



School Enrichment Catalogue

- **Secret Life of Seeds**

- Description: Explore the secret life of seeds to learn more about their different parts, how they are dispersed in the wild and by man-made machines, the type of environment plants need to survive, and how seeds are tested to see if their variety is viable for use. Students will explore different plants by researching and creating a plant profile. Students will get hands-on and conduct their own seed test. As the plants germinate, they will be able to see first-hand how plants begin to grow. This lesson covers field crops, wild plants, and domesticated plants.
- Grades: 4-8
- Time Requirement: 90 minutes
- Cost: \$15 per classroom
- Supported Science Standards: LS2.A; LS4.C; LS1.B; ESS2.E

- **Garden in a Glove**

- Description: In this activity, youth will be introduced to basic gardening concepts such as the type of environment plants need to survive, what a seed needs to grow, and parts of a plant. Each youth will start their own garden in a glove. They will plant five different seeds and watch to see how the seeds sprout and grow. This is a modified version of The Secret Life of Seeds for younger grade levels.
- Recommended Grades: K-3
- Time Requirements: 60-70 minutes
- Cost: \$10 per classroom
- Supported Science Standards: LS1; ESS3; LS2

- **Crop Curiosity**

- Description: Youth will encounter concepts in environmental science, biology, and agriculture in the context of Mars exploration. The current environment of Mars is more similar to Earth than other planets in our solar system, but it is not similar enough to meet the survival requirements for humans, plants, or animals from Earth without life support systems. For this reason, humans cannot grow food such as fruits and vegetables directly in the Martian landscape as we do with farm fields or orchards on Earth. Youth will play a card game to learn about the items needed to grow food plants on Mars in an artificial "agriculture module" environment.
- Recommended Grades: 4-8
- Time Requirement: 60 minutes
- Cost: Free
- Supported Science Standards: ESS2.A; ETS1.B; ESS2.E; ESS1.B; ESS3.A



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• Ocean Communicator

- Description: In this activity, youth investigate challenges that ocean scientists, engineers, and technologists are currently addressing. Each challenge requires innovations and technical solutions that inspire public action. By the end of the lesson, youth will be able to make connections between specific ocean challenges and climate change, the impacts on life (both human and animal), and how science is being used to address those challenges. Youth will also learn about making PSAs (public service announcements). **NOTE:** This activity can be used as a two-part series with Ocean Expedition.
- Grades: 3-8
- Time Requirement: 60-70 minutes
- Cost: Free
- Supported Science Standards: ESS3; LS2

• Ocean Expedition

- Description: In this activity, youth play a board game to navigate their ocean robot around the world while learning key ocean concepts. Topics include aquaculture, climate change, innovation, human impact, and the ocean ecosystem. By the end of the lesson, youth will be able to identify ways they are connected to the ocean, regardless of where they live. They will also be able to understand the challenges scientists and engineers face when researching the ocean and appreciate the mysteries of the ocean and what is still left to discover and learn. **NOTE:** This activity can be used as a two-part series with Ocean Communicator.
- Grades: 3-8
- Time Requirement: 70-90 minutes
- Cost: Free
- Supported Science Standards: ESS3; LS2

• Motion Commotion

- Description: Through this experiment, youth will construct an understanding of motion, stopping distance, and reaction time through engagement in hands-on, experiential learning. This activity will engage in individual and group exploration of the effect of motion and reaction time on our daily lives, with an emphasis on healthy living. This is a fun activity for youth to observe collisions and investigate the physical factors that govern safety, such as riding in a car.
- Grades: 4-8
- Time Requirement: 60-80 minutes
- Cost: Free
- Supported Science Standards: PS3.A; PS3.C; PS2.A; ETS1.A; ETS1.B



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• Stellar Optics

- Description: In this activity, the youth will explore the principles of light and construct a simple refracting telescope. Using their telescope, youth will learn about common constellations that have influenced human cultures for millennia. Since the distortion of light by moisture and other atmospheric particles hinders our view of the celestial bodies here on Earth, youth are introduced to the concept of moving outside of Earth and its atmosphere for further exploration.
- Recommended Grades: 2-6
- Time Requirements: 60-90 minutes
- Cost: Free
- Supported Standards: ESS1.A; ESS1.B; HGSS3; HGSS5

• Scratch Coding Basics

- Description: This computer-based activity is an opportunity for youth to be introduced to the world of coding. Using Scratch coding, youth will begin to understand the basics of coding through an online interactive program created just for kids. Not only does it provide an introduction to coding and computer science fundamentals, but it also helps build logic and problem-solving abilities. Additionally, working with Scratch encourages creative thinking, allowing kids to work on projects that are both visually appealing and functional. Are you interested in introducing your kindergarteners through second-graders to Scratch coding? Sign up for the Junior Scratch Coding session.
- Recommended Grades: 3-8
- Time Requirements: 60-90 minutes
- Cost: Free

• Junior Scratch Coding

- Description: This computer-based activity is an opportunity for youth to be introduced to the world of coding. Using Scratch coding, youth will begin to understand the basics of coding through an online interactive program created just for younger kids. Not only does it provide an introduction to coding and computer science fundamentals, but it also helps build logic and problem-solving abilities. Additionally, working with Scratch encourages creative thinking, allowing kids to work on projects that are both visually appealing and functional.
- Recommended Grades: K-2
- Time Requirements: 60-90 minutes
- Cost: Free



