

The Importance of Trees

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Grade: 3+

Benchmarks:

Grade 3

E.ES.E.5 Human Impact- Humans depend on their natural and constructed environment. Humans change environments in ways that are helpful or harmful for themselves and other organisms.

E.ES.03.51 Describe ways humans are dependent on the natural environment (forests, water, clean air, Earth materials) and constructed environments (homes, neighborhoods, shopping malls, factories, and industry).

Objectives:

- Shows students the importance of maintaining a healthy environment
- Helps students appreciate and bond with nature
- Teaches students the impact of our carbon footprint
- Displays how carbon affects our climate
- Communicates the significance of trees
- Students will know more about the biomass of trees and how carbon relates to trees

Assessment:

This lesson plan is focused on the students' growth of knowledge in regards to trees. As the benchmark indicates, humans are very dependent on the natural environment. I want students to understand the purpose of trees and why they remain vital to our existence. I aim to have students learn more about our impact on the environment, specifically with our carbon footprint. By completing the following activities, students will know more background information on trees and how they can expand their knowledge by getting involved within their community.

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Materials and Setup

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|-----------|---|
| Engage | <p>Associations with Trees</p> <ul style="list-style-type: none">- The teacher will write the word “Tree” on the board and ask students about their previous knowledge about trees- Students will write and draw as much as they know about trees on the board- Students will also be allowed to discuss trees with other students after they’ve given a few examples of their own prior knowledge |
| Explore 1 | <p>The Impact of Not Taking Proper Care of Our Environment</p> <ul style="list-style-type: none">- The Lorax will be read aloud to students- Students will answer questions about the story after the book has been read |
| Explore 2 | <p>What Life Would Be Like Without Wood</p> <ul style="list-style-type: none">- Students will watch a Bill Nye video clip- Students will then brainstorm within groups about other items that wouldn’t be around without wood- Individual groups will each draw one item on a large piece of paper, color it, and give a few reasons why it is important- Teachers will hang up the pictures around the room to remind students how imperative wood is to humans |
| Explore 3 | <p>Grow Your Own Tree</p> <ul style="list-style-type: none">- Students will make their own tree out of newspaper |
| Explore 4 | <p>Carbon Footprint</p> <ul style="list-style-type: none">- Students will complete the online carbon footprint calculator for homework- Students will bring their results to class- Students will answer a few follow-up questions pertaining to their results |
| Explore 5 | <p>Albedo</p> <ul style="list-style-type: none">- Students will be asked a few questions about albedo based on a given definition and table |

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| Explain | <p>Further Explanation on Trees</p> <ul style="list-style-type: none"> - Students will view a PowerPoint presentation that gives relative terms and concepts associated with the above activities |
| Elaborate 1 | <p>Carbon Uptake of Local Michigan Trees</p> <ul style="list-style-type: none"> - Students will learn about the rate of carbon uptake of local trees within Michigan - Students will analyze and interpret the data by creating three different scenarios - Students will find the amount of CO₂ drawn up by trees in each scenario and compare it to their carbon footprint |
| Elaborate 2 | <p>Where Carbon is Located Within the Environment</p> <ul style="list-style-type: none"> - Students will observe a few graphs and alter specific factors involving carbon - Students will note and record the projections based on their alterations - Students will answer questions based on their findings |
| Elaborate 3 | <p>Student Involvement</p> <ul style="list-style-type: none"> - Students will watch a video about climate change - Students will receive a list of local organizations regarding environmental protection - Students will find at least five ways to change their behavior in order to benefit the environment and decrease their carbon footprint |
| Elaborate 4 | <p>Plant a Tree Outdoors</p> <ul style="list-style-type: none"> - Students will plant a small tree in their schoolyard outside with the help of their teacher - Before they decide on the tree type, students will look at the distribution of trees in Michigan from years ago, based on the location of the school; this will help with deciding which tree will be best to plant |

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| Evaluate | <p>Questions Based on the Material Covered</p> <ul style="list-style-type: none">- Students will answer open-ended questions in regards to what they've learned- Students will also give feedback on whether they enjoyed the activities or not |
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Safety

The first safety concern for this lesson is when students make their own tree. Scissors will be needed to cut the newspaper so just be sure that each student is careful when handling and using scissors. The second safety issue is when students will plant a tree outside. Make sure students wash their hands after touching the soil while planting the tree.

