Grade 2 Science Instructional Focus / Toolkit			
The Grade 2 Science Instructional Focus Toolkit has been created to assist teachers in identifying activities that are well aligned to the benchmarks. This toolkit is not intended to replace your district's curriculum or to be solely used to address the benchmarks. Care was given to identify multiple activities that could be executed via hands-on inquiry, virtually and in some cases infused with the literacy block. Resources have been pulled from CPALMS. For all activities, a materials list resides on the first page once you click the link. There may be materials listed that are not accessible to you. Do not let this discourage you. There are talking points and alternative activities built within the resources. Again, the toolkit serves as a suggestion of activities that can be used to support your instruction and not be mistaken for your course description.			
Benchmark	**Verbiage**	**Instructional Guidance and Vocabulary**	**Resources**
SC.2.L.14.1	Distinguish human body parts (brain, heart, lungs, stomach, muscles, and skeleton) and their basic functions.	All plants and animals, including humans, are alike in some ways and different in others. All plants and animals, including humans, have internal parts and external structures that function to keep them alive and help them grow and reproduce. Humans can better understand the natural world through careful observation.	How Big is Your Heart? (Teaching Idea) Students measure their fists to approximate the size of their own heart and then complete a model from construction paper. Analyzing Human Body Parts (Lesson Plan) Cooperative groups research body parts and use graphic organizers. They create a human body from construction paper. What Am I? A Human Body Riddle Book: (Lesson Plan) Students identify and describe the function of major body parts using an interactive e-book and create a riddle book. Parts of the Human Body (Unit/Lesson) Sequence Students explore the major parts of the body in different stations.

			Students design and construct a helmet “skull”.
SC.2.L.16.1	Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies. Examples for other life cycles: peanuts, frogs, meal worms.	Offspring of plants and animals are similar to, but not exactly like, their parents or each other. Life cycles vary among organisms, but reproduction is a major stage in the life cycle of all organisms.	Where Do Butterflies Come From? (Presentation/Slideshow) This is an accessible, easy-to-read book about the life cycle of a butterfly. It can be downloaded in PowerPoint, Impress, or Flash format.
SC.2.L.17.1	Compare and contrast the basic needs that all living things, including humans, have for survival.	Plants and animals, including humans, interact with and depend upon each other and their environment to satisfy their basic needs. Both human activities and natural events can have major impacts on the environment. Energy flows from the sun through producers to consumers.	Diversity & Evolution grades K-2 (Lesson Study Resource Kit) A unit of instruction that is focused on diversity, adaptation, and classification of living things. Antarctic Food Chain Song-SeaWorld Classroom Activity (Teaching Idea) Students describe an Antarctic food chain through the use of song. A Dolphin's Day-SeaWorld Classroom Activity (Teaching Idea) students will use number and listening skills as they reinforce their understanding of dolphin behavior using echolocation. As the students listen to the teacher read a story about a dolphin's adventure they can either connect dots or plot points on a graph to figure out what the dolphin gets to eat at the end of the story.

			Pet For A Day! (Lesson Plan) This lesson integrates science and reading utilizing authentic text to teach headings, comparing and contrasting basic needs of animals as well as observing needs of animals.
SC.2.L.17.2	Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.		Geography Mobile-SeaWorld Classroom Activity (Teaching Idea) The student will create a mobile for each of three locations the Arctic, Australia, and Africa. Upon completing the mobile students can research the animals to understand the different animal habitats and how the habitats meet the animals' needs. No Place to Hide-SeaWorld Classroom Activity (Teaching Idea) In this activity, students will learn how the destruction of a coral reef affects the animals that live there. Square of Life Project (Unit/Lesson Sequence) The Square of Life: Studies in Local and Global Environments is an Internet-based, collaborative project in which students investigate their local environment and share that information with other students

			from around the country and the world.
SC.2.E.6.1	Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.	Boulder, stone, pebble, sand, granular, humus, crust, loam geologist, silt, soil, gravel Humans continue to explore the composition and structure of the surface of Earth. External sources of energy have continuously altered the features of Earth by means of both constructive and destructive forces. All life, including human civilization, is dependent on Earth's water and natural resources.	Rocks for Kids (Images/photographs) Information to develop understandings of rocks/minerals and the processes by which they are formed. Includes links to other websites. Rocks, Rocks, Everywhere (Lesson Plan) Students will sort rocks based upon color, hardness, texture, layering and particle size. Soil Composition and Classification (Unit/Lesson Sequence) Soil samples are observed, classified and manipulated. Students will build a wall from their own mortar mix to withstand the force of a rolling ball.
SC.2.E.6.2	Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed.		Scoop on Soil Game (Virtual Manipulative) Explains how soil is formed, how soil is important, what is in soil, and how erosion can be decreased, and how soil impacts aspects of our daily lives. What Soil! (Lesson Plan) Students will analyze different types of soil.
SC.2.E.6.3	Classify soil types based on color, texture (size of particles), the ability to retain water, and the		More About Wet Soils (Teaching Idea) Students discover unique components of soil when dry or wet.

