

## ELEMENTARY SCHOOL STEM PATHWAY MODULE DESCRIPTIONS

### Pre-K/ Kindergarten-1st Grade

#### **The Art of Shapes- How Can We Make Art with the Shapes Around Us and Share with Others in Our Community?**

In this project, students learn about the different geometric shapes in the world around them (e.g., rectangles, squares, trapezoids, etc.). They keep an artist's sketchbook to take note of the shapes and include ideas as to how to incorporate shapes in their art. Students write an artist's statement talking about their process and welcome visitors to the grand opening of their Shapes Gallery where they hold a meet the artist talk, answer questions, and share their pieces.

#### **BBC Micro:bit In the Classroom**

The micro:bit is a pocket-sized system that introduces you to how software and hardware work together with a cost around \$25.00 each. Students connect to a computer with the internet and code the micro:bit to perform various tasks or activities. This unit is customizable for grade levels K-8

#### **Boom Cards to Practice Skills and Teach the Standards!**

Teachers will learn what Boom Cards are and how to use them to teach various standards! Teachers will explore free version/paid version options and register for the free version. Teachers will explore using Fast Play for diagnostic purposes and learn where to Find Boom Cards for free review, including instructor made Intro to Technology Boom Cards, and curricular boom cards. Teachers will be able to make their own for classrooms and district use and learn how to share. Emphasis will be on creating Boom Cards to learn more about the school community.

#### **Bubble Mini Unit**

This unit uses bubbles as an engaging tool for science, math, and reading. Activities include doing an experiment to learn what impacts bubble size, think about what a machine is, read a book on bubbles and machines, and use the EDP to create their own bubble machine.

#### **Squishy Circuits**

Students will be introduced to basic circuitry using materials that conduct and do not conduct electricity. The students will be able to create a basic circuit using two types of dough and discover what a conductor, insulator, and a short circuit is. Includes book suggestions, and extensions.

#### **Claymation/ Papermation Videos in the Early Elementary Classroom**

Teachers will learn how to make their own Claymation or papermation videos, as well as students can create their own! Can be used with storytelling, creative "writing", explaining

scientific processes and functions, visualizing mathematical concepts such as fractions, recreating historical time periods and events, and demonstrating physical activities such as proper exercises and stretches.

### **What Makes Someone a Community Hero?**

Focus is on the school community and integration into current curriculum for PK, then the local community for K. Focus on the local community at the parish level as students explore what a hero is and what makes a hero at the 1st grade level.

### **Community Stories Come Alive! Make stories come alive for kids in our community**

Students retell stories to others in the community by videoing them and placing them on the website or the library site.

### **Designing Paper Baskets for a Rock Collection**

Max and Lola want to give people who visit their rock collection a basket to collect their own rocks; however, they will not be able to make enough for everyone. In this unit, students explore patterns and investigate the strength and properties of paper before applying them to design a paper basket. Supplemented with student activity where students also look at rock collections and identify rocks!

### **Finch Robotics**

Zac the Robot needs your help! In this module, students will learn color and shape recognition, matching colors and the appropriate words, and coding! Through the use of the story book Zac the Robot by Stephanie Lanier, students will make connections between literature, real-world shapes and colors, and robots. This lesson will “program” the students’ love of literature and technology! Teachers learn how to use the Finch robot and adapt a lesson to work with the Finch robot.

### **Fish Unit**

Fishing for an interdisciplinary unit? Well, here it is! This unit connects literacy, shape, number and color recognition, science, art, social studies, and the EDP together. Students will read *The Rainbow Fish* by Marcus Pfister, use a game to help recognize colors, shapes, and numbers, and design a way to Catch a Fish by designing a fish collector with magnetism and forces. Students will also explore conserving Louisiana fish populations and create an ad campaign to protect fish in Louisiana. Finally, students will decorate their fish in an artistic manner. This unit is quite a catch!