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• **Tissue Paper Earth**

- Description: In this lesson, youth will learn the basics of Earth and how it is divided between land and oceans. By the end of the lesson, the youth will have an overview of planet Earth. We will talk about what natural resources Earth has and dive into one of the most important resources: water. During our lesson, the youth will create their own tissue paper Earth to take home with them.
- Recommended Grades: K-2
- Time Requirements: 60 minutes
- Cost: \$10 per classroom
- Supported Science Standards: ESS3.A; ESS2.C

• **Color Wheel Boquet**

- Description: Color and color theory form the foundation of art as well as design. During this lesson, youth will explore the basics of the color wheel and the language we use to talk about color. Youth will create their own paper flower as we discuss the color wheel and learn about basic color theory.
- Recommended Grades: K-2
- Time Requirements: 60 minutes
- Cost: \$10 per classroom

• **Paper Marbling (Color Wheel Exploration)**

- Description: Color and color theory form the foundation of art as well as design. During this lesson, youth will explore the basics of the color wheel and the language we use to talk about color. Youth will create their own paper marbling project to remind them of color wheel basics.
- Recommended Grades: K-4
- Time Requirements: 60 minutes
- Cost: \$20 per classroom

• **Flower Dissection**

- Description: During this lesson, youth will explore the wonders of our natural world by dissecting a flower. Youth will learn about the basics of flower anatomy, what plants need to grow, and pollination. By dissecting flowers and identifying their parts, youth will better understand the mechanics of pollination.
- Recommended Grades: K-4
- Time Requirements: 60 minutes
- Cost: \$25 per classroom
- Supported Science Standards: ESS3.A; LS2.A; LS1.B



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- **Owl Pellet Dissection**

- Description: Owl pellet dissection is an easy, beginner dissection for all ages! At the end of this lesson, youth will have a better understanding of food webs, food chains, and of course--owls. Youth will learn about owls and their place in the food web through the dissection of owl pellets.
- Recommended Grades: 1-6
- Time Requirements: 60-90 minutes
- Cost: \$85 per classroom
 - If this is a prohibiting cost, please contact Katherine for class modifications that will reduce the class fee.
- Supported Science Standards: LS1.C; LS2.A; LS2.B; LS2.C

- **Egg Drop Experiment**

- Description: Let's test gravity! In this experiment, the youth will try to design a device that will protect a raw egg when it is dropped from a height. Before the lesson, the youth will learn the basics of physics, gravity, and force.
- Recommended Grades: 4-8
- Time Requirements: 70 minutes
- Cost: \$15 per classroom
- Supported Science Standards: PS2.A; ETS1.B

- **Communication Quest**

- Description: Communication is a pillar of human interaction. In this lesson, youth will become aware of their own communication preferences and they will be introduced to verbal/non-verbal messages and active listening.
- Recommended Grades: K-5
- Time Requirements: 30 minutes
- Cost: Free
- Supported Standards: Common Core Standards. Speaking and Listening. Report on an experience in an organized manner. Use different presentation forms when appropriate.

- **Follow the Leader: Communications**

- Description: The ability to give and interpret directions is an important part of everyday life. During this lesson, youth will send and receive messages. They will listen carefully and give and understand clear directions.
- Recommended Grades: K-5
- Time Requirement: 30 minutes
- Cost: Free
- Supported Standards: Common Core Standards. Speaking and Listening. Evaluate and apply information presented orally.



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- **Resource Detective**

- Description: How can you tell if a website contains reliable information? In this lesson, youth will learn about choosing good sources of information to use from the internet.
- Recommended Grades: 1-8
- Time Requirements: 45 minutes
- Cost: Free
- Supported Standards: Core Curriculum Standard. Reading. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

- **Seek to Connect: Communication**

- Giving a speech starts long before you are standing in front of an audience. In this activity, youth will be able to explore the selection of a speech topic and find ways to adapt that topic to the interests and characteristics of various audience backgrounds.
- Recommended Grades: 6-12
- Time Requirement: 45-60 minutes
- Cost: Free
- Supported Standards: Common Core Standard. Speaking and Listening. Adapt speech to a variety of contexts and communicative tasks.

- **Communication Time Travel**

- Description: Forms of communication have evolved dramatically over time. From non-verbal gestures to highly specialized communication like social media, all of these forms vary and are better suited for one situation over another. In this lesson, youth will learn about the history of communication and how different methods have evolved over time.
- Recommended Grades: 3-12
- Time Requirement: 45-60 minutes
- Cost: Free
- Supported Standards: Common Core Standards. Writing. Conduct short research demonstrating understanding of the subject under investigation.

- **Managing Money**

- Description: Money management is an important part of life. In this lesson, youth will identify needs versus wants. They will also develop a money management plan.
- Recommended Grades: 3-8
- Time Requirement: 60 minutes
- Cost: Free
- Supported Standards: Organize personal finances and use a budget to manage cash flow.



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- **Freeze a Conflict**

- Description: Conflict is a natural event in human relationships. Conflict can be positive and lead to creative solutions and compromises. Conflict only becomes a liability when it is not dealt with and resolved. In this lesson, youth will experience a conflict situation and practice methods of resolving it.
- Recommended Grades: 3-8
- Time Requirements: 45-60 minutes
- Cost: Free

- **FBI: Foodborne Illness**

- Description: Youth will become FBI detectives as they explore the characteristics of bacteria that cause foodborne illnesses. They will also learn about the connections between standards of living and foodborne illness.
- Recommended Grades: 4-8
- Time Requirement: 60-80 minutes
- Cost: Free
- Supported Standards: NSS.G.K-12.6