
- How it Works
- This American Life
- Wow in the World
- Stuff You Should Know

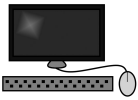


Enrichment Activity Chart: *Offline Learning*

High School






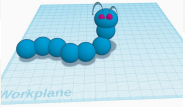





Create Monday	STEM Tuesday	Active Wednesday	Writing Thursday	Fun Friday
<p>Create your personal mission patch! In a large circle, draw (or use clippings) to represent things you are passionate about.</p>	<p>Scientists want to understand the world around us. Write 5 WHY or WHAT questions to learn more about something in nature. Go find the answers.</p>	<p>Create an obstacle course. Calculate your average time to complete the course over a series of 5 attempts. Get a family member to try!</p>	<p>What is something you are passionate about? Write a short story or poem about it.</p>	<p>Draw your ideal future city. What areas will keep citizens healthy and happy? What laws will you have?</p> 
<p>Create a skit or poster on the importance of hand washing and how to do it properly.</p> 	<p>Engineers solve problems to improve our lives. What is a problem in your local community? Brainstorm ideas and draw a design to solve it.</p>	<p>Play some basketball (or trash can ball)! Measure how many baskets you make out of 10. Calculate your percentage accuracy. Make it a competition.</p>	<p>What do you plan to do after high school? Why do you want to take this path? Bonus: find someone who is in this path and ask them for advice.</p>	<p>Host a paper airplane contest.</p> 
<p>Create a vision board of your goals for the future by using pictures from magazines or drawing your own!</p>	<p>Design and build a roller coaster from paper, paper plates, and tape. How long can you keep a ping pong ball moving? How does this involve potential and kinetic energy?</p>	<p>Players race to pick up as many Skittles (or other small candy) as they can using only a straw and placing in a bowl.</p> 	<p>With a family member, discuss a significant historical event that happened to them. How did this event impact their life? What did they learn? Write a summary of the interview.</p>	<p>Sit in a chair. Lean your head back and place a cookie in the center of your forehead. Move the cookie to your mouth using only your facial muscles and gravity. Make it a competition!</p>
<p>Make a greeting card using 3D pop up art.</p> 	<p>Design a device to keep a water balloon or egg from breaking when thrown against a wall or dropped from a second story.</p>	<p>Players must keep two balloons up in the air with just one hand and the other hand is kept behind their backs. The last player with two balloons still going wins.</p>	<p>Make a list of 20 things that make you happy. Write a short story including as many things as you can.</p> 	<p>A Rube Goldberg is a contraption that is over-engineered to perform a simple task in a complicated fashion, generally including a chain reaction. Make one!</p>
<p>Create a hoop glider using a straw and paper. How far can you make it go?</p> 	<p>Find a quiet place in nature. Bring a journal and record everything you see.</p> 	<p>Measure your heart beat for 10 seconds. Convert to beats per minute. Run around and then measure again. What is the percentage increase?</p>	<p>Write 5 qualities that make a good leader. Who do you know that has these qualities? How can you work on these qualities?</p>	<p>Make a starting and finishing line about 15 feet apart. Each player puts their feather on the starting line and blows on it in a race to the finish line.</p>
<p>Peter Piper picked a peck of pickled peppers. Write 3 of your own tongue twisters.</p>	<p>The tongue map theory states that different areas of your tongue sense different tastes. Look-up this theory. Create an experiment to prove or disprove it.</p>	<p>Create your own dance workout routine. Teach to a family member.</p> 	<p>What if Julius Caesar had a social media profile? Describe what it would be like, and share a few of his most recent posts. (You can choose any historical figure.)</p>	<p>Design and build a catapult with household items to knock over a tower of cups. Calculate percentage accuracy and maximum distance.</p>