### **Getting To Safety!**

In this module, students make a fire escape plan for their homes and school using measurement concepts. They review school emergency plans, gather input from local fire officials, and learn about fire safety while measuring.

### **Growing Milkweed for Butterflies**

Students learn about butterfly life cycles and grow Milkweed to create a butterfly habitat.

### **How Can We Take Care of the Environment and Inspire Others to Help Us?” Designing Hamster**

**Habitats**

Students will learn about animals' basic needs and explore characteristics of two- and three- dimensional shapes before applying them to design an artificial hamster habitat to meet the needs of organisms.

**Inspired By Nature**

Students explore the structures and behaviors of plants and animals that protect them from danger or help increase their chance for survival. Students design nature inspired solutions to a student identified problem faced by humans.

**Litter**

After noticing problems in their school environment, students create teams and define jobs to address and solve these problems. Students will design tools to help them solve the problems and create training materials to teach others how to use the tools they designed and perform the tasks they identified.

**Make a Business- Who Can Sell Out First?**

Students will create a product for the school population, then make a marketing pitch to the other students. Students can purchase the items with real or pretend money. The first to sell out wins.

**Make stories Come Alive**

In this project, students build their reading fluency and comprehension skills as they create engaging video productions of fables and folktales from diverse cultures. Students work in teams to engage in a close reading of selected stories, create storyboards, and write Reader's Theater-style scripts for these stories and then plan and produce their dramatic readings as video stories for a class Storytime Channel. Student hosts conclude each story with an explanation of the story's central message, moral, or theme.

**Pulleys- Rapunzel Needs Your Help**

Rapunzel has been trapped in a tower, and she needs your help! In this interactive STEM lesson that combines engineering with literacy, students will work in teams to create a pulley system to help the princess escape the tower. The students will learn about simple machines, pulleys, and working parts. By working through the design thinking process, students will discuss ideas, draw blueprints, create a working model, and develop modifications after testing their designs.

**How can we use Pushes and Pulls in Games and Work?**

This module helps familiarize teachers with activities promoting STEM. Students will examine, measure, and explain how pushes and pulls of various objects are used to produce and control motion. Students will analyze and make observations. Students explore the concepts of cause and effect regarding motion. Students will experiment with motion.

**Roly Poly Ecology Fun**

In this unit students learn about ecology and the outdoors through a wonderful creature called a Roly Poly, aka pill bugs! Students will read a book, explore the outdoors to observe Roly Polies,

learn through experimentation and research what needs they have before building the roly poly's habitat indoors.

### **Introduction to ScratchJr for Emergent Reader: Create and Program a Story**

Teachers will incorporate Scratch Jr in a series of lessons designed to improve literacy skills in an emergent reader. Activities include introducing programming, following directions, writing code right to left, sequencing, storytelling, design a character/adding sounds, scene changing and directing your character like an author, debugging - when your character doesn't listen, timing, repeating an action, you be the author-make your own story.

**And**

### **ScratchJr- What is Scratch JR?/ Reinforcing Math and Literacy with Scratch Jr: Create Animations to Reinforce Uppercase and Lowercase Letters and Number Counting.**

Once familiar with Scratch Jr, students can make animations with Letters and Numbers as the Characters in order to aid in recognizing letters, matching upper- and lower-case letters, and counting objects. Teachers or older students can make animations for 1st graders, then they can make their own.

### **Sound and Light**

In this module, students will design and conduct investigations, make observations, and share their research with others as they explore light and sound and their properties, then use that knowledge to design a device that uses light or sound to solve the problem of communicating over distance.

### **How Can We Teach People About Weather in Our Community?**

After completing the lessons, students will recognize that they can learn about weather using their five senses and begin to build an understanding of basic weather concepts. They will gain experience in communicating results by drawing, writing, and talking about weather as they use science to ask questions and collect and analyze data. They will also determine the best clothes to wear in various weather conditions and create a weather guide. Finally, they will design a building to withstand various conditions.

### **Helping Emergency Workers with Toy Making**

Students learn about emergencies and help firefighters and police by creating items to comfort young people who are in need.

