Second Grade Science Curriculum Map

Quarter 2						
NGSSS Body of Knowledge	*Nature of Science/Earth and Space Science/Physical Science*	*Nature of Science/Earth and Space Science/Physical Science*	*Nature of Science/Earth and Space Science/Physical Science*	*Nature of Science/Physical Science*	*Nature of Science/Physical Science*	*Nature of Science/Physical Science*
Unit of Study	Weather	Weather	Weather	Properties of Matter	Changes in Matter	Changes in Matter
Target Standards	SC.2.E.7.2 : Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air.	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).	SC.2.E.7.4 : Investigate that air is all around us and that moving air is wind. SC.2.E.7.5 : State the importance of preparing for severe weather, lightning, and other weather related events.	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.	SC.2.P.8.2 : Identify objects and materials as solid, liquid, or gas.	SC.2.P.8.3 : Recognize that solids have a definite shape and that liquids and gases take the shape of their water vapor container. SC.2.P.8.4 : Observe and describe water in its solid, liquid, and gaseous states.
Pacing	Weeks 10-11	Weeks 10-11	Week 12	Weeks 13-16	Weeks 17-18	Weeks 17-18
Objective/ Learning Goal/SWBT	*Investigate that heat from the sun causes an increase in temperature. *Discuss and explain that more direct exposure to the sun causes a greater increase in temperature. *Investigate and record patterns of change as the sun directly and indirectly heats land (soil), air, and water. (direct – placing objects in sun's direct rays), (indirect – placing objects in containers that are not in sun's direct rays). *Compare results with peers. *Answer "how do you know" questions to communicate own thinking. *Ask "how do you know" questions to understanding peers' thinking.	*Investigate and record how water left in an open container seems to disappear (evaporate) and water in a closed container does not disappear (evaporate). *Compare the results of the two investigations. *Discuss the impact sun's energy plays in evaporation. *Explain that air/water are in constant motion as water changes from a liquid to water vapor.	*Explain that air is all around us even though it cannot be seen. *Observe that air takes up space and has weight. *Define wind as moving air. *Investigate the effects of wind on various objects. *Identify ways wind can be harnessed for human use. *Explain that wind can be a source of great power and can cause damage and dangerous storms. *Identify and describe severe conditions such as hail, lightning, floods, and fires associated with severe weather events specific to this area. *Discuss the procedures the school has in place to prepare students and staff for severe weather events. *Discuss the importance of having a plan at home and in the classroom for severe weather. *Generate a list of items that would be good to have in a home or classroom emergency kit, making comparisons between them.	*Describe and record an object's physical properties – observable and measurable characteristics. *Explain that objects/substances are known as matter. *Discuss that matter is anything that has weight and takes up space. *Measure and compare the length of objects (matter) using a metric ruler. *Measure and compare the weight of objects (matter) using a balance. *Measure and compare the temperature of matter (solids, liquids, and gases) using a thermometer. *Predict and investigate whether various objects will sink or float in water. *Draw conclusions about objects that sink and objects that float. *Investigate the effect a magnet has on magnetic (including other magnets) and nonmagnetic objects (push/repel, pull/attract, no effect).	*Sort objects (matter) and materials into three categories (solid, liquid or gas) based on similar physical characteristics. *Explain the reasons objects/materials were put into each category. *Explain that scientists classify things into groups according to common or similar properties.	*Explain that one physical characteristic of a solid is that it has a definite shape. *Investigate how the shape of a solid can be changed by applying energy or a force to it. *Explain that one physical characteristic of a liquid is that it takes the shape of its container. *Investigate how a liquid flows from one place to another when it is not contained. *Explain that one physical characteristic of a gas is that it takes the shape of its container. *Compare any two forms of matter. *Observe and describe water in its solid, liquid and gaseous state. *Investigate how a change in temperature changes the physical properties of water. *Explain that water is still water even when it changes from a solid to a liquid to a gas and vice versa.
Inquiry Flipcharts/Labs	How Does the Sun Heat Earth?, p. 11 What Is Evaporation?, p. 12	How Does the Sun Heat Earth?, p. 11 What Is Evaporation?, p. 12	Wind Watching, p.10 Make Your Own Tornado, p. 13 Keep It Safe, p.13	How Can We Measure and Compare Objects?, p. 15 Sink the Boat, p. 14 Property Scavenger Hunt, p.14	What State Is It?, p. 16 The Paper Towel Mystery, p.16	What State Is It?, p. 16 The Paper Towel Mystery, p.16
Fusion Textbook	p.79-82A	p.79-82A	p.83-92	p.95-108A	p.109-120	p.109-120