2010 MS Framework G1 - Inquiry	2018 MS CCRS for Science - all grades and courses
Competency 1. Understand how to plan and carry out a simple scientific investigation.	All Inquiry skills will be taught in the appropriate performance objectives in the new standards. Students will use various Science and Engineering Practices (SEPs) to learn the content. All science skills should be included as needed.
1a. Demonstrate an understanding of a simple investigation by asking appropriate questions about objects, organisms,	
1b. Compare, sort, and group objects according to their attributes.	
1c. Use simple tools (e.g., rulers, scales, hand lenses, thermometers, microscopes) to gather information. • Length, using nonstandard units (e.g., paper clips, Unifix cubes, etc.) and standard units (inches, centimeters) • Weight, using a balance scale with and without nonstandard units • Capacity, using nonstandard units	
1d. Match a simple problem to a technological solution related to the problem (e.g., dull pencil – sharpener, bright light – sunglasses, hot room – fan, cold head – hat, heavy	
1e. Use diagrams and written and oral expression to describe ideas or data.	
1f. Explain why scientists and engineers often work in teams with different individuals doing different things that contribute to the results.	

2010 MS Framework G1 – Life Science	2018 MS CCRS for Science G1 – Life Science
Competency 3. Develop an understanding of the characteristics, structures, life cycles, interactions, and environments of organisms.	**Standard statements are in bold font below.**
3a. Classify animals and plants by observable features (e.g., size, appearance, color, motion, habitat).	**L.1.1 Students will demonstrate an understanding of the basic needs and structures of plants.** L.1.1.1 Construct explanations using first-hand observations or other media to describe the structures of different plants (i.e., root, stem, leaves, flowers, and fruit). Report findings using drawings, writing, or models. L.1.1.2 Obtain information from informational text and other media to describe the function of each plant part (roots absorb water and anchor the plant, leaves make food, the stem transports water and food, petals attract pollinators, flowers produce seeds, and seeds produce new plants). L.1.1.3 Design and conduct an experiment that shows the absorption of water and how it is transported through the plant. Report observations using drawings, sketches, or models. L.1.1.4 Create a model which explains the function of each plant structure (roots, stem, leaves, petals, flowers, seeds). L.1.1.5 With teacher support, gain an understanding that scientists are humans who use observations and experiments to learn about the natural world. Obtain information from informational text or other media about scientists who have made important observations about plants (e.g., Theophrastus, Gregor Mendel, George Washington Carver, Katherine Esau). [**Animals moved to Grade 2 (2.1.1)**]
3b. Describe the primary function of the major body organs (brain, skin, heart, lungs, stomach, intestines, bones, and muscles).	*Expanded and moved to Grade 4(L.4.1)*
3c. Communicate the importance of food and explain how the body utilizes food.	*Expanded and moved to Grade 4(L.4.1)*

2010 MS Framework G1 – Life Science	2018 MS CCRS for Science G1 – Life Science
3d. Chart and compare the growth and changes of animals from birth to adulthood.	**L.1.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.** L.1.2.1 Investigate, using observations and measurements (non-standard units), flowering plants (pumpkins, peas, marigolds, or sunflowers) as they change during the life cycle (i.e., germination, growth, reproduction, and seed dispersal). Use drawings, writing, or models to communicate findings. L.1.2.2 Obtain, evaluate, and communicate information through labeled drawings, the life cycle (egg, larva, pupa, adult) of pollinating insects (e.g., bees, butterflies). **[Other animal life cycles taught in G2]**
3e. Identify the basic needs of plants and animals and recognize that plants and animals both need to take in water, animals need food, and plants need light.	**L.1.3A Students will demonstrate an understanding of what plants need from the environment for growth and repair.** L.1.3A.1 Conduct structured investigations to make and test predictions about what plants need to live, grow, and repair including water, nutrients, sunlight, and space. Develop explanations, compare results, and report findings. **L.1.3B Students will demonstrate an understanding of the interdependence of flowering plants and pollinating insects.** L.1.3B.1 Identify the body parts of a pollinating insect (e.g., bee, butterfly) and describe how insects use these parts to gather nectar or disburse pollen. Report findings using drawings, writing, or models.
3f. Identify and label the parts of a plant.	*See above - L.1.1.1*

2010 MS Framework G1 – Life Science	2018 MS CCRS for Science G1 – Life Science
Previously taught about plants and animals in Grade 3.	**L.1.4 Students will demonstrate an understanding of the ways plants adapt to their environment in order to survive.** L.1.4.1 Explore the cause and effect relationship between plant adaptations and environmental changes (i.e., leaves turning toward the sun, leaves changing color, leaves wilting, or trees shedding leaves). L.1.4.2 Describe how the different characteristics of plants help them to survive in distinct environments (e.g., rain forest, desert, grasslands, forests). L.1.4.3 Create a solution for an agricultural problem (i.e. pollination, seed dispersal, over-crowding). Use an engineering design process to define the problem, design, construct, evaluate, and improve the solution.*