## 2nd Grade-3rd Grade

### **Animal Adaptations / Go Go Pollinators**

How can we assess understanding of environments and biomes and animal adaptations? Students will create a new environment and a new animal with adaptations to survive in that environment as a culminating activity.

### **As Seen On TV!**

Students explore coastal erosion in Louisiana. They observe and gather data in an experiment on how water and wind change the shape of the land. Students then design a way to stop the movement of earth, then test their solutions using design thinking. Finally students create a commercial to sell their solution as a product, where they can act the commercial out or video it. They will perform the commercial in front of the class while they show their solution. Students could also create a print ad for their design.

### **BBC Micro:bit In the Classroom**

The micro:bit is a pocket-sized system that introduces you to how software and hardware work together with a cost around \$25.00 each. Students connect to a computer with the internet and code the Micro:bit to perform various tasks or activities. This module is customizable for grade levels K-8

### **Camp Computation**

This module will teach addition and subtraction, counting coins, word problems, telling time, and measurement skills by using a camping trip project where students design and plan a camping trip for several of their friends or family members. Students complete a variety of activities using math. Students will budget for a camping trip (addition), purchase items in a "store" using coins and bills, measure different camping equipment using inches or centimeters, create a schedule of camping activities, and graph the number of animals seen on a hike.

### **Creating a GIF-Scene Development**

Teachers learn how to create a GIF from scratch, then use their knowledge to create visual aids for their classroom, as well as how to teach students to create GIFs. Students will learn how to create a gif to show a scene of their choice such as from a story, holiday, history lesson, or a math concept as requested by their teacher

### **Digital Story-telling**

Students will learn to use writing and planning skills in order to create a personal narrative and use digital storytelling to put that narrative into pictures.

### **Energy Efficient Housing**

What is energy efficiency? In this module students will design, plan, and create an energy efficient house for a customer that is also sustainable. Includes measurement, and designing

a prototype.

### **Forces, Hovercrafts, and Magnets.**

Students investigate forces to learn about their effect on the motion of a toy. They design a hovercraft in order to see what affects its motion and create a data table and a graph as they investigate. Next, they explore the electrical and magnetic forces through centers, leading to students creating their own experiments on magnetism, gathering data, and sharing their results. Finally, students use the engineering design process to create a magnetic lock for their journal!

### **Happy Winds Day**

Where does wind come from? How can humans use wind to their advantage? Students will learn the concept of energy conservation and discover how windmills utilize power. They will explore whether there are things students can do to help cut down windmill energy usage. The students' goal will be to build the most efficient blade design that will produce the most electricity.

### **How Does Your Garden Grow?**

Students will take on the challenge of using stop motion animation to demonstrate how plants grow over time after completing Let Us Turnip The Beet Growing Plants module. Can also be used with any content area as a way to summarize.

### **Let Us Turnip The Beets!**

What is a plant and what do plants need to grow? Students will use literacy and observation skills as they discover what plants need to live and thrive. Includes exploration of plants, seeds, and observing plants growing over time. Used in conjunction with the module How Does Your Garden Grow, students will come away with a detailed understanding of the concepts.

### **Magnet Maze Madness**

Students will work together to design and build a maze. They will use a pinball and a magnet to guide the ball through the maze. Students will explain how a magnet works and be able to discuss the properties of magnets.

### **Make a Digital Mosaic, Vision Board, and GIF**

This lesson can be incorporated into any subject area. Students will learn how to create a mosaic picture digitally. They will create a digital vision board to help stay on task with their goals. Finally, students will learn how to create a simple GIF.

### **May The Forces Be With You**

In this unit, students will learn about force and motion using hands-on activities on the playground and in the classroom. Students will think about the playground as a place to learn about science. Force and motion concepts will be introduced through literacy and activities. The playground is used to make observations about force and motion and about how fun a playground is intertwined with force and motion. Students complete the unit by using what they have learned about forces and motion to create a Rube Goldberg machine.

