

Available on request

Topic	Series	Description
Lives of Stars	Summer of Science	[See "Lives of Stars" in the Science Expedition Series]
Space Scale	Summer of Science	[See "Space Scale" in the Science Expedition Series]
Asteroids, Comets, & Craters	Summer of Science	What are asteroids and comets, and what's the difference? Learn about our smaller neighbors in the Solar System, with an activity where students make their own edible, ice cream comet.
Solar Radiation & Energy	Summer of Science	Get to know our Sun! How does it work, and how can we use what the Sun provides as a source of energy? Students will have the opportunity to make their own "solar ovens."
Simple Machines (Pulley & Levers)	Summer of Science	An introduction to Forces I & II, see how we use simple machines everyday to get work done! Students will try their hand at designing their own simple machines.
Forces I	Summer of Science	Learn about the physical contact forces that govern our world. Students will try their hand at making their own sturdy structures while going through the Engineering Design Process.
Forces II	Summer of Science	We can feel the physical push and pull of things around us, but what about forces affect our motion? Students will learn about inertia, friction, and gravity, while taking part in an experiments involving toy cars to get them to roll the farthest.
Light and Optics	Summer of Science	Explore light and heat as different components of the Sun's energy. Students will also use various light sources to examine ice and understand how NASA studies planets and moons from space.
Chemistry: Ooey, Goey Science	Mad Science!	Investigate the states of matter and chemical reactions! Students will explore chemical reactions through mixing safe compounds and recording their observations.
Physics: Things That Go Bump in the Night	Mad Science!	Students will explore the concept of laws of conservation, specifically in relation to the conservation of momentum and the conservation of angular momentum. Students will get to experiment with a large model Newton's Cradle, and make their own as well!
Constellations	Science Expedition	Learn about the constellations we can see in the night sky, why our stars change with the seasons, and make your own sky chart! See why many cultures used the stars to keep track of time and for navigation throughout history.
Lives of Stars	Science Expedition	There's more to stars than meets the eye! Find out how stars are born, how they live, and how they die, and the impacts the lives of stars have on our universe.
Space Scale	Science Expedition	From the tiniest of moons to the largest of galaxies, things in space come in all shapes and sizes. See where you fit in the scale of space and our solar system!
Destination Mars	Science Expedition	Mars is a hot topic when it comes to space travel. Learn about the rovers, landers, and orbiters that have been to the red planet, and where humans stand as we venture towards manned missions in space.

Crater Creation	Science Expedition	Explore the craters on Earth and other worlds in our solar system. Experiment to see how they form and what types of conditions can erase them or preserve them over time.
Asteroids & Comets	Science Expedition	What is an asteroid, what is a comet, and what is the difference? Learn about these rocky neighbors and what roles they play in our solar system.
Missions in Space	Science Expedition	From one small step on the Moon to running the long-distance marathon to Pluto, learn about the amazing missions that played an integral part in the story of humankind's exploration into space.
Dark Matter Mystery	Science Expedition	Dark matter is one of many mysteries still being unlocked in astronomy today. What is it, and how can we understand it? What does the future of research on dark matter look like?
Cowboys & Cowgirls	Discovery Expedition	Explore the challenges of cattle: keeping a herd together, the livelihood of ranchers, and the skills of the ranch hands.
History of the Rodeo	Discovery Expedition	What are the origins of the rodeo we know today? Examine the rich history of the rodeo, and the necessity of the skills on show to ranch life in South Dakota. How alive is the rodeo in our culture today and what role does it play?
Cowboy Cooking	Discovery Expedition	You live on the plains and are working hard. Cookie, what's for dinner? Students will learn how meals were planned and how food sources were utilized and maximized.
Extreme Survival	Discovery Expedition	What happens when the temperature drops and the wind picks up? Learn what you can do to prepare for winter weather and emergency situations, and what you can do when you're in the moment to be safe!
U.S. Presidents	Discovery Expedition	Learn about our history through presidents who have taken office. From George Washington to Barack Obama, learn about presidents of the United States.
Public Health & Nutrition	Discovery Expedition	Students will learn about some of the diseases that have created epidemics in our communities, as well as what happens when it goes world-wide as a pandemic. Discussion will cover ways society
Women's History: Women of South Dakota - Civics & Suffrage	Discovery Expedition	How have women from South Dakota impacted history on a national scale, and what are some of the challenges they faced concerning voting? Additionally, how the voting process and the Electoral College works will be discussed.
Women's History: Explorers	Discovery Expedition	Learn about women explorers here in the Black Hills and around the world, both past and present. What mysteries of our world and universe lie in wait for future explorers?
Women's History: Young & Bright	Discovery Expedition	Take a look at the young women who are making a difference today and the amazing discoveries that will change our future. What can our youth learn from them and how can they relate with their
Women's History: Inventors	Discovery Expedition	Everyone has heard of Thomas Edison, but have you heard of Stephanie Kwolek or Dr. Grace Murray Hopper? Dive into the rich history of these women inventors and others, and learn the
Women's History: Leaders	Discovery Expedition	What does it take to be a great leader? Learn about women leaders in our own community and around the world. Exercises in leadership and team-building will accompany discussion.
Earth Science: Conservation	Discovery Expedition	How is the act of conservation in effect today? Learn what is being done to help preserve the animals, plants, and other valuable resources of our living Earth, and what we can do on a personal level to help.

