

Rainforest Adventure

Program Summary: Participants will learn about tropical rainforests and the plants and animals that inhabit them.

K – 2nd grade:

Discuss the characteristics of tropical rainforests and where they are located. Introduce the layers of the rainforest (forest floor, understory, canopy, emergents). Observe and discuss the plants and animals that inhabit the different layers of the rainforest. Discuss simple connections between animals, plants, and humans. Discuss the importance of the rainforest and some of the products that humans use in their everyday lives that come from the rainforests.

- ✓ SC00-S1C1-01: Observe common objects using multiple senses
- ✓ SC00-S1C1-02: Ask questions based on experiences with objects, organisms, and events in the environment
- ✓ SC00-S4C1-01: Distinguish between living and nonliving things
- ✓ SC00-S4C1-02: Name human body parts
- ✓ SC00-S4C1-03: Identify the five senses and their related body parts
- ✓ SC00-S4C2-01: Describe that most plants and animals will grow to physically resemble their parents
- ✓ SC00-S5C1-01: Identify the following observable properties of objects using the senses - shape, texture, size, color
- ✓ SC00-S5C1-02: Compare objects by the following observable properties - size, color, type of material
- ✓ SC00-S6C3: Identify the following aspects of weather - temperature, wind, precipitation, storms

- ✓ SC01-S1C1-01: Compare common objects using multiple senses
- ✓ SC01-S1C1-02: Ask questions based on experiences with objects, organisms, and events in the environment
- ✓ SC01-S4C1-01: Identify characteristics of living things
- ✓ SC01-S4C1-02: Compare the following observable features of living things - movement (legs, wings), protection (skin, feathers, tree bark), respiration (lungs, gills), support (plant stems, tree trunks)
- ✓ SC01-S4C1-03: Identify observable similarities and differences between/among different groups of animals (e.g. number of legs, body coverings, size)
- ✓ SC01-S4C2-02: Identify similarities and differences between animals and their parents
- ✓ SC01-S4C3-02: Compare the habitats (e.g. desert, forest, prairie, water, underground) in which plants and animals live
- ✓ SC01-S4C3-03: Describe how plants and animals within a habitat are dependent on each other
- ✓ SC01-S6C1-01: Describe the following basic earth materials - rocks, soil, water
- ✓ SC01-S6C1-04: Identify the following as being natural resources - air, water, soil, trees, wildlife

- ✓ SC01-S6C1-05: Identify ways to conserve natural resources (e.g. reduce, reuse, recycle, find alternatives)
- ✓ SC02-S1C1-01: Formulate relevant questions about the properties of objects, organisms, and events in the environment
- ✓ SC02-S3C2-01: Analyze how various technologies impact aspects of people's lives (e.g. entertainment, medicine, transportation, communication)
- ✓ SC02-S4C1-01: Identify animal structures that serve different functions (e.g. sensory, defense, locomotion)

3rd – 4th grade:

Discuss concepts mentioned above. Discuss the difference between renewable and nonrenewable resources and determine which rainforest products are renewable and nonrenewable. Discuss the factors that threaten the survival of the tropical rainforests and encourage students to propose what they can do to help.

- ✓ SC03-S1C1-01: Formulate relevant questions about the properties of objects, organisms, and events of the environment using observations and prior knowledge
- ✓ SC03-S1C2-04: Use metric and U.S. customary units to measure objects
- ✓ SC03-S2C2-01: Describe how, in a system (e.g. terrarium, house) with many components, the components usually influence one another
- ✓ SC03-S2C2-02: Explain why a system may not work if a component is defective or missing
- ✓ SC03-S3C1-02: Describe the beneficial and harmful impacts of natural events and human activities on the environment (e.g. forest fires, flooding, pesticides)
- ✓ SC03-S4C3-01: Identify the living and nonliving components of an ecosystem
- ✓ SC03-S4C3-03: Explain the interrelationships among plants and animals in different environments
- ✓ SC03-S4C3-04: Describe how plants and animals cause change in their environment
- ✓ SC03-S4C3-05: Describe how environmental factors (e.g. soil composition, range of temperature, quantity and quality of light or water) in the ecosystem may affect a member organism's ability to grow, reproduce, and thrive
- ✓ SC03-S4C4-01: Identify adaptations of plants and animals that allow them to live in specific environments
- ✓ SC03-S4C4-03: Cite examples of how a species' inability to adapt to changing conditions in the ecosystem led to the extinction of that species
- ✓ SC03-S6C1-06: Describe ways humans use earth materials (e.g. fuel, building materials, growing food)
- ✓ SC04-S3C1-01: Describe how natural events and human activities have positive and negative impacts on environments (e.g. fire, floods, pollution, dams)
- ✓ SC04-S3C1-02: Evaluate the consequences of environmental occurrences that happen either rapidly or over a long period of time
- ✓ SC04-S4C3-01: Describe ways various resources (e.g. air, water, plants, animals, soil) are utilized to meet the needs of a population
- ✓ SC04-S4C3-02: Differentiate renewable resources from nonrenewable resources

- ✓ SC04-S4C3-03: Analyze the effect that limited resources may have on an environment
- ✓ SC04-S4C3-04: Describe ways in which resources can be conserved
- ✓ SC04-S4C4-02: Give examples of adaptations that allow plants and animals to survive
- ✓ SC04-S6C3-03: Differentiate between weather and climate as they relate to the southwestern United States
- ✓ SC04-S6C3-06: Compare weather conditions in various locations

5th – 6th grade:

Discuss concepts mentioned above. Discuss the benefits and/or harmful impacts human activities have on the rainforest and the plants and animals that live there. Encourage students to propose solutions, alternative resources, or products that might assist rainforest conservation. Discuss what we can do in our lives to help conserve and what communities/organizations can/are doing to help conserve.

- ✓ SC05-S3C1-01: Explain the impacts of natural hazards on habitats
- ✓ SC05-S3C1-02: Propose a solution, resource, or product that addresses a specific human, animal, or habitat in need

- ✓ SC06-S3C2-01: Propose viable methods of responding to 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

7th grade and up:

Discuss concepts mentioned above. Introduce biodiversity and its ecological importance. Discuss global warming.

- ✓ 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 risks in biological or geological systems

- ✓ SC08-S3C1-01: Analyze the risk factors associated with natural, human induced, and/or biological hazards
- ✓ SC08-S3C1-02: Analyze possible solutions to address the environmental risks associated with chemicals and biological systems
- ✓ SC08-S4C4-01: Explain how an organism's behavior allows it to survive in an environment
- ✓ SC08-S4C4-06: Describe the following factors that allow for the survival or living organisms - protective coloration, beak design, seed dispersal, pollination

- ✓ SCHS-S3C1-01: Evaluate how the processes of natural ecosystems affect, and are affected by, humans.
- ✓ 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-S4C3-01: Describe relationships among organisms within populations, communities, ecosystems, and biomes.
- ✓ SCHS-S4C3-02: Describe how organisms are influenced by a particular combination of biotic and abiotic factors in an environment.
- ✓ SCHS-S6C2-17: Investigate the effects of acid rain, smoke, volcanic dust, urban development, and greenhouse gases, on climate change over various periods of time.