### **Once Upon a Code- Using Scratch for Characterization**

How can we use technology to teach characterization? Students will use Scratch to develop characters with personalities (using thought and speech bubbles to “animate” and “narrate” a character’s thoughts and actions.)

### **Our Town, USA**

How can we teach about the responsibilities of citizens within a community? By designing, planning, and building a community using what we have learned about rights, responsibilities, producers, consumers, local government, and economics.

### **Space Solutions Math for 3<sup>rd</sup> Grade**

How can we as astronauts, mathematicians, and scientists prepare to travel around the universe? Students start with a budget to follow as they select a crew to go on their space trip with them. Students can consider the pros and cons of bringing the different crew members on their mission. Next students must complete their astronaut training by choosing classes and making a schedule to follow. Students must help other astronauts as they shop and pack for the space mission. This involves counting coins, addition/subtraction, and word problems. Students measure the distance between the planets and answer questions about their measurements. Students will also plan out a habitat on the moon base for their crew using the exact same materials for each crew member and determine how many of each item they will need. They will create arrays using the materials.

### **Stop! Matter Time!**

In this project-based learning experience, students will become "Matter Makers" and investigate the changes in states of matter through real-world scenarios. They will work in teams to explore and understand the concepts of melting, freezing, evaporation, and condensation, and apply their knowledge to solve challenges related to states of matter.

### **Suite Life of Bees!**

Bees are one of the primary pollinators for food sources on Earth, yet they are in danger of dying off. Learn more about why they are in danger and design a plan to help the bees survive!

### **The S'More the Merrier**

This is a fun and simple activity, but it can take a while for the students to set up properly, especially when it comes to getting the foil correct in the box. Alternatively, after learning about heat energy and transfer the students can use the EDP to design their own solar ovens using the materials you give them.

### **We Don't Need Roads!**

Can you create a Hovercraft with very little friction? This activity can be done by itself or with the module Forces, Hovercrafts, and magnets

## 4TH -5TH GRADE

### **3D Printing with Tinkercad**

Students learn the basics of 3D design such as creating negative space, duplicating, rotating, and aligning objects utilizing TinkerCAD. Students will practice making a cookie cutter and name plate keychain.

### **American Revolution- A Tale Of 2 Sides? Podcasting**

How can you teach different sides of the American Revolution? Use resources such as a classroom podcast to investigate through inquiry the question of “Did the American Revolution have more than two sides?”

### **BBC Micro:bit In the Classroom**

The micro:bit is a pocket-sized system that introduces you to how software and hardware work together with a cost around \$25.00 each. Students connect to a computer with the internet and code the micro:bit to perform various tasks or activities. This unit is customizable for grade levels K-8

### **Build A Business Module(s)**

Option 1 Starting a Business-Elementary school students are natural entrepreneurs. In this project, students work in teams to develop a business concept, conduct market research and/or a competitive analysis, create a realistic financial plan, and pitch their businesses to an audience. As students create and plan a business, they learn key mathematical skills involving operations, grouping, and decimals and develop competence in areas of technology, communication, and collaboration.

Option 2 In this investigation, students will learn how to become an entrepreneur and design a food truck. Students will be able to design a food truck while learning about decimals, unit cost and ratios, integrating information from several texts, writing informative/explanatory texts to examine a topic and convey ideas and information clearly and report on a topic including multimedia components and visual displays. Students will also be able to identify examples of resources used to produce goods and services.

### **Coasters, Contraptions, Rubber Band Racers, and Circuit Boards**

How can you teach forces, energy transfer, and simple machines? By using Marble Roller Coasters, Contraptions, Rubber Band Racers, and Circuit Cards! Students design, build and test these objects in order to explore 4th grade science standards and the engineering design process.

