

Sunshine State Standards, Grades 3-5
Benchmarks that can be taught through
***The Dinosaurs of China* exhibit**

Strand D: Processes that Shape the Earth

Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.

Benchmark SC.D.1.2.4: The student knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features.

Grade Level Expectations

The student:

Third

1. understands the processes of weathering and erosion.

Fourth

1. understands how processes of weathering and erosion constantly change the surface of the Earth.

Fifth

1. understands how eroded materials are transported and deposited over time in new areas to form new features (for example, deltas, beaches, dunes).
2. understands that geological features result from the movement of the crust of the Earth (for example, mountains, volcanic islands).

Strand F: Processes of Life

Standard 1: The student describes patterns of structure and function in living things.

Benchmark SC.F.1.2.2: The student knows how all animals depend on plants.

Grade Level Expectations

The student:

Third

1. understands the various ways that animals depend on plants for survival (for example, food, shelter, oxygen).

Fourth

Content addressed at third grade.

Fifth

Content addressed at third grade.

Benchmark SC.F.1.2.3: The student knows that living things are different but share similar structures.

Grade Level Expectations

The student:

Third

1. knows the common and distinguishing characteristics of groups of vertebrate animals (mammals, birds, fish, reptiles, amphibians).
2. understands similarities and differences among plants.
3. understands that although plants and animals are different, they also share common characteristics (for example, they both have structures for reproduction, respiration, and growth).

Fourth

Content addressed at third grade.

Fifth

Content addressed at third grade.

Standard 2: The student understands the process and importance of genetic diversity.

Benchmark SC.F.2.2.1: The student knows that many characteristics of an organism are inherited from the parents of the organism, but that other characteristics are learned from an individual's interactions with the environment.

Grade Level Expectations

The student:

Third

Content addressed at fifth grade.

Fourth

Content addressed at fifth grade.

Fifth

1. knows that many characteristics of an organism are inherited from the genetic ancestors of the organism (for example, eye color, flower color).
2. knows that some characteristics result from the organism's interactions with the environment (for example, flamingos eat a certain crustacean that causes their feathers to be pink).

Strand G: How Living Things Interact with Their Environment

Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.

Benchmark SC.G.1.2.1: The student knows ways that plants, animals, and protists interact.

Grade Level Expectations

The student:

Third

Content addressed at fourth and fifth grades.

Fourth

1. knows how plants and animals interact with one another in an ecosystem (for example, organization of communities, flow of energy through food webs).
2. understands the relationship among organisms in aquatic and terrestrial food chains (for example, the role of producers, consumers, and decomposers).

Fifth

1. understands the various roles of single-celled organisms in the environment.
2. knows ways in which protists interact with plants and animals in the environment.

Benchmark SC.G.1.2.2: The student knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment.

Grade Level Expectations

The student:

Third

1. knows how organisms with similar needs in a climatic region compete with one another for resources such as food, water, oxygen, or space.
2. knows behavioral and structural adaptations that allow plants and animals to survive in an environment.

Fourth

Content addressed at third and fifth grades.

Fifth

1. understands how changes in the environment affect organisms (for example, some organisms move in, others move out; some organisms survive and reproduce, others die).

Benchmark SC.G.1.2.5: The student knows that animals eat plants or other animals to acquire the energy they need for survival.

Grade Level Expectations

The student:

Third

1. understands that energy is transferred to living organisms through the food they eat.
2. knows examples of living things that are classified as producers, consumers, carnivores, herbivores, and omnivores.

Fourth

Content addressed at third grade.

Fifth

Content addressed at third grade.

Standard 2: The student understands the consequences of using limited natural resources.

Benchmark SC.G.2.2.3: The student understands that changes in the habitat of an organism may be beneficial or harmful.

Grade Level Expectations

The student:

Third

Content addressed at fourth grade.

Fourth

1. understands patterns of interdependency in ecological systems.
2. understands that what benefits one organism may be harmful to other organisms.
3. understands that changes in an ecological system usually affect the whole system.

Fifth

Content addressed at fourth grade.

Strand H: The Nature of Science

Standard 1: The student uses the scientific processes and habits of mind to solve problems.

Benchmark SC.H.1.2.1: The student knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.

Grade Level Expectations

The student:

Third

1. knows that it is important to keep accurate records and descriptions to provide information and clues on causes of discrepancies in repeated experiments.

Fourth

1. knows that scientists make the results of their investigations public, and they describe the investigations in ways that enable others to repeat the investigation.

Fifth

1. understands that although the same scientific investigation may give slightly different results when it is carried out by different persons or at different times or places, the general evidence collected from the investigation should be replicable by others.

Benchmark SC.H.1.2.2.: The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.

Grade Level Expectations

The student:

Third

1. 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.
2. 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).

Fourth

1. plans and investigates experiments in which hypotheses are formulated based on cause and effect relationships; distinctions are made among observations,

conclusions/inferences and predictions; a limited number of variables are controlled; and numerical data that are contradictory or unusual in experimental results are recognized.

2. uses metric tools to measure, record, and interpret data.

Fifth

1. understands that scientists use different kinds of investigations (for example, observations of events in nature, controlled experiments) depending on the questions they are trying to answer.

2. understands the importance of accuracy in conducting measurements, and uses estimation when exact measurements are not possible.

Benchmark SC.H.1.2.4: The student knows that to compare and contrast observations and results is an essential skill in science.

Grade Level Expectations

The student:

Third

1. knows that to compare and contrast observations and results is an essential skill in science.

Fourth

1. knows that comparisons between experiments can be made when conditions are the same.

Fifth

1. uses strategies to review, compare and contrast, and critique scientific investigations.

2. knows that an experiment must be repeated many times and yield consistent results before the results are accepted.

Benchmark SC.H.1.2.5: The student knows that a model of something is different from the real thing, but can be used to learn something about the real thing.

Grade Level Expectations

The student:

Third

1. uses sketches, diagrams and models to understand scientific ideas.

Fourth

1. knows that a model of something is different from the real thing, but can be used to learn something about the real thing.

Fifth

1. uses sketches and diagrams to propose scientific solutions to problems.

2. constructs models to compare objects in science.

Standard 3: The student understands that science, technology, and society are interwoven and interdependent.

Benchmark SC.H.3.2.2: The student knows that data are collected and interpreted in order to explain an event or concept.

Grade Level Expectations

The student:

Third

1. knows that data are collected and interpreted in order to explain an event or concept.
2. understands that scientific information can be presented in several ways (for example, using numbers and mathematics, drawings, words, graphs, tables).

Fourth

1. constructs and analyzes graphs, tables, maps, and charts to organize, examine, and evaluate information.

Fifth

1. selects appropriate graphical representations (for example, graphs, charts, diagrams) to collect, record, and report data.