**Title:** Why Should I Protect Nature?
**Time** 60 Minutes
**Subjects:** Science, Social Studies, Language Arts

**Objectives**

- Listen to gain knowledge and share information and perform a task (relating to caring for trees and experiencing nature).
- Explain the interdependence relationships between humans, trees, and nature.

**Standards**

Technology Standard 3: Understand the relationship among science, technology, society and the individual.

- Benchmark # 3: Know that man-made materials, products, and systems can affect the environment adversely, yet there are things that can be done to circumvent this process (e.g., disposing of waste properly, reusing old objects in new ways).

Science Standard 14: Understands how human actions modify the physical environment.

- Benchmark #1: Knows how people affect the environment in negative (e.g., cutting trees,) and positive (e.g., becoming stewards of environment ) ways.

Language Arts Standard 8: Use listening and speaking strategies for different purposes.

- Benchmark # 1: Make contributions in class and group discussions.
- Benchmark # 2: Ask and respond to questions.
- Benchmark # 5: Use grade level appropriate vocabulary in speech (e.g., terms related to parts of trees).

**Materials**

- Included PowerPoint presentation "Why Should I Protect Nature?"(link provided below)
- Included below "Why Should I Protect Nature?"matching activity
- Unlined index card or small piece of drawing paper for each student
- Writing and drawing utensils

**Description**

Trees are the main feature of forests. Forests have trees of many different species, sizes, and ages. Trees have four basic parts: roots, trunk, branches and leaves. The roots absorb water and nutrients from the soil, anchor the tree to the ground, and store food materials. The trunk holds the tree upright and transports nutrients and water from the roots to the leaves. The branches help carry materials from the trunk to the leaves. The leaves make its own food from the sun.




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Trees and forests are located worldwide. Tropical rain forests are located near the equator in South America, Central America, Africa, Southeast Asia, and Australia and neighboring islands. Temperate rain forests are located along the Pacific coast of the US and Canada. New Zealand, Tasmania, Chile, Ireland. Scotland, and Norway are also homes to temperate rain forests.

Trees are wildlife habitats and useful resources for humans, Trees prevent soil erosion, produce oxygen and reduce carbon dioxide in the atmosphere by means of photosynthesis, and moderate ground temperature. Trees provide food such as nuts and fruit. Additionally, trees in forests supply people with raw materials for wood, paper, and cardboard products. Fuel for cooking and heating and fats, gums, and oils for manufacturing are also derived from trees. Trees also give humans scenic beauty, shade, and recreational areas for camping, hiking, hunting,and bird watching. However, forests are changing and trees are being destroyed due to damaging human activities and habits.

Despite their usefulness and importance, trees and forests throughout the world are being harmed by human behavior. Deforestation, the clearing of trees, happens in areas of rapid population growth for farms, cattle ranches, towns, and timber. In tropical rainforests trees are cut to clear land for growing crops and raising livestock. Destructive agricultural procedures not only destroy trees but also deplete soil in burned forests of nutrients and reduce biodiversity when only one crop is planted on farmland. In addition, deforestation causes a loss of topsoil and plant roots which can lead to harmful flooding in affected areas. Logging is another prime cause of deforestation around the world. Trees are cut for lumber, paper, and cardboard and used heavily in the packaging of manufactured goods. Deforestation has also caused many species of plants and animals to become endangered or extinct.

Industrial pollution also hurts trees and forests when automobiles, power plants, factories, agricultural and household chemicals release harmful substances into the environment. Acid rain can disrupt photosynthesis in plants. It weakens them causing them to be more susceptible to disease. Smog can damage plant proteins and reduce the production of seeds making plants less resistant to drought and diseases. Pesticides from farming and yards can enter waterways that flow to trees and forests. The chemicals in these pesticides can kill trees or impair their growth. Oil and toxic spills contaminate forest soils preventing plant or tree growth in polluted areas.

Many scientists believe that human activities are the prime cause of climate change and global warming. Fossil fuels burned by factories, power plants, and motor vehicles release carbon dioxide as they burn. Global warming is caused when greenhouse gases, such as carbon dioxide, accumulate in the atmosphere of the Earth trapping the heat of the sun. Trees help prevent global warming by absorbing and using carbon dioxide during photosynthesis. However, deforestation means significantly less trees are available to remove carbon dioxide from the air and release oxygen. Carbon makes up half of the weight of the tree. When trees are burned in rain forests to clear land, carbon is released and this also adds to the global warming problem.

However, human activity can fortunately help trees and forests with mindful changing of behaviors. People can plant trees. Less trees will be destroyed when people reduce reuse, and recycle wood and paper products. Although rain forests may be far away from our homes the negative impact of their decline has far reaching effects. It’s not too late to make a difference.




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**Kid's Speak:** Trees are the oldest living things and largest plants on Earth. Trees are important to life on our planet. Trees provide shade and beauty. They clean the air, help keep temperatures balanced, cut down on noise, provide habitat and food for wildlife and people, and reduce soil erosion. We use products from trees every day. People need to take care of trees like trees take care of people. We can reduce, reuse, and recycle so less trees are destroyed. We can also plant new trees.

**Eco-fact:** According to the US National Academy of Sciences a 4-square-mile area of rain forest contains about 1,500 species of flowering plants, 750 species of trees, 125 species of mammals, 400 species of birds, 150 species of butterflies, 100 species of reptiles, and 60 species of amphibians.

**Procedure:**
**Establishing Prior Knowledge:**

- Pass out a small piece of drawing paper or unlined index card to every student. Say aloud and write the word nature on the board. Tell students to quickly draw or sketch on the paper or index card what nature means to them?
- Build a word web with nature in the center, restating and recording student responses from their sketches. Add any other ideas that you think are needed.
- Ask students what it means to protect nature. Illicit student responses on ways they believe they have protected nature.
- Ask students why they think nature is important to protect. Illicit student responses on reasons they believe nature is important to protect.
- Finally, ask students ways they spend time in nature. Responses can be added to word web.
- Explain to students that we are going to be learning more about protecting nature, why it is important, and what they can do to help now at six or seven years old as well as later as an adult.

**Conducting Lesson:**

- Use included PowerPoint presentation "Why Should I Protect Nature?" as a tool for teaching and learning about reasons and ways to interact with and protect nature. Ideas for appreciating and experiencing nature will be offered. Finally, suggestions of ways students can protect nature at 6-7 years old and as an adult will be shown.
  - Show the PowerPoint "Why Should I Protect Nature ?" stopping during the presentation for frequent questions, answers, and discussion.

**After Conducting Lesson:**

- In preparation for creative assessment activities, review the key concepts of the PowerPoint presentation. Two options for review are presented here.

**Review Option 1:** Lead a group discussion. Sample discussion points are provided below and in PowerPoint presentation Slide 15.
- What is nature?




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- Why protect nature ?
- How can you protect nature as a 7 year old?
- How can you protect nature as an adult?
- Why should you experience nature?
- How can you experience nature?

**Review Option 2:** Students can do a provided cut and paste matching activity. This activity can be done individually, in pairs, or whole class. Students will have a grid paper with 3 columns: Trees and Nature Protect People, People Protect Trees and Nature, and, Ways to Experience Nature. They will have a second worksheet with twelve boxes describing concepts covered in PowerPoint presentation. Students will cut out the twelve boxes and glue them in the appropriate column.

**Creative Activities:**

- There are many creative ways to show why and how to protect nature. Choose the message and means to convey it. Here are some possibilities:
- Creative dramatics such as skits
- Make a poster
- Poems such as haiku, acrostic, freestyle




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