Lesson Plan – We All Need Trees

Program Materials:

* Clear bin labelled We All Need Trees (top shelf of first set of shelves to left in office storage aisle)
* Treasure Chest (Sprouse’s storage unit)
* Typing paper if doing leaf rubbings

Introduction:

We All Need Trees. First of all, trees give us fresh air. Take a deep breath and then let it out. We humans breathe in oxygen and breathe out carbon dioxide. Guess what? Trees and plants breathe in the carbon dioxide that we humans breathe out and trees breathe out clean oxygen for humans and animals to breathe in. How cool is that? In fact, one large tree can provide fresh oxygen for 4 people each day.

We know that fruit like apples, oranges, peaches and pears and nuts like walnuts, almonds and pecans come from trees.

We know that wood comes from trees and we can use that lumber to make lots of things with wood like furniture, houses, barns, fences, pencils .

But did you know that through modern science, man has learned how to take the fiber from trees and create wonderful items that make our everyday lives better and more enjoyable. In fact, there are over **5,000 different products** which come from trees.

**Tree logs are reduced to pulp and pulpwood is used to make paper products like:**

* toilet paper
* paper towels,
* napkins,
* facial tissue,
* paper plates,
* cartons,
* cardboard boxes and
* paper that we write or draw on
* newspaper, wrapping paper book paper and wall paper.

**Pulpwood is further processed to create cellulose which is used to**:

* Make rayon and acetate fabrics for clothes like ties, shirts, dresses and suits
* Methylcelluose is used to thicken oral medicines like cough syrup, shampoo, hair conditioner, toothpaste, ice cream, lipstick, and other cosmetics, paint, and food products like ice cream.
* Cellulose wood fibers are dissolved and can then be formed into molded plastic type articles like toothbrushes, hair combs, baby bottles and eyeglass frames.
* Ethyl cellulose is responsible for making the hard, impact-resistant plastics found in products like football helmets.
* Nitro cellulose helps make nail polish look glossy when it dries
* Cellulose acetate chemicals are used to make film

**Tree gum is sap that is extracted from trees**. The gum is used to:

* make the adhesive on band aids so they will stick to your skin.
* It is added to synthesized essential oils from trees to make chewing gum.
* The gum is also used to make candles and crayons.

A few more things we get from trees:

1. Tree bark is used to make “tall oil” which cosmetic companies can use to make perfumes.
2. Tree produced chemicals can be used to make synthetic rubber for toys, shoes, rubber bands, and tires. But rubber trees can be tapped to extract latex for natural rubber products like latex gloves, rubber balls, shoes, and tires.
3. A maple tree can be tapped to extract maple syrup for our pancakes or waffles.

**Here are some interesting tree facts:**

* About 100,000 different kinds of trees have been identified so far but new types of trees are still being discovered
* Trees are the oldest living things on planet earth. They never die of old age. They might die from fire, lack of water, disease, be blown over by a wind storm, from a lightning strike or something like that, but they don’t die from old age.
* Trees are the heaviest and tallest living things on planet earth too.
* Trees have large roots underground that hold soil in place and help stop erosion. So, there is like a whole tree underground for each tree that we see growing above ground.
* One large tree can suck up to 100 gallons of water out of the ground and discharge it into the air in a day. This helps stop flooding.
* 100 trees remove 53 tons of carbon dioxide and 430 pounds of other air pollutants each year.
* Trees help settle out and trap dust, pollen and smoke from the air. The dust level in the air can be as much as 75 percent lower on the sheltered side of the tree compared to the windward side.
* Tree leaves that fall to the ground reduce soil temperatures and soil moisture loss. As leaves decay, they promote soil micro organisms and provide nutrients for plants.
* Trees provide shade cooling the air temperature.
* Trees absorb and block noise and reduce glare. A well-placed tree can reduce noise by as much as 40 percent.
* Trees create an ecosystem and provide a place to live and food to eat for many birds and animals.
* Each year, one person uses wood and paper products equivalent to a 100-foot tree which is 18 inches in diameter

Options:

Read the Giving Tree Story

Read Nature’s Treasure Chest and show images of items Randy used the first hour of his day getting ready for school

Put bags of tree treasures from tree program storage bin into the plastic treasure chest and allow students to pick a treasure and reveal it to the class.

Show tree cookies and let students know that you can tell the age of a tree by counting its rings

Do leaf rubbings

(videos of all of these options are on the District’s website)