This Module combines the activities from **Engineering Design Process and STEM Challenges Module and the Energy and Engineering Module**

### **Digital Storytelling**

Students will use Google Slides, WeVideo, or similar to tell digital stories based on various content areas. Students could create a visual report or virtual movie trailer to show what they have learned in math, ELA, or other content areas, rather than a typical report. Students create



a storyboard, learn to video, and edit their movies, add sound, and other effects to their final products.

### **Earthquakes**

In this unit students will investigate earthquakes including patterns of seismic waves, how seismic waves are measured (by building a seismograph measuring device) and design an Earthquake resistant building then test it by building a shake table.

### **Earth's Changing Features**

How can you plan and conduct an investigation to show the effects of water, wind, or vegetation on the relative rate of weathering and erosion on the Louisiana Coastline, and develop a solution using design thinking to slow the process?

### **ECOSYSTEMS—Quadrat Sampling and Energy Flow**

Quadrats are rectangular frames used to mark out sample areas in order to gather data about the environmental qualities within those areas. In this project, students conduct a quadrat survey in order to investigate the health of a local ecosystem such as their school grounds or a nearby park. They use the data collected to calculate the abundance of different species as both a measure of density (unit rate) and of frequency (percentage). They analyze the health of the ecosystem (using ratios and percentages), either by focusing on an invasive species or by examining the biodiversity of the ecosystem. Students present their findings and discuss their implications in the form of a news article.

### **Engineering Design Process and STEM Challenges**

In this module, you will be challenged to complete STEM Challenges that use the Engineering Design Process to develop engineering and problem-solving skills.. For Part 1, build a Rubber Band racer and use the EDP to redesign and share what you learned so you can compete against others in a race. Then in Part 2 of the training, teachers will divide up into groups and complete one of the challenges given to them. Then they will work to improve their design following the EDP. The module allows teachers time to consider how these challenges can be used in their classrooms.

### **Energy and Engineering**

This Module is an energy and engineering supplementary unit. Students will complete STEM activities using the Engineering Design Process to reinforce concepts of Potential Energy, Kinetic Energy, and Forces such as: Friction, Momentum, Gravity, and Inertia, as well as Simple Machines, electrical circuits, and conservation of energy and transfer of energy. Students will also use the Engineering Design Process to plan and design a solution to a human problem using plant and animal structures.

### **Golden Civilizations Exploration**

Students use inquiry based research to create a museum exhibit (physical or digital) that showcases their assigned civilization's golden age and explains why it came to an end. The exhibits can be displayed at a community/school event and provide a summary of their conclusions. Resources could also include a digital museum exhibit. In addition, student teams

are stranded on a deserted island and must create a civilization that accounts for survival mentally, physically, and emotionally.

### **Hurricane Resistant Building**

Students will design a building that can withstand the impact of strong wind forces following the engineering design process, and test and redesign their designs using wind power. Students will work with a prototype and research about hurricane resistant buildings. Then they will create a model and present their own hurricane resistant architectural models.

### **The Italian Renaissance/ Catapult**

This unit is a Project Based Learning (PBL) Unit that focuses on the Italian Renaissance. Students will research questions they brainstormed during a Question Formulation Technique Session, as well as causes and effects of the Italian Renaissance, and will use the Engineering Design Process to design, build, and test an invention. The unit culminates in students designing, building, and testing a catapult.

### **BBC micro:bit with Cyber Arcade**

This is a fun and creative introduction to computer science and physical computing for elementary grade levels (ages 9–12). Using a Micro:bit (a pocket-sized computer) and MakeCode (free online coding software), young makers practice problem-solving and teamwork to create interactive arcade games. Includes instruction and activities for 20 one-hour-long sessions. In each session, makers have opportunities to develop knowledge in computer science, engineering, art, and game design, as well as gain exposure to real-world industry concepts and vocabulary.

### **Pixel Art Design**

Teachers will learn how to create their own Pixel Art activities to use with students.

### **Pop Art**

Use digital media to create Pop Art designs that can illustrate or tell a story as they create their own pop art advertisements. Students will learn about pop art and its origin. Explore complementary colors and symbols in artwork.