Engage:

Associations with Trees

Begin this lesson by writing the word “Tree” on the board. Draw different types of trees and a few items associated with trees. Then ask each student to go up to the board and add one or two things they know about trees. They can either write or draw something about them. If students have trouble with giving information, ask them some helpful questions to spark their knowledge about trees.

Possible Answers:

- Where trees are found
- What lives in trees
- Different kinds of trees
- The different parts of trees
- What trees are made up of

Explore 1:

The Impact of Not Taking Proper Care of Our Environment

Reading of The Lorax:

<http://www.youtube.com/watch?v=soRbNIPbHEo>

Follow Up Questions for The Lorax

1. Why did the Once-ler use all the Truffula trees?
2. What did the Once-ler want from the Thneeds he made?
3. Who is the Lorax?
4. What happened to the Brown Bar-ba-loots as a result of the Once-ler cutting down all the Truffula trees?
5. Where was the smoke coming from that prevented the Swomee-Swans from singing?
6. Why did the Humming-Fish have to leave the pond?
7. What did the Once-ler realize toward the end of the book? What did he give to the boy?
8. When did you notice the land, air, and water getting dangerous for all of the animals?

9. How does the book compare to our environment/schoolyard?
10. Did you enjoy reading The Lorax? Why?

Answers for The Lorax Questions

1. The Once-ler used all of the Truffula trees because that's what he needed to make Thneeds.
2. The Once-ler wanted money from the Thneeds.
3. The Lorax was a man who tried to protect the Truffula trees from being cut down by the Once-ler. He was also in charge of keeping the animals safe.
4. The Brown Bar-ba-loots were hungry because the fruit was no longer growing from the Truffula trees since the Once-ler was cutting them down. So, the Brown Bar-ba-loots had to leave their home.
5. The smoke came from the Thneed factory.
6. The Humming-Fish had to leave the pond because the Once-ler was putting goo into it from making the Thneeds. The fish couldn't live in the polluted waters so they were forced to leave.
7. The Once-ler learned how important the Truffula trees were to the land and that he was wrong for cutting down the trees. He gave the last Truffula tree seed to the boy, hoping he would plant it and take care of it.
8. The land, air, and water were getting dangerous for the animals as soon as the factories were being used by the Once-ler to make Thneeds.

9. The book is similar to the factories near us that make products for people. The factories polluted the land, air, and water, which made it hard for living things to survive. This also happens in real life, right near our homes. This also connects with our schoolyard because trees are needed to uptake carbon and give off oxygen for us!

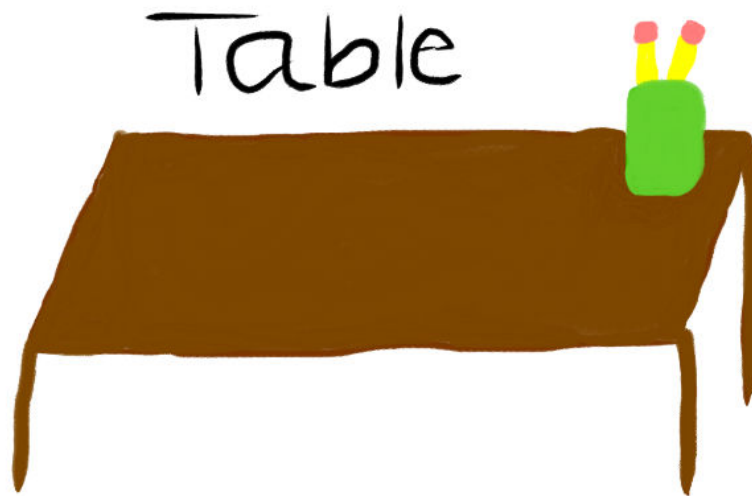
10. Students will voice their own opinion and give reasons why they either did or did not enjoy the book.