	ability to support the growth of plants.		Jack's Magic Beans (MEA Lesson Plan) Using Jack and the Beanstalk story, students will examine types of soil, research and answer questions from text resources on the internet, then rank soils.
SC.2.E.7.1	Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season.	Humans continue to explore the interactions among water, air, and land. Air and water are in constant motion that results in changing conditions that can be observed over time	Seasons (Slideshow) An accessible, easy-to-read book about the four seasons in the Western hemisphere. Observe Water in Winter and Summer (Video) This video clip explores what happens to water in the same location over the course of different seasons. Stormy Studies (Lesson Plan) This lesson teaches children about different weather patterns using nonfiction text with supporting pictures. After reading the text, children will play a Jeopardy style game and then create a foldable as a formative assessment.
SC.2.E.7.2	Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air.		Which Color Absorbs Heat? (Teaching Idea) Students will test whether the color of a material affects how much heat it absorbs. Light and Shadows: The Sun Moves in the Sky (Teaching Idea) The class records observations of the sun's apparent motion or path through the daytime sky.

			Virtual Learning Experiences for Weather Units (Video/Audio/Animation) Website with great visuals. Students can utilize the website to self-teach, reteach, or practice what they have learned. Some of the foci of the website are: wind direction, wind force, precipitation, temperature, sunshine, visibility and clouds. Is It Hot In The Light? (Lesson Plan) Students will make observations that things in direct sunlight are warmer than things that are not in as much sunlight. Also, they may notice that there may be more heat near asphalt, brick, or cement because heat can be stored and radiated from these materials.
SC.2.E.7.3	Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).		Investigating The Water Cycle - Evaporation (Teaching Idea) In this water cycle activity, students investigate the evaporation process by participating in an outdoor evaporation experiment held on the school grounds. Students will determine where evaporation takes place the fastest and how nature and humans can affect the process. Water and Wind in Weather (Lesson Sequence) Students are

			introduced to evaporation and wind. "Windmills" synthesizes information about how wind can move objects.
SC.2.E.7.4	Investigate that air is all around us and that moving air is wind.		KROS Pacific Ocean Kayak Journey: Kites, Rowing, Wind, and Navigation (Perspectives Video) This video uses understanding of math and wind to help get you where you want to go. Three Pigs 2.0 - An Engineering Design Challenge (Lesson Plan) This Engineering Design Challenge is intended to help students apply the concepts of force from SC.2.P.13.1 (investigate the effect of applying various pushes and pulls on different objects) and the concept of wind from SC.2.E.7.4 (investigate that air is all around us and that moving air is wind) as they build structures to withstand the force of high-speed winds. It is not intended as an initial introduction to these concepts. The Air We Breathe (Teaching Idea) This is a PDF file from the NASA site featuring an online book all about air. This resource can be used as a 5E "engage" activity, to supplement an

			activity, or as a great review for the completion of an activity. It covers great facts about the Earth's atmosphere and how people, plants, and animals are all dependent on oxygen.
SC.2.E.7.5	State the importance of preparing for severe weather, lightning, and other weather related events.		Professor Tinkermeister and the Wacky, Whiz-Bang, Weather-Watching Wonder (Text Resource) This is an online book that helps students learn how to protect themselves from the hazards of thunderstorms. Weather Measure (Unit/Lesson Sequence) In this unit, students learn about meteorology and act as meteorologists, predict and take temperature measurements, and create a severe weather preparedness plan.
SC.2.P.10.1	Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.	Energy is involved in all physical processes and is a unifying concept in many areas of science. Energy exists in many forms and has the ability to do work or cause a change.	Sun and Me (Unit/Lesson Sequence) The purpose of this unit developed by the Florida Solar Energy Center is to create an awareness of the power of solar energy, the importance of it in our lives, and its impact on the future of energy development. An Energetic Place to Live (MEA Lesson) In this activity, students will review how people use electricity in their daily lives and learn about the differences

