



Miami Seaquarium is a great field trip option that will teach students about wildlife conservation and life sciences. Through our park signage and marine mammal shows, we offer educational and fun experiences that will cover FL standards of education just by visiting the park. Here is a list of science standards that will be covered just by visiting our park.

### Kinder

#### SC.K.L.14.2

Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.

*Example:* In the sea lion show Salty is thought to be giving CPR to a scuba diver. When in reality, sea lions cannot give CPR.

#### SC.K.L.14.3

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.

*Example:* Observe seals and sea lions. Ask students to describe some similarities between these marine mammals and some differences about them.

#### SC.K.N.1.2

Make observations of the natural world and know that they are descriptors collected using the five senses.

*Example:* Touch the sting rays: Ask students to observe using their 5 senses. How does the sting ray feel? What does the sting ray look like? Can you eat a sting ray? Can you smell the sting rays? If you participate in a sting ray feeding: What does the sting ray food feel and smell like?

#### SC.K.N.1.4

Observe and create a visual representation of an object which includes its major features.

*Example:* Observe the dolphins. Ask the students to describe what some major features of the animal are.

#### SC.K.N.1.5

Recognize that learning can come from careful observation.

*Example:* Observe the penguins: what can you learn about the penguins from watching them interact with each other? What can you learn about the penguins from observing their environment?

### 1st

#### SC.1.E.6.2



Describe the need for water and how to be safe around water.

*Example:* Which animals in the park need water to survive? Do they hold their breath for a long time? How long can you hold your breath?

SC.1.L.14.1

Make observations of living things and their environment using the five senses.

*Example:* Touch the sting rays: Ask students to observe using their 5 senses. How does the sting ray feel? What does the sting ray look like? Can you eat a sting ray? Can you smell the sting rays? If you participate in a sting ray feeding: What does the sting ray food feel and smell like?

SC.1.L.14.3

Differentiate between living and nonliving things.

*Example:* Observe the aquariums in dolphin lobby. Ask the students to point out living creatures (fish, sea urchins, sting rays) and to point out nonliving things (rocks, sand). Take them to the Rescue a Reef coral exhibit, ask them if the corals are living or nonliving. Explain that corals are living things even though they look to be nonliving.

SC.1.L.16.1

Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.

*Example:* Visit our top deck dolphin exhibit. Here you will see a mother and her baby. Talk about similarities between the students and their parents. Explain that it is the same with animals.

SC.1.L.17.1

Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.

*Example:* Observe our manatees during the Manatee Presentation (check your show schedule). Watch the manatees eat their food. Have the children list the necessities that are available in the exhibit that they observe the manatees using. Air – see the manatees take a breath. Water – see the fresh water hose running. Food – see the manatees eating. Space – see the exhibit where they live.

SC.1.N.1.2

Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.

*Example:* Visit the red footed tortoises at Tropical Wings. In groups have the children describe what the tortoises look like, feel like, how much they think they weigh, how they move and how many there are.



SC.1.N.1.4

Ask "how do you know?" in appropriate situations.

*Example:* Ask "how do you know" for any one of the previous examples.

2<sup>nd</sup>

SC.2.L.17.1

Compare and contrast the basic needs that all living things, including humans, have for survival.

*Example:* Observe our manatees during the Manatee Presentation (check your show schedule). Watch the manatees eat their food. Have the children list the necessities that are available in the exhibit that they observe the manatees using. Air – see the manatees take a breath. Water – see the fresh water hose running. Food – see the manatees eating. Space – see the exhibit where they live. Ask the students to describe how they receive these basic necessities in their own lives.

SC.2.L.17.2

Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.

*Example:* Visit the penguin exhibit: explain that these penguins are found and are adapted to a climate that is different than that of south Florida. Their enclosure is temperature controlled.

SC.2.N.1.3

Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others.

*Example:* Ask the students if penguins are birds. When they respond, prompt them with "how do you know" Talk about what characteristics make penguins birds.

3<sup>rd</sup>

SC.3.E.6.1

Demonstrate that radiant energy from the Sun can heat objects and when the Sun is not present, heat may be lost.

*Example:* Visit the aquariums in dolphin lobby – Observe the lighting in each. These animals need like from the "sun" in order to keep the water temperature adequate for each species. Without these lights, heat would be lost.

SC.3.L.15.1



Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.

*Example:* Visit multiple exhibits in the park and ask the students what kind of animal is in each exhibit. Ask them to explain their answer. What characteristics do these animals have that make them a mammal, reptile, fish etc?

SC.3.N.1.6

Infer based on observation

*Example:* Infer what kind of animal dolphins are based on observing them.

4<sup>th</sup>

SC.4.L.16.2

Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment.

*Example:* Observe the killer whale and pacific white sided dolphins. In the wild, these animals would not necessarily spend time together. Here at MSQ, they are members of the same pod and play together. Observe the manatees. Juliet the manatee is over 60 years old. Manatees in the wild rarely reach this age. She does not have any environmental stressors or threats that would cause her to die at a young age.

SC.4.L.16.3

Recognize that animal behaviors may be shaped by heredity and learning.

*Example:* Observe the dolphins or sea lions during a show. Speak to the students about how they know how to do the behaviors in the show. Who teaches them?

SC.4.L.17.2

Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.

*Example:* Observe the manatees – What do they eat? Where does that food come from in the wild? Observe the dolphins – What do they eat? Where does that food come from in the wild? Explain that these animals cannot produce their own food, like plants.

SC.4.L.17.4

Recognize ways plants and animals, including humans, can impact the environment.

*Example:* Walk through conservation outpost: Have the students list the ways that humans are effecting the environment of sea turtles and manatees.



---

5<sup>th</sup>

SC.5.L.15.1

Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.

*Example:* Visit the Rescue a Reef coral exhibit in dolphin lobby. Explain that when the temperature changed (gets too hot) corals can bleach and eventually die. Visit the manatee exhibit – explain that when the water gets too cold for manatees, they can experience something called cold stress. This is why they migrate to warm waters.

SC.5.L.17.1

Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.

*Example:* Observe the seals and sea lions – Ask the students to list adaptations that these animals have and how the specific adaptation would aid them to survive in the wild. Observe the African penguins – Ask the students to list adaptations that these animals have and how the specific adaptation would aid them to survive in the wild. Compare the adaptations of the penguins to the adaptations of the seals and sea lions. How do they differ? How are they the same? How does their environment effect their adaptations?

SC.5.N.1.6

Recognize and explain the difference between personal opinion/interpretation and verified observation.

*Example:* Observe the sea turtles – Ask the students why they think sea turtles are important to the ecosystem? Listen to their answers, prompt them with “how do you know” when appropriate. Have them differentiate between their opinions and their observations.

**Want more?**

Each of the field trip add-on educational presentations at Miami Seaquarium are aligned to science, math, art and language arts standards. We provide post-visit educational materials to extend student’s in-park experiences to the classroom.