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Virtual Snorkel: Coral Reef Ecology

If students can't come visit the reef with MarineLab in person, then next best thing is a guided reef snorkel with a marine biologist over the web. Students will not only get to see a piece of the reef here in the Florida Keys, but will learn the names of some of the fish, understand why coral is important, practice ID skills and play a game along the way to assist with observation. Let's go snorkeling (virtually...)!

Grade Level: 4-8

Timing: 45-60 minutes

Materials:

BINGO and ID sheet (neither are required)

STANDARDS SUPPORTED

Next Generation Science Standards:

Featured Science Practice → engaging in argument from evidence

Featured Cross Cutting Concept → stability and change, cause and effect

Disciplinary Core Ideas → LS2.A Interdependent relationships in ecosystems, LS2.C ecosystem dynamics, functioning and resilience, LS1.A. structure and function

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms

MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.



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Next Generation Sunshine State Standards:

SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment

SC.4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.4.N.1.6 Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

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.

SC.7.L.17.2 Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.

Ocean Literacy Principles:

Principle 5. The ocean supports a great diversity of life and ecosystems.

d: Ocean biology provides many unique examples of life cycles, adaptations and important relationships among organisms (symbiosis, predator-prey dynamics, and energy transfer) that do not occur on land.

f. Ocean ecosystems are defined by environmental factors and the community of organisms living there. Ocean life is not evenly distributed through time or space due to differences in abiotic factors such as oxygen, salinity, temperature, pH, light, nutrients, pressure, substrate and circulation. A few regions of the ocean support the most abundant life on Earth, while most of the ocean does not support much life.