

# Tropical Treasures Guided Tour

## Curriculum Standards and Concept Focus

### 6<sup>th</sup> grade:

- ✓ SC06-S1C1-02: Formulate questions based on observations that lead to the development of a hypothesis.
- ✓ SC06-S1C3-02: Form a logical argument about a correlation between variables or sequence of events (e.g., construct a cause-and-effect chain that explains a sequence of events).
- ✓ SC06-S2C2-03: Apply the following scientific processes to other problem solving or decision making situations:
  - Observing
  - Questioning
  - Communicating
  - Comparing
  - Measuring
  - Classifying
  - Predicting
  - Organizing Data
  - Inferring
  - Generating hypothesis
  - Identifying Variables
- ✓ SC06-S3C2-01: Propose viable methods of responding to an identified need or problem.
- ✓ SC06-S3C2-02: Compare possible solutions to best address an identified need or problem.
- ✓ SC06-S4C1-01: Explain the importance of water to organisms.
- ✓ SC06-S4C3-01: Explain that sunlight is the major source of energy for most ecosystems.
- ✓ SC06-S4C3-02: Describe how the following environmental conditions affect the quality of life:
  - Water quality
  - Climate
  - Population density
  - Smog

### 7<sup>th</sup> grade:

- ✓ SC07-S1C1-01: Formulate questions based on observations that lead to the development of a hypothesis.
- ✓ SC07-S1C3- 02: Form a logical argument about a correlation between variables or sequence of events (e.g. construct a cause-and-effect chain that explains a sequence of events).
- ✓ SC07-S2C2- 03: Apply the following scientific processes to other problem solving or decision making situations:
  - Observing
  - Questioning
  - Communicating
  - Comparing
  - Measuring
  - Classifying
  - Predicting
  - Organizing data
  - Inferring
  - Generating hypotheses
  - Identifying variables
- ✓ SC07-S3C1-01: Analyze environmental risks (e.g. pollution, destruction of habitat) caused by human interaction with biological or geological systems.
- ✓ SC07-S3C1-02: Analyze environmental benefits of the following human interactions with biological or geological systems:
  - Reforestation
  - Habitat restoration
  - Construction of dams
- ✓ SC07-S3C1-03: Propose possible solutions to address the environmental risk in biological or geological systems.
- ✓ SC07-S3C2-01: Propose viable methods of responding to an identified need or problem.
- ✓ SC07-S3C2-02: Compare solutions to best address an identified need or problem.
- ✓ SC07-S4C3- 01: Compare food chains in a specified ecosystem and their corresponding food web.
- ✓ SC07-S4C3-02: Explain how organisms obtain and use resources to develop and thrive in:
  - Niches
  - Predator/prey relationships

- ✓ SC07-S4C3-03: Analyze the interactions of living organisms with their ecosystems:
  - Limiting factors
  - Carrying capacities

### 8<sup>th</sup> grade:

- ✓ SC08-S1C1-01: Formulate questions based on observations that lead to the development of a hypothesis.
- ✓ SC08-S1C3-02: Form a logical argument about a correlation between variables or sequence of events (e.g. construct a cause-and-effect chain that explains a sequence of events).
- ✓ SC08-S1C3-08: Formulate new questions based on the results of a previous investigation.
- ✓ SC08-S1C4-01: Communicate the results of an investigation.
- ✓ SC08-S2C2-01: Apply the following scientific processes to other problem solving or decision making situations:
  - Observing
  - Questioning
  - Communicating
  - Comparing
  - Measuring
  - Classifying
  - Predicting
  - Organizing Data
  - Inferring
  - Generating hypotheses
  - Identifying Variables
- ✓ SC08-S3C1-01: Analyze the risk factors associated with natural, human induced, and/or biological hazards, including:
  - Waste disposal of industrial chemicals
  - Greenhouse gasses
- ✓ SC08-S3C1-02: Analyze possible solutions to address the environmental risks associated with chemicals and biological systems.
- ✓ SC08-S3C2-01: Propose viable methods of responding to an identified need or problem.
- ✓ SC08-S3C2-02: Compare solutions to best address an identified need or problem.
- ✓ SC08-S4C4-01: Explain how an organism's behavior allows it to survive in an environment.
- ✓ SC08-S4C4-04: Compare the symbiotic and competitive relationships in organisms within an ecosystem (e.g. lichen, mistletoe/tree, clownfish/sea anemone, native/non-native species).

### High School:

- ✓ SCHS-S1C1-02: Develop questions from observations that transition into testable hypotheses.
- ✓ SCHS-S1C1-04: Predict the outcome of an investigation based on prior evidence, probability, and/or modeling (not guessing or inferring).
- ✓ SCHS-S1C4-03: Communicate results clearly and logically.
- ✓ SCHS-S1C4-04: Support conclusions with logical scientific arguments.
- ✓ SCHS-S3C1-01: Evaluate how the processes of natural ecosystems affect, and are affected by, humans.
- ✓ SCHS-S3C1-02: Describe the environmental effects of the following natural and/or human-caused hazards:
  - Flooding
  - Drought
  - Earthquakes
  - Fires
  - Pollution
  - Extreme weather
- ✓ SCHS-S3C1-03: Assess how human activities (e.g. clear cutting, water management, tree thinning) can affect the potential for hazards)
- ✓ SCHS-S3C1-05: Evaluate the effectiveness of conservation practices and preservation techniques on environmental quality and biodiversity.
- ✓ SCHS-S3C2-05: Evaluate methods used to manage natural resources (e.g. reintroduction of wildlife, fire ecology).
- ✓ SCHS-S3C3-02: Describe biotic (living) and abiotic (nonliving) factors that affect human populations.
- ✓ SCHS-S4C3-01: Identify the relationships among organisms within populations, communities, ecosystems, and biomes.
- ✓ SCHS-S4C3-02: Describe how organisms are influenced by a particular combination of biotic (living) and abiotic (nonliving) factors in an environment.