2010 MS Framework G1 – Physical Science	2018 MS CCRS for Science G1 – Physical Science
Competency 2. Develop an understanding of properties of objects and materials, position and motion of objects, and properties of heat and magnetism.	**Standard statements are in bold font below.**
2a. Recognize that most things are made of parts.	*Expanded and moved to Kindergarten (P.K.5.B)*
2b. Describe properties and changes of objects and materials. • Processes of melting and freezing • How water evaporates and disappears into the atmosphere • How water condenses onto cold surfaces	*Expanded and moved to Grade 2 (P.2.5)*
2c. Describe the effects of various forms of motion and of forces on objects. • Different forms of motion (sliding, rolling, straight line, circular, back-and-forth) • Effects that motion can produce (spilling, breaking, bending)	*Expanded and moved to Grade 2 (P.2.6)*
2d. Differentiate between interactions of two magnets and the interaction of a magnet with objects made of iron, other metals, and nonmetals.	*Expanded and moved to Grade 3 (P.3.6)*
2e. Describe changes in shadows over time and predict how a shadow will look as the light source moves.	**P.1.6A Students will demonstrate an understanding that light is required to make objects visible.** P.1.6A.1 Construct explanations using first-hand observations or other media to describe how reflected light makes an object visible. P.1.6A.2 Use evidence from observations to explain how shadows form and change with the position of the light source.
2f. Compare and classify solids and liquids.	*Expanded and moved to Kindergarten (P.K.5.A)*

2010 MS Framework G1 – Physical Science	2018 MS CCRS for Science G1 – Physical Science
2g. Identify vibrating objects that produce sound and classify sounds (e.g., high or low pitched, loud or soft).	**P.1.6B Students will demonstrate an understanding of sound.** P.1.6B.1 Conduct an investigation to provide evidence that vibrations create sound (e.g., pluck a guitar string) and that sound can create vibrations (e.g., feeling sound through a speaker). P.1.6B.2 Create a device that uses light and/or sound to communicate over a distance (e.g., signal lamp with a flashlight). Use an engineering design process to define the problem, design, construct, evaluate, and improve the device.*

2010 MS Framework G1 - Earth Science	2018 MS CCRS for Science G1 – Earth Science
Competency 4. Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.	**Standard statements are in bold font below.**
4a. Compare and classify Earth materials. • Physical attributes of rocks (e.g., large/small, heavy/light, smooth/rough, hard/crumbly, dark/light, etc.) • Physical attributes of soil (e.g., smell, texture, color, etc.)	*Expanded and moved to Grade 2 (E.2.10)*
4b. Identify Earth landforms and bodies of water (e.g., continents, islands, peninsulas, oceans, rivers, lakes, ponds, creeks).	**E.1.9B Students will demonstrate an understanding of models (drawings or maps) to describe how water and land are distributed on Earth.** E.1.9B.1 Locate, classify, and describe bodies of water (oceans, rivers, lakes, and ponds) on the Earth's surface using maps, globes, or other media. E.1.9B.2 Generate and answer questions to explain the patterns and location of frozen and liquid bodies of water on earth using maps, globes, or other media. E.1.9B.3 With teacher guidance, plan and conduct a structured investigation to determine how the movement of water can change the shape of the land on earth.
4c. Observe, identify, record, and graph daily weather conditions.	**E.1.9A Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.** E.1.9A.1 Analyze and interpret data from observations and measurements to describe local weather conditions (including temperature, wind, and forms of precipitation). E.1.9A.2 Develop and use models to predict weather conditions associated with seasonal patterns and changes. E.1.9A.3 Construct an explanation for the general pattern of change in daily temperatures by measuring and calculating the difference between morning and afternoon temperatures. E.1.9A.4 Obtain and communicate information about severe weather conditions to explain why certain safety precautions are necessary.

2010 MS Framework G1 - Earth Science	2018 MS CCRS for Science G1 – Earth Science
4d. Categorize types of actions that cause water, air, or land pollution.	**E.1.10 Students will demonstrate an understanding of human dependence on clean and renewable water resources.** E.1.10.1 Obtain and evaluate informational texts and other media to generate and answer questions about water sources and human uses of clean water. E.1.10.2 Communicate solutions that will reduce the impact of humans on the use and quality of water in the local environment. E.1.10.3 Create a device that will collect free water to meet a human need (e.g., household drinking water, watering plants/animals, cleaning). Use an engineering design process to define the problem, design, construct, evaluate, and improve the device.* **[Emphasis is on water in G1]**
4e. Collect, categorize, and display various ways energy from the sun is used.	*See E.1.9.A above*
4f. Identify relationships between lights and shadows and illustrate how the shape of the moon changes over time.	*Expanded and moved to Grade 2 (E.2.8)*
4g. Distinguish characteristics of each season and describe how each season merges into the next.	*Moved to Kindergarten (E.K.8A).*