

Title: The Giving Tree and Receiving Tree

Time 60 – 75 Minutes (Could be divided into two session)

Subjects: Science, Social Studies, Language Arts

Objectives

- Listen to gain knowledge and share information and perform a task (relating to parts of trees and uses of parts of trees).
- Make inferences and draw conclusions using picture clues, story text and prior knowledge.
- Identify the different parts of plants and the purposes they serve.
- Explain the interdependence relationships between humans and trees

Standards

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 tress).

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.

Science Standard 5: Understand the structure and function of cells and organisms.

• Benchmark #2: Know that plants and animals have features that help them live in different environments.

Materials

- A copy of "The Giving Tree" by Shel Silverstein
- Giving and Receiving chart provided below
- Examples of paper and cardboard products to display to class
- Example of product label stating product was made from recycled material
- Leaf pattern provided below
- Writing and coloring utensils
- Large teacher-made tree for bulletin board

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.

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 rainforests 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.

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: For every ton of paper that is recycled, rather than thrown in the trash, seventeen trees are saved.

Before Conducting the Lesson:

- Teacher asks students what do trees give to people. Listen to responses, accept or restate reasonable responses, and record on chart (sample chart provided).
- Teacher says that she has the perfect book to discover how trees give to people called "The Giving Tree" by Shel Silverstein.
- Teacher introduces and reads "The Giving Tree."

Conducting the Lesson:

- Teacher says let's see if we can add to chart of what trees give to people. What do people need to give trees? Responses can include: Clean air, clean soil, clean water, space to grow. Let's put our ideas in the next section of the chart.
- Ask students for an opposite or antonym for giving. Responses may include getting or receiving.
 We will add our ideas to the Receiving side of the chart.
- Let's look at this poster for some more ways that people can give trees what they need or care for trees. Show the printable poster from NGW poster section: <u>Easy Ways to Protect Land and</u> <u>Natural Spaces</u>
- Teacher asks students why using two sides of paper, recycling paper, and buying recycled paper
 can help trees. What does paper have to do with trees? Teacher explains to students that paper
 products and cardboard products are made from trees. Teacher holds up paper towel roll,
 cardboard packaging, school paper and any other examples.
- Teacher continues to explain that the more paper and cardboard used the more trees that need to be cut. Recycled paper products are made from old paper that is remade into new products. More trees don't need to be cut down and less energy is used. Teacher shows students products that have a label stating they have been made from recycled paper
- Teacher will write the word steward on the board. Teacher will explain to students that people
 who take of, treat with respect, and do not harm things are stewards of those things. Tell students
 that they can be by following the ideas suggested on the poster. "Tree stewards" are friends to
 the trees. They take care of and treat the trees with respect so that the trees will be around for a
 long time.
- Teacher asks students of other ways they can be stewards of trees. Responses may include planting new trees, using less products from trees like cloth napkins rather than paper, reusable lunchbox rather than paper bag, reusable cup rather than paper cup. Students can encourage parents to buy "tree friendly" products.
- Teacher says let's add some of our "tree steward" ideas to our chart Receiving Tree side of the chart.

After Conducting Lesson:

- Teacher concludes that we have now discovered ways that people need and can help trees and trees need and can help people.
- Teacher tells students that we read "The Giving Tree" but we are now going to make "The Receiving Tree" for our bulletin board.
- Teacher will provide a large tree with trunk and branches cut from brown paper or colored brown.
 Each student will be given a provided leaf pattern to cut out, add illustration and sentence, and color. The illustration and sentence should show an example of a way people can give to trees or trees can receive from people.



• When student leaves are done they can be added to the brown tree branches to create "The Receiving Tree" bulletin board.

Adaptations:

- Part of this lesson (the teacher read aloud) could be conducted outdoors sitting under a tree.
- Rather than cut out large "Receiving Tree" teacher could draw one on large paper. Details can be added to the picture: the ground, tree roots, sun, people.
- Make a classroom book called "The Receiving Tree." Each child can contribute a page showing how people can be tree stewards and give to trees.
- Each child could make their own book called "The Receiving Tree" by creating several pages showing how people can be tree stewards and give to trees.