

Lesson Title: Age of a Tree

Overview: Students will learn how plants build mass, the life cycle of trees, how to determine the age of a tree by watching the Washington Forest Protection Association (WFPA) video, and students will draw their own tree cookies including important events from their lives. Students will also learn the layers inside a tree by doing the Build a Tree activity. The follow-up activities including writing assignments and labeling the layers inside a tree.

Standards (Working towards):**4th grade**

Science: 4-ESS3-1 Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.

ELA: CCSS.ELA.W.4.2.D Use precise language and domain-specific vocabulary to inform about or explain the topic.

Washington Social Studies: E2.4.3 Identify examples of the variety of resources (human capital, physical capital, and natural resources) that are used to produce goods and services in Washington state.

5th grade

Science: 5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.

ELA: CCSS.ELA.W.5.2.D Use precise language and domain-specific vocabulary to inform about or explain the topic.

Washington Social Studies: E2.5.2 Identify examples of the variety of resources (human capital, physical capital, and natural resources) that are used to produce goods and services.

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.]

Objective: Students will be able to learn how trees grow and learn the growth layers inside of a tree.

Pre-Lesson

- Brainstorm with class about how plants grow.
- Grow a bean in a sandwich bag experiment to demonstrate how seeds need only water and air to grow. <https://youtu.be/pg92cspLy0I>
- Learn parts of a tree cookie.
- Reading Tree Cookies (attached at end of page).

Post Lesson

- Write a narrative paragraph about their tree cookie and have students draw their own tree cookie describing their life in years.
- Write an expository paragraph on why people should visit a forest.
- Write a poem about the layers inside of a tree.
- Write a persuasive paragraph why it is important to grow trees.
- Draw tree cookie and labeling parts, writing a sentence for each layer's function.
- Project Learning Tree – Activity 63 Tree Factory <https://www.plt.org/family-activity/tree-factory/>

Extension:

- Take hike and find a young tree and count the whorls to determine the age.
- Or take a hike and find a stump or a piece of firewood to count the growth rings.
- Teach your family and friends about the layers inside a tree and how you determine the age of a tree.
- Have family members draw their own tree cookies including important dates in their lives.

Resources:

- Washington Forest Protection Association (WFPA) <https://www.wfpa.org/>
- Pacific Education Institute (PEI) <https://pacificeducationinstitute.org/>
- Neighborwood FB <https://www.facebook.com/groups/4495891857149300/>
- Project Learning Tree (PLT) www.plt.org

Instructions for your tree cookies

- Draw a circle and add YOUR growth rings!
 - Add important events in your life.
- You can use a piece of paper or paper plate.
 - Be sure to include the bark and add those growth rings!

Examples: year you were born, started school, moved, went to Disneyland, became a big sister or brother, visited the ocean, entered 4th grade, got a new pet etc.