### **Reduce Our Carbon Footprint**

In this module, students use measurement, data, and fraction concepts to develop, implement, and monitor an action plan for reducing their family's impact on the environment. Each student team focuses on one resource: water, garbage, food waste, electric car gas use. Students communicate these strategies and goals to their families in the form of an informative/explanatory letter and then measure and graph changes in their families' resource use as they implement their action plans. An alternative, if there are barriers to measuring data about resource use at home, students might consider measuring the use of resources in the classroom or across the school.

### **Once Upon a Code- Using Scratch to Retell/ Summarize a Story**

Same format as used in prior grades, but different content standards are addressed.

### **Stop Motion Animations and Narrative Writing - Bridge Design**

This module uses a stop motion animation app such as Stop Motion Studio to photograph student characters and settings in order to retell a fairy tale or nursery rhyme by creating a unique ending or changing the point of view. Students learn how to create a storyboard and make a stop motion animation video including editing by adding voiceover and complementary music. Can also be used to tell a historical narrative, a science experiment, or even relate a math problem.

### **Teaching Fractions and Decimals with a Choice Board!**

Students will use a choice board including a stock market project, designing a new playground for children in wheelchairs, and creating a new flavor of soda (recipes). In order to learn about fractions and decimals.

### **Wind Lift- Energy and Turbines**

Students build a windmill and test the energy it generates, discuss energy transfer and relate the speed of the wind blades to energy. Students modify the blades to improve function. Next, students use centers to show how energy can be transferred by sound, light, heat, and electricity. Finally, students build and test an electrical circuit that converts energy into other types of energy within a given time frame and from select materials

### **Word Play**

In this module students will explore the play of The Phantom Tollbooth and create sets and costumes culminating in a production/presentation of the play.

## **6TH -8TH GRADE**

### **2D Stop Motion Animation**

Teachers explore how students can create 2D Animation projects that can be used in any classroom for creating creative presentations. Teachers create their own 2d animations. **For use in any content area!**

### **BBC Micro:bit Training**

The BBC micro:bit is a pocket-sized computer that introduces you to how software and hardware work together. It has an LED light display, buttons, sensors and many input/output features that, when programmed, let it interact with you and your world. Teachers will train to use the micro:bit in the classroom environment to help students solve various problems they encounter related to the content areas.

### **Birdbrain Finch 2.0 Training**

From icon- and block-based coding to advanced text-based programming, the Finch is a tool for elementary school, AP computer science, and every class in between! The Finch 2.0 is designed for teachers who are new to coding so they can meet the needs of students at all experience levels. Use the Finch to explore math, English, and science while learning computational thinking

skills! Learn about the abilities of the Finch robot 2.0 version from Birdbrain, a low cost robot that can be used in core concept classes to bring learning to life! Particular emphasis is on using the robot in math, English, science, computer science, and STEM!

### **Birdbrain Hummingbird Training**

Learn the basics of programming, building, and teaching with the Hummingbird Robotics Kit. Design, build, and program a personally meaningful robot out of any materials, with any device, in multiple programming languages! Use with all content.

### **Boom Card Training**

Wanting a way to review students for a test, or see how well they understand a standard, but in a fun way? Try Boom cards! Learn how to create your own Boom card activities for every content area!

### **Canva Video: As seen on TV! Middle School**

Students will brainstorm environmental problems in the state, then choose 1 problem to create a solution for. Students will make a prototype of their solution and create a video about it using Canva.

### **Claymation**

Tell a story/ poem, share an experiment, or recreate an event in history! Using clay to create figures and backgrounds, students can visually present their thoughts and ideas to create great presentations in new and exciting ways! Teachers will experience the process as they make their own claymation.