Enrichment Activity Chart: *Online Learning*

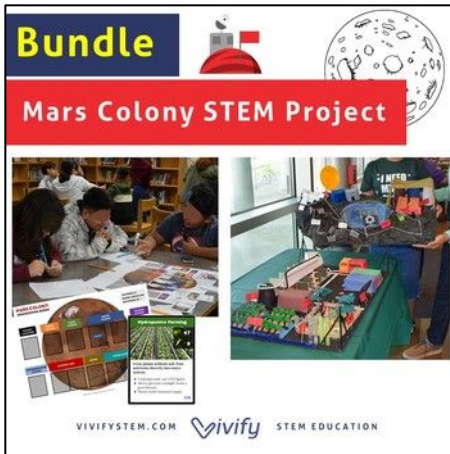
High School



Create Monday	Career Tuesday	Coding Wednesday	Skills to Success Thursday	College Friday
<p>Listen to this podcast episode and write down 3 facts. Create a poster for your own podcast show bit.ly/scientificamerican9</p>	<p>Complete the My Next Move Career Quiz: mynextmove.org/expl ore/ip</p> 	<p>Play a coding game at studio.code.org</p> 	<p>Create a free account at: s2sacademy.org/courses Use a public access code: s2sacademy.org/no-access-code/. Complete Module 1 (Lila's Dilema).</p>	<p>Explore the College Board Getting Started guide: bigfuture.collegeboard.org/get-started</p> 
<p>Create your own 3D design on www.tinkercad.com</p> 	<p>Ever considered an engineering career? Explore more here: www.discovere.org/discover-engineering</p>	<p>Check out the projects at scratch.mit.edu then create your own game!</p>	<p>Return to s2sacademy.org/courses Complete Module 2 (Career Pursuit).</p>	<p>Explore college options: bigfuture.collegeboard.org/find-colleges. Create a list of top 10 options.</p>
<p>Create virtual science experiments www.msichicago.org/play/goreact/ or bit.ly/interactivecells7</p>	<p>Explore career options: bigfuture.collegeboard.org/explore-careers</p>	<p>Check out lesson 1 in CS0 https://academy.cs.cmu.edu/splash</p> 	<p>Return to s2sacademy.org/courses Complete Module 3 (Why Do You Want To Be A...?).</p>	<p>Explore college options further at cappex.com. Get a glimpse of a real college class: classcentral.com/collection/ivy-league-moocs</p>
<p>Create your own website! Create an account and complete the Web Development course: studio.code.org/s/csd2-2019</p>	<p>Select your top 3 career options. Research further at www.onetonline.org/</p> 	<p>Create an account and take the Fundamentals coding course: learn.grasshopper.app</p>	<p>Return to s2sacademy.org/courses Complete Module 4 (What Makes You Tick?).</p>	<p>Learn how to pay for college: bigfuture.collegeboard.org/pay-for-college</p> 
<p>Create digital art, a website, or a game: projects.raspberrypi.org</p>	<p>Research additional career options at www.learnhowtobecome.org</p>	<p>Create a free account on Code Combat and play the game: www.codecombat.com</p>	<p>Return to s2sacademy.org/courses Complete Module 5 (Find Your Future).</p>	<p>Learn the basics of getting into college: bigfuture.collegeboard.org/get-in. Make a to-do list to stay on track.</p>
<p>Download and explore the JigSpace app.</p> 	<p>Create your resume. Learn more here: s2sacademy.org/courses/non_replay/usa/gaj_06/. Share with an adult for feedback.</p>	<p>Take the Code Academy Quiz: www.codecademy.com/explore/sorting-quiz. Complete one of the recommended basic courses.</p>	<p>Return to s2sacademy.org/courses Complete Module 6 (Get Some Experience).</p>	<p>Play some financial football! financialfootball.com/play/</p> 

Want more STEM?

For a complete list of all of Vivify STEM resources broken down by standards, topics, and grade levels, go here: <http://bit.ly/VivifyResourceGuide>



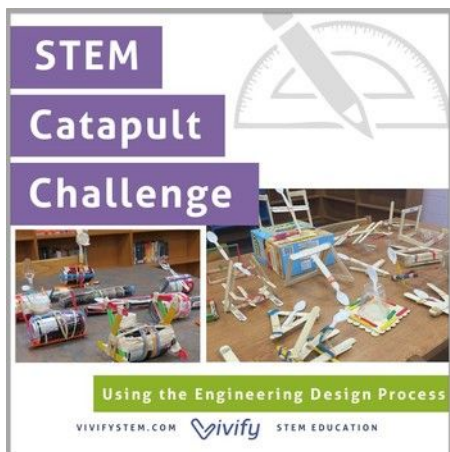
bit.ly/VivifyMars



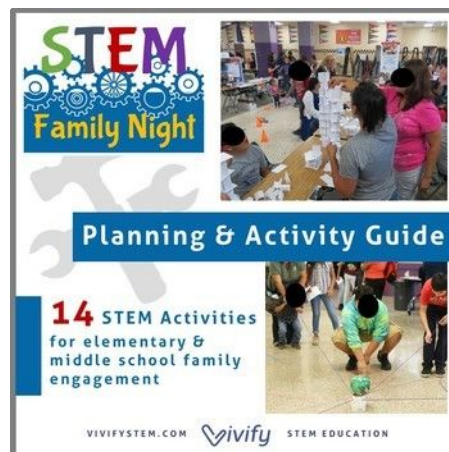
bit.ly/Vivifyspacebundle



bit.ly/icebreakerbundle



bit.ly/Vivifycatapult



bit.ly/STEMfamilynight



bit.ly/Vivifybotany

Vivify's Overview of STEM Education

Successful STEM education is an empowering interdisciplinary approach that brings math and science concepts to life through problems that mimic the complexities and excitement of the real world. STEM revolves around the Engineering Design Process that embraces failure, relies on teamwork, and requires critical thinking and creativity. While exciting, educators often become intimidated as a search for curriculum leads to an overwhelming range of activities from index towers to robotics competitions. At Vivify, we believe that not all STEM is created equal. Educators should adopt a [3 Stages of STEM](http://bit.ly/stemstages) approach by progressively building towards more complex projects.

To learn more about the 3 Stages of STEM, go here: <http://bit.ly/stemstages>