Earth Science: Water - A Life Resource	Discovery Expedition	What is our dependence on water for our day-to-day lives, and the part it plays in our world's ecosystems? Hands on learning of water filtration systems will be a focus, as well as the consequences of a lack of clean water.
Earth Science: Indigenous & Invasive Species	Discovery Expedition	What is an invasive species, and what impacts do they have on local, indigenous species and their environments and ecosystems? Learn about past and current situations of various invasive species, how they are able to move to new areas, and methods we use to help reduce introducing new species modern-day.
Earth Science: Volcanoes & Earthquakes	Discovery Expedition	Learn about the basic geology relating to volcanoes and earthquakes, and how the two are related. What are some different types of volcanoes, and how do they form? Students will also take part in an in-class chemical volcano explosion activity!
Fur Trade	Discovery Expedition	A few brave men made their way from the early 1800s through the 1830s. They lived in small settlements among the Native Americans and hunted furs to sell to European traders. Explore the types of fur bearing animals desired for trade and take part in an interactive fur trading post game.
Games and Toys	Discovery Expedition	Giggles and laughter abound while playing games of yesteryear such as marbles, pick-up sticks, cat's cradle and more. Be sure to bring your smiles while learning about historical games.
Gold Rush	Discovery Expedition	The Black Hills Gold Rush took place in Dakota Territory in the United States. It began in 1874 following the Custer Expedition. Many prospectors traveled to Deadwood in 1876 to seek their fortune. Participate in a gold panning experience while learning about gold fever.
Load Your Wagon	Discovery Expedition	A trip by covered wagon would be several months long and pioneers would need to pack enough supplies and equipment to last the journey. Come join the fun and learn through this hands-on interactive class as you decide what supplies get packed and what has to stay behind.
Pioneer Cooking	Discovery Expedition	Pioneers planted fruit trees to have fruit. After a few years, pioneers could make pies, jams, and more. Participants will make apple rings and string them ready to hang up. While having fun making your craft, you will learn about weights and measures and more on pioneer cooking.
Railroads	Discovery Expedition	A new way of sending messages was using a telegraph machine, where people could send sounds as dashes and dots to each other. These sounds turned back into words using Morse code. Working for the railroad, a telegrapher's job was to keep the trains on schedule, let train crews know of problems, or any unexpected trains ahead of them. Learn how to build a telegraph machine and then translate your name in Morse code.
Dark Matter	Discovery Expedition	Goals for this lesson is for students to gain an appreciation and knowledge about Dark Matter.
Surface Color and Effect on Temperature Change	Discovery Expedition	Have you ever walked across dark pavement or across sand? What was the experience like? Students will gain the basic understanding that change in temperature is related to the surface color of an object.
Waves and Optics	Discovery Expedition	This class is based on the NASA Summer of Innovation unit that has activities designed to demonstrate methods of using the Electromagnetic Spectrum to learn about our universe.
Forces I	Discovery Expedition	Using spaghetti, students will use an engineering design process and learn how to work as a team, while building their own structure.

Forces II	Discovery Expedition	Isaac Newton was one of the first to learn about gravity and force. Scientists still use his laws today. Be ready to laugh and have fun while using bowling balls and brooms to learn about forces!
Solar Ovens and EM Radiation	Discovery Expedition	Make a delicious treat to eat in a solar oven made out of a shoebox and in the process, learn why solar ovens are used in some countries for both cooking and drinking water.
Scale of the Universe	Discovery Expedition	This interactive class will have you counting your steps between the planets to learn about distances in space and designing your own mission badge before liftoff!
Lives of Stars	Discovery Expedition	Using pound cake, this interactive class explores elements and compounds of a star.