			between renewable and nonrenewable energy resources. Students will also be introduced to sound energy and how it is measured.
SC.2.P.13.1	Investigate the effect of applying various pushes and pulls on different objects.	Motion, push, pull force, gravity, direction, friction It takes energy to change the motion of objects. Energy change is understood in terms of forces--pushes or pulls. Some forces act through physical contact, while others act at a distance.	All About Motion (Teaching Idea) Students will observe and discuss motion in learning stations or in demonstration. They will observe and discuss how a push or pull affects motion. Investigating Motion With Marbles (Teaching Idea) In this guided inquiry activity, students will use 2 marbles of different size and a box to investigate what makes the marbles move and what will cause the marbles to change speed and direction.
SC.2.P.13.2	Demonstrate that magnets can be used to make some things move without touching them.		Magnets and Springs (Virtual Manipulative) This resource will teach you about the forces of attraction and repulsion between magnets, and about forces of attraction between magnets and magnetic materials. Magic Magnets (Teaching Idea) Students will be able to classify objects as metals and nonmetals, and will be able to demonstrate that magnets can make certain metals and other magnets move without actually touching them.

SC.2.P.13.3	Recognize that objects are pulled toward the ground unless something holds them up.		What Goes Up Must Come Down! (Lesson Plan) Students will investigate the following problem: How can you design an invention that keeps a balloon in the air instead of letting it be pulled to the ground by gravity? Can you keep your balloon in the air longer than the other teams?
SC.2.P.13.4	Demonstrate that the greater the force (push or pull) applied to an object, the greater the change in motion of the object.		Pinewood Derby Forces and Motion (Perspectives Video: Teaching Idea) Explore the physics behind rolling cars. Sports Equipment - What Kind of Force? (Teaching Idea) Children discuss, observe and "play" with equipment used in familiar sports. They discuss how the equipment is used and predict how the equipment is put into motion or stopped from continuing to be in motion.
SC.2.P.8.1	Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.	All objects and substances in the world are made of matter. Matter has two fundamental properties: matter takes up space and matter has mass. Objects and substances can be classified by their physical and chemical properties.	Flinkers (Problem Solving Task) Students observe properties of matter by investigating objects that sink, float or flink. May the Force Be With You (Lesson Plan) Students explore what items are attracted to magnets. The Shape of Kisses (Lesson Plan) Students compare the properties

		The use of the more familiar term 'weight' instead of the term "mass" is recommended for grades K-2.	of chocolate in solid and liquid form.
SC.2.P.8.2	Identify objects and materials as solid, liquid, or gas.		Investigating Oobleck: Solid or Liquid? (Teaching Idea) Students predict, observe, explore, question and conclude. States of Matter (Animation) Shows particle arrangement in solid, liquid, gas Explore the States (of Matter): Super Solids Explore the States (of Matter): Lovely Liquids: Explore the States (of Matter): Glorious Gases Three lesson plans designed to help students use properties to classify matter.
SC.2.P.8.3	Recognize that solids have a definite shape and that liquids and gases take the shape of their container.		Effect of Shape on Volume: (Lesson Plan) Students learn that volume is not affected by a container's shape. The Mystery Book (Lesson Plan) Students use manipulatives to sort into solid, liquid and gas. Solid or Liquid? (Teaching Idea) Students investigate if materials are solid or liquid using predictions, recording observations, drawing conclusions and formulating questions.

SC.2.P.8.4	Observe and describe water in its solid, liquid, and gaseous states.		Observe Water in Winter and Summer (Video) Explores what water looks like in the same location in different seasons. Solar Still Part 1: Salt Water (Video Clip) This video shows a model of the water cycle using a homemade solar still to separate pure water from salt water.
SC.2.P.8.5	Measure and compare temperatures taken every day at the same time.		What's the Weather? (Lesson Plan) Students make daily weather observations and learn about meteorology and changing nature of weather.
SC.2.P.8.6	Measure and compare the volume of liquids using containers of various shapes and sizes.		Effect of Shape on Volume: (Lesson Plan) Students learn that volume is not affected by a container's shape.
SC.2.P.9.1	Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.	Matter can be changed physically or chemically.	How Degrading-SeaWorld Classroom Activity (Teaching Idea) Students will demonstrate how some materials degrade in salt water better than others. Look How It Changes (Lesson Plan) Students use informational text to explore physical and chemical changes that occur throughout the seasons. Holey Rusted Metal! (Lesson Plan) Students conduct a guided inquiry lab involving the chemical change that creates rust.