

# **Grade Level Expectations for the Sunshine State Standards**

## **Science Third Grade**



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**Sunshine State Standards  
Grade Level Expectations  
Science  
Third Grade**

The third grade student:

*The Nature of Matter*

- determines the physical properties of matter using metric measurements that incorporate tools such as rulers, thermometers, balances.
- understands that physical changes in the states of matter can be produced by heating and cooling.
- knows that the weight of an object is equal to the sum of the weights of its parts.
- uses a tool to observe and study minute details of objects (for example, hand lens).

*Energy*

- knows objects that emit heat and light.
- knows different forms of energy (for example, heat, light, sound).
- knows that the Sun provides energy for the Earth in the form of heat and light.
- knows that heat can be produced by chemical reactions, electrical machines, and friction.
- uses a variety of tools to measure the gain or loss of energy.
- knows that when a warmer object comes in contact with a cooler one, the warm object loses heat and the cool one gains it until they are both at the same temperature.
- knows that some source of energy is needed for organisms to stay alive and grow.
- knows ways natural resources are important.
- classifies resources as renewable or nonrenewable.
- knows that alternate energy sources (for example, synthetic fuels, geothermal energy) are being explored using natural and mechanical processes.

*Force and Motion*

- describes the motion of various objects (for example, forward, circular, wave).
- understands the characteristics of waves (for example, crest, trough, length).
- knows the six types of simple machines (screw, inclined plane, wedge, pulley, lever, and wheel and axle).
- knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting on the object.

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*Processes that Shape the Earth*

- knows that smaller rocks come from the breaking and weathering of bedrock and larger rocks.
- knows that approximately 75 percent of the surface of the Earth is covered by water.
- understands the stages of the water cycle (for example, evaporation, condensation, precipitation).
- understands the processes of weathering and erosion.
- knows that land forms change over time (for example, earthquakes, volcanoes).
- knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.

*Earth and Space*

- knows that days and nights change in length throughout the year.
- knows the patterns of average temperatures throughout the year.
- knows the frequency of the lunar cycle is approximately 28 days.
- knows the Sun is a star that is much nearer to the Earth than the other stars.
- knows characteristics of Mercury, Venus, Earth, and Mars.
- knows the relative positions of all the planets
- knows that, in addition to the Sun, there are many other stars that are far away.

*Processes of Life*

- understands the various ways that animals depend on plants for survival (for example, food, shelter, oxygen).
- knows the common and distinguishing characteristics of groups of vertebrate animals (mammals, birds, fish, reptiles, amphibians).
- understands similarities and differences among plants.
- understands that although plants and animals are different, they also share common characteristics (for example, they both have structures for reproduction, respiration, and growth).

*How Living Things Interact with Their Environment*

- knows how organisms with similar needs in a climatic region compete with one another for resources such as food, water, oxygen, or space.

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- knows behavioral and structural adaptations that allow plants and animals to survive in an environment.
- understands that energy is transferred to living organisms through the food they eat.
- knows examples of living things that are classified as producers, consumers, carnivores, herbivores, and omnivores.
- understands that plants and animals share and compete for limited resources such as oxygen, water, food, and space.
- knows that the size of a population is dependent upon the available resources within its community.

*The Nature of Science*

- knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.
- plans and investigates an experiment that defines a problem, proposes a solution, identifies variables, collects and organizes data, interprets data in tables, charts and graphs, analyzes information, makes predictions, and presents and supports findings.
- uses various kinds of instruments to collect and analyze information (for example, meter sticks, timing devices, graduated cylinders, force meters, pan balances, calipers, microscopes, cameras, sound recorders, hot plates, magnets, collecting nets).
- knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.
- knows that to compare and contrast observations and results is an essential skill in science.
- uses sketches, diagrams and models to understand scientific ideas.
- makes predictions and inferences based on observations.
- uses charts and graphs to understand patterns of change.
- understands the relationships between science concepts and the history of science and the contributions of scientists.
- uses reference materials to obtain information related to science concepts.
- knows that data are collected and interpreted in order to explain an event or concept.
- understands that scientific information can be presented in several ways (for example, using numbers and mathematics, drawings, words, graphs, tables).

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- understands how scientific discoveries have helped or hindered progress regarding human health and lifestyles.
- knows that, through the use of science processes and knowledge, people can solve problems, make decisions, and form new ideas.



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