

Second Grade

Science as Inquiry

Research shows that young students work well in a cooperative learning environment. Students should be actively involved in exploring phenomena in the natural world posing questions and seeking answers as they arise. Students develop simple skills of observation, measurement and number sense as they actively participate in simple investigations. During investigations, students must have opportunity to use tools such as magnifiers, thermometers, rulers, or balances to gather data and extend their senses. They must have ample time to talk about their observations and compare their observations with those of others. They should be encouraged to employ oral language, drawings and models to communicate results and explanations of investigations and experiments. In a cooperative learning environment, students learn that when people give different descriptions of the same thing, it is better to make new observations instead of debating about who is correct. Students must always use appropriate safety procedures, including listening skills, when conducting simple investigations.

Forces and Motion

	Essential Standard	Clarifying Objectives	
2.P.1	Understand the relationship between sound and vibrating objects.	2.P.1.1	Illustrate how sound is produced by vibrating objects and columns of air.
		2.P.1.2	Summarize the relationship between sound and objects of the body that vibrate – eardrum and vocal cords.

Matter: Properties and Change

	Essential Standard	Clarifying Objectives	
2.P.2	Understand properties of solids and liquids and the changes they undergo.	2.P.2.1	Give examples of matter that change from a solid to a liquid and from a liquid to a solid by heating and cooling.
		2.P.2.2	Compare the amount (volume and weight) of water in a container before and after freezing.
		2.P.2.3	Compare what happens to water left in an open container over time as to water left in a closed container.

Earth Systems, Structures and Processes

	Essential Standard	Clarifying Objectives	
2.E.1	Understand patterns of weather and factors that affect weather.	2.E.1.1	Summarize how energy from the sun serves as a source of light that warms the land, air and water.
		2.E.1.2	Summarize weather conditions using qualitative and quantitative measures to describe: <ul style="list-style-type: none"> • Temperature • Wind direction • Wind speed • Precipitation
		2.E.1.3	Compare weather patterns that occur over time and relate observable patterns to time of day and time of year.
		2.E.1.4	Recognize the tools that scientists use for observing, recording, and predicting weather changes from day to day and during the seasons.

Structures and Functions of Living Organisms

	Essential Standard	Clarifying Objectives	
2.L.1	Understand animal life cycles.	2.L.1.1	Summarize the life cycle of animals: <ul style="list-style-type: none"> • Birth • Developing into an adult • Reproducing • Aging and death
		2.L.1.2	Compare life cycles of different animals such as, but not limited to, mealworms, ladybugs, crickets, guppies or frogs.

Evolution and Genetics

	Essential Standard	Clarifying Objectives	
2.L.2	Remember that organisms differ from or are similar to their parents based on the characteristics of the organism.	2.L.2.1	Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.
		2.L.2.2	Recognize that there is variation among individuals that are related.