

FLORIDA SCIENCE STANDARDS: GRADE K

INSTRUCTIONS: At the end of your final 180 days of teaching, complete this checklist indicating a **mastered skill** by circling **M** or circle **W** for a **skill you are working on**. If you find a **skill you are not ready to tackle**, circle **NA**. Submit this checklist with a completed a Private School Covering Semester Report available at <http://www.mycca.org/updates.htm>. Completed checklists for subjects that students are taking through CCA group classes are not required.

Big Idea1:

A: Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.

B: The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."

C: Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge.

D: Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.

STATUS			SKILL
M	W	NA	Collaborate with a partner to collect information.
M	W	NA	Make observations of the natural world and know that they are descriptors collected using the five senses.
M	W	NA	Keep records as appropriate -- such as pictorial records -- of investigations conducted.
M	W	NA	Observe and create a visual representation of an object which includes its major features.
M	W	NA	Recognize that learning can come from careful observation.

Big Idea10:

A. Energy is involved in all physical processes and is a unifying concept in many areas of science.

B. Energy exists in many forms and has the ability to do work or cause a change.

STATUS			SKILL
M	W	NA	Observe that things that make sound vibrate.

Big Idea12:

A. Motion is a key characteristic of all matter that can be observed, described, and measured.

B. The motion of objects can be changed by forces.

STATUS			SKILL
M	W	NA	Investigate that things move in different ways, such as fast, slow, etc.

Big Idea13:

A. It takes energy to change the motion of objects.

B. Energy change is understood in terms of forces--pushes or pulls.

C. Some forces act through physical contact, while others act at a distance.

STATUS			SKILL
M	W	NA	Observe that a push or a pull can change the way an object is moving.

Big Idea14:

A. All plants and animals, including humans, are alike in some ways and different in others.

B. All plants and animals, including humans, have internal parts and external structures that function to keep them alive and help them grow and reproduce.

C. Humans can better understand the natural world through careful observation.

STATUS			SKILL
M	W	NA	Recognize the five senses and related body parts.
M	W	NA	Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.
M	W	NA	Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.

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Big Idea5: Humans continue to explore Earth's place in space. Gravity and energy influence the formation of galaxies, including our own Milky Way Galaxy, stars, the Solar System, and Earth. Humankind's need to explore continues to lead to the development of knowledge and understanding of our Solar System.

STATUS			SKILL
M	W	NA	Explore the Law of Gravity by investigating how objects are pulled toward the ground unless something holds them up.
M	W	NA	Recognize the repeating pattern of day and night.
M	W	NA	Recognize that the Sun can only be seen in the daytime.
M	W	NA	Observe that sometimes the Moon can be seen at night and sometimes during the day.
M	W	NA	Observe that things can be big and things can be small as seen from Earth.
M	W	NA	Observe that some objects are far away and some are nearby as seen from Earth.

Big Idea8:

A. All objects and substances in the world are made of matter. Matter has two fundamental properties: matter takes up space and matter has mass.

B. Objects and substances can be classified by their physical and chemical properties.

Mass is the amount of matter (or "stuff") in an object. Weight, on the other hand, is the measure of force of attraction (gravitational force) between an object and Earth.

The concepts of mass and weight are complicated and potentially confusing to elementary students. Hence, the more familiar term of "weight" is recommended for use to stand for both mass and weight in grades K-5. By grades 6-8, students are expected to understand the distinction between mass and weight, and use them appropriately.

STATUS			SKILL
M	W	NA	Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.

Big Idea9:

A. Matter can undergo a variety of changes.

B. Matter can be changed physically or chemically.

STATUS			SKILL
M	W	NA	Recognize that the shape of materials such as paper and clay can be changed by cutting, tearing, crumpling, smashing, or rolling.