HOUSTON MUSEUM
of NATURAL SCIENCE

6th – 8th Grade Discovery Hunt: Farish Hall of Texas Wildlife and Hamman Hall of Coastal Ecology

As you visit Farish Hall of Texas Wildlife and Hamman Hall of Texas Coastal Ecology, use your observation skills and scientific thinking to answer the questions below. Write neatly and use complete sentences.

Ecosystem Organization

Choose one ecosystem display.

- Ecosystem name: _____

List an example of each level:

- Organism (one living thing): _____
- Population (group of same species): _____
- Community (different species together):
    1. _____
    2. _____
    3. _____

How does biodiversity help this ecosystem stay healthy?

Biotic and Abiotic Factors

Pick two different habitats you see.

Habitat 1: _____

- List three living (biotic) things:

- List three non-living (abiotic) things:

- How might two organisms compete for something in this habitat?

Habitat 2: _____

- List three living (biotic) things:

- List three non-living (abiotic) things:

- How does one organism depend on something non-living here?

3. Relationships in Nature

Find examples of each type of relationship:

- Predator and prey:
  Predator: _____ Prey: _____
  What is one adaptation you notice? _____
- Competition:
  Species 1: _____ Species 2: _____
  What do they compete for? _____
- Symbiosis (choose one):
  □ Mutualism □ Parasitism □ Commensalism

Organisms: _____ and _____
Describe their relationship:

Food Web Connections

Pick one habitat and build a food web.

- Habitat: _____

Fill in the blanks:

- Producers: _____
- Primary consumers: _____
- Secondary consumers: _____
- Tertiary consumers: _____

Draw arrows below to show how energy moves from one group to another.

Why does energy decrease at each step in the food web?

Human Impact

In the Hamman Hall of Coastal Ecology, look for ways people affect coastal ecosystems.

- Name one positive human impact:

- Name one negative human impact:

What is one thing you can do to help protect Texas coastal ecosystems?

Environmental Changes & Adaptations

Environmental changes can happen quickly or slowly, affecting how organisms survive. Find an example of each type of change.

- Short-term change:
  Example: _____
  How do organisms respond?

- Long-term change:
  Example: _____
  How does it affect populations?

Pick one organism and describe an adaptation that helps it survive:
Organism: _____
Adaptation: _____
What challenge does it help with?

Critical Thinking

If one species disappeared from a Texas ecosystem, how could it affect other living things?

What could people do to help keep Texas ecosystems healthy?

Science Words to Know

- Adaptation: A body part or behavior that helps an organism survive.
- Ecosystem: All living and non-living things in an area.
- Abiotic: Non-living things like water, sunlight, soil.
- Biotic: Living things like plants and animals.
- Population: A group of the same species living together.
- Community: Different species living and interacting together.
- Predator: An animal that hunts other animals.
- Prey: An animal that is hunted.
- Food web: Shows how energy moves among living things.
- Conservation: Protecting nature and wildlife.

TEKS Alignment

6th Grade Science

- SCIENCE.6.12.A: Investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as availability of light, water, range of temperatures, or soil composition.
- SCIENCE.6.12.B: Describe and give examples of predatory, competitive, and symbiotic relationships between organisms, including mutualism, parasitism, and commensalism.
- SCIENCE.6.12.C: Describe how variations within a population can be an advantage or disadvantage to the survival of a population as environments change.

7th Grade Science

- SCIENCE.7.11.B: Describe human dependence and influence on ocean systems and explain how human activities such as runoff, artificial reefs, or resource use impact these systems.
- SCIENCE.7.12.A: Construct and analyze food chains, food webs, and energy pyramids to explain energy flow through ecosystems.
- SCIENCE.7.12.B: Describe how ecosystems are sustained by the continuous flow of energy and the recycling of matter and nutrients.

8th Grade Science

- SCIENCE.8.11.A: Investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as quantity of light, water, range of temperatures, or soil composition.
- SCIENCE.8.11.B: Explore how short- and long-term environmental changes affect organisms and traits in subsequent populations.
- SCIENCE.8.11.C: Recognize human dependence on ocean systems and explain how human activities such as runoff, artificial reefs, or resource use have modified these systems.