

Middle School:  
Discover Gray's Reef Habitat

Sixth Grade:

**S6CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.**

- a. Observe and explain how parts are related to other parts in systems such as weather systems, solar systems, and ocean systems including how the output from one part of a system (in the form of material, energy, or information) can become the input to other parts. (For example: El Nino's effect on weather)
- b. Identify several different models (such as physical replicas, pictures, and analogies) that could be used to represent the same thing, and evaluate their usefulness, taking into account such things as the model's purpose and complexity.

**S6E3. Students will recognize the significant role of water in earth processes.**

- a. Explain that a large portion of the Earth's surface is water, consisting of oceans, rivers, lakes, underground water, and ice.
- c. Describe the composition, location, and subsurface topography of the world's oceans.

Seventh Grade:

**S7CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.**

- b. Understand that different models (such as physical replicas, pictures, and analogies) can be used to represent the same thing.

**S7L4. Students will examine the dependence of organisms on one another and their environments.**

- c. Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.
- d. Categorize relationships between organisms that are competitive or mutually beneficial.
- e. Describe the characteristics of Earth's major terrestrial biomes (i.e. tropical rain forest, savannah, temperate, desert, taiga, tundra, and mountain) and aquatic communities (i.e. freshwater, estuaries, and marine).

Eighth Grade:

**S8CS5. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.**

- a. Observe and explain how parts can be related to other parts in a system such as the role of simple machines in complex machines.
- b. Understand that different models (such as physical replicas, pictures, and analogies) can be used to represent the same thing.

**S8CS6. Students will communicate scientific ideas and activities clearly.**

- b. Write for scientific purposes incorporating information from a circle, bar, or line graph, data tables, diagrams, and symbols.
- c. Organize scientific information in appropriate tables, charts, and graphs, and identify relationships they reveal.