### **Comic Book Core**

In this project, students are challenged by a comic book publisher to create an engaging and meaningful comic book that will teach others about core concepts in the curriculum of choice with the example being math related. Students explore the imaginary world(s) of superheroes in order to generate problems that their favorite characters might face. They model these problems and use these ideas to create their own topic comic books. Throughout the project, students will reflect on the ways in which the problems they create in their comic books mirror real-life situations. Concepts: Math

### **Digital Storytelling**

Do your students need a way to express their thoughts and opinions, without using a slide deck? How about creating a video? This module will have teachers creating their own digital story in preparation for training students. Adding video, sounds, and music is easy after this training!

### **Engineering Design Process**

The Engineering Design Process is a series of steps that engineers follow to find a solution to a problem, which can be rich in content and learning as the teacher chooses to make it. In this lesson the EDP is explored as a problem solving tool for all content areas, although we will focus on its use in science and STEM. Teachers explore various competitions and challenges they can use to bring the EDP to life, including two options- paper airplane design and balloon car racer design.

- EDP Build a Balloon Car: Does using the Engineering Design Process seem difficult to use? This module models how to go through the process easily with your students and provides working knowledge of the EDP through the creation of your own Balloon Car! Then, you can use that knowledge to design your own projects related to your standards!
- EDP Paper Airplane: Does using the Engineering Design Process seem complicated? Uncertain where to start? This module demonstrates how to go through the process easily with your students and provides working knowledge of the EDP through the creation of a paper airplane that is the fastest, or has the longest flight, or both! Use that knowledge to design your own project related to your standards!
- STEM Challenges

### **Esports**

Are you interested in Esports? We can provide you with materials and advice on how to build your own program at your school! Learn from the experts!

### **Gif Maker**

This simple activity can be combined with other presentations and activities to animate still images and enhance student presentations for a variety of projects.

### **Rocket STEM Interdisciplinary Unit**

How have scientific advancements impacted our world and society as related to space travel? This unit can be used as an interdisciplinary unit, thereby strengthening the learning involved, or it can be used on its own. Suggested curricular activities for core content areas include Rocket Boy Novel exploration, maps and timelines- space exploration themed, measurement, scale models, and distance/ angles, and Newton force and motion with the engineering design process.

### **Scratch**

Scratch is a coding language with a simple visual interface that allows students to create digital stories, games, and animations for use in the classroom and beyond! Scratch promotes computational thinking and problem solving skills, self-expression, collaboration, and equity in computing.

### **Tinkercad**

Learn how to use the 3 aspects of Tinkercad to design wonderful classroom projects! Use 3d design, coding and electronics to bring project based learning to life!

### **Using Natural Disasters in STEM: Tornadoes**

Mapping damage, graphing data, reading about safety and tornadoes and designing an infomercial, and preventing damage through the engineering design process.

## Special Options

### **Code.org Workshop Training**

The Capitol Area Regional STEM Center is affiliated with Code.org and provides training to elementary schools K-5 through 1 day workshops. To schedule a workshop, please contact Nicole Foster at [nfoster1@lsu.edu](mailto:nfoster1@lsu.edu) for further information.

### **CS Training- 3-5 day options**

Teachers will be trained to utilize a variety of online CS resources that can be used in the classroom environment. Standards based activities are used to help teachers supplement the classroom content areas and enrichment areas.

### **STEM Pathway, Jr Courses for Middle School**

The Middle School STEM Pathways Jr program is pleased to announce that we offer three middle school electives to serve as a pipeline to prepare students for the High School STEM Pathways– Aquaponics, Step into STEM, and Step Into Computer Science. These courses provide middle school students with the opportunity to access quality STEM courses through project-based learning experiences. In addition, the Intro to STEM Pathways and Careers high school credit course has successfully been implemented at both the high school and middle school levels and may be an option at your district. These year-long courses include everything needed to be successful in STEM. Teacher training occurs in the summer for 12 days.

### **SPECIAL REQUESTS**

Do you have a specific request for STEM training? Let us Know! Contact us at [caincenter@lsu.edu](mailto:caincenter@lsu.edu) or [nfoster1@lsu.edu](mailto:nfoster1@lsu.edu) for assistance.