Explore 2:

What Life Would Be Like Without Wood

Show Bill Nye Video Clip:

<http://www.watchknowlearn.org/Video.aspx?VideoID=3153&CategoryID=547>



Reasons Why a Table is Important:

- We use a table for eating dinner with family
- We use a table as a surface to complete our work on
- We use a table for setting other items on it, like a pencil jar
- We use a table to hold our miscellaneous items
- We use a table as an area to make food on

Explore 3:

Grow Your Own Tree

This project is intended for younger students. This fun craft can be used when teaching students about trees. Not only are they making a tree, but they are also using remnants of an actual tree to do so! This is a great hands-on activity in order for students to visualize how a tree grows in size. Hopefully students will ask further questions about trees after completing this project.

Materials:

- Tape
- Newspaper
- Scissors

Procedure:

1. Lie out eight pieces of newspaper and tape all the pieces together side by side.
2. Roll the eight pieces of newspaper up so it creates a thick circular piece of paper.
3. Cut one of the ends of the newspaper roll four times.
4. Once you cut the roll of newspaper, bend back all of the strips of paper.
5. Pull the center part upwards and your tree will grow!

Instructional Video:

<http://www.youtube.com/watch?v=pCSl0L4wXYo>

Explore 4:

Carbon Footprint

The teacher will hand out a worksheet giving the website link and a note home to parents explaining the directions and why students are completing this activity. The students will be responsible for finding their family's carbon footprint at home with the help of their parents. Then they will be asked questions the next day in class.

Carbon Footprint Activity

Dear Parents,

This week, students are learning about the importance of trees and how they uptake carbon in our environment. Students will be responsible for finding out the size of their family's carbon footprint. A website is given below. Take the time to help your son/daughter complete the activity online. Do your best in filling out all the information and please read the beginning information; your results don't have to be perfect. Your child needs to print out their results and bring them back to class. We will be analyzing the results and explaining what it all means in class. If you have any questions, feel free to ask. Thanks!

*Note: For question four, please replace "UK" with "US". Answer the question based on whether you stay in state, go out of state, or out of the country for the holidays.

So, choose the best new answer that correlates with the old questions given.

We will stay in Michigan

We will go out of Michigan, but stay in the US

We will go out of the US

We're not going on holiday

Website Link:

http://www.planet-positive.org/how_2_calculator.php

Carbon Footprint Follow-up Questions

1. What was the value of your family's carbon footprint?
2. What did the online activity compare the size of your carbon footprint to?
3. What are some reasonable changes you can make to decrease your family's carbon footprint?
4. What does "carbon footprint" mean?
5. Did you enjoy this activity? Why?

Extra Credit: Have another family (friends or relatives) figure out their carbon footprint. Then, write a paragraph comparing their footprint to yours. What are some similarities and differences?

My Carbon Footprint:

Planet Positive : Kids Calculator

4/6/13 3:27 PM



- [Planet Positive Why](#)
- [Planet Positive How](#)
- [News and Blogs](#)
- [2020 Vision](#)

[Become Planet Positive](#) [Four steps](#) [Tips to reduce](#) [Directory](#) [Eco Store](#) [Who we are](#) [Contact](#)

[Kids calculator](#)

Well done!
This is your Carbon Footprint:



The aim is to make your footprint as small as possible - by using less electricity, walking to school etc.

[Click here to find out how well you really did](#)



- 1 - Travel
- 2 - Energy
- 3 - Water
- 4 - Food
- 5 - Waste

You are here: [Home](#) > [Planet Positive How](#) > [Kids calculator](#)