

# Evolving Ecosystems 6-8 Virtual Outreach

## **Program Description:**

- Ecosystem characteristics are in a constant state of change because of our ever adapting planet and contributions from human impacts. Aquatic ecosystems can pose an even greater challenge to define since water covers the majority of the planet. How well can these ever changing ecosystems be identified? Students will play a bingo game to recognize food chains and physical descriptors of different aquatic ecosystems.

## **Essential Question(s):**

- What role do humans and other organisms play in aquatic ecosystems?

## **Georgia Standards of Excellence:**

- **S6E3 a.** Ask questions to determine where water is located on Earth's surface (oceans, rivers, lakes, swamps, groundwater, aquifers, and ice) and communicate the relative proportion of water at each location.
- **S7L4 d.** Ask questions to gather and synthesize information from multiple sources to differentiate between Earth's major terrestrial biomes (i.e., tropical rain forest, savanna, temperate forest, desert, grassland, taiga, and tundra) and aquatic ecosystems (i.e., freshwater, estuaries, and marine).
- **S8P2 c.** Construct an argument to support a claim about the type of energy transformations within a system [e.g., lighting a match (light to heat), turning on a light (electrical to light)].

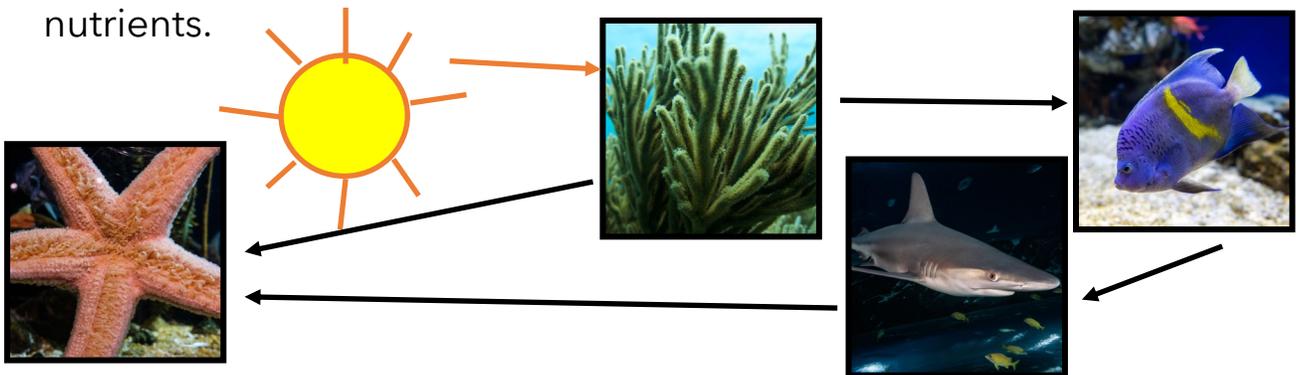
## **Next Generation Science Standards:**

- **MS-LS2-3.** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

## Evolving Ecosystems 6-8

### What is an Ecosystem?

Ecosystems are communities of living organisms and non-living things interacting to create a system. Ecosystems get grouped and categorized by the vegetation present, the minerals and the climate. These interactions determine the flow of energy and the cycling of nutrients.



### What is the flow of energy?

The flow of energy is literally the movement of energy through living organisms. Each ecosystem requires a producer to begin the flow of energy. A consumer will then eat the producer and take and absorb that created energy. The flow continues through the various consumers and onto the decomposers, where it is then added into the cycling of nutrients.

### What is the cycling of nutrients?

The cycling of nutrients is very similar. Instead of the initial energy coming from a producer, the energy comes from nutrients found in the soil or water. These nutrients could be released from decomposers or from the minerals and rocks.

# What I Learned



EDUCATION

GEORGIA AQUARIUM

## Evolving Ecosystems 6-8

**Go to a local ecosystem, observe and record your findings:**

What type of plants are present? If possible, what specific species? \_\_\_\_\_

\_\_\_\_\_

What type of animals are present? If possible, what specific species? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Provide an example of one food chain, utilizing the species listed above or research potential species in the area:

\_\_\_\_\_

\_\_\_\_\_

What human impacts are present?

\_\_\_\_\_

\_\_\_\_\_

What affect is human impact having on this ecosystem?

\_\_\_\_\_

\_\_\_\_\_

Identify your local ecosystem using the information gathered. Create an image of this ecosystem with example food chain present.