Galena Creek Visitor Center
At-Home Learning Activity Lesson Plan Base

Discovering the Age of Trees with Tree 'Cookies'

Project Learning Tree- Family Activity: Tree Cookies

Summary of Activity

By observing annual rings of tree 'cookies,' or slices of a tree, we can learn about the tree's growth. This is an indoor activity, but if there are tree stumps, what was left over after a tree was cut down, it can be down outdoors. Parent involvement is not necessary and you only need paper to complete this activity. This is a great activity for grades 3-8, and covers STEM topics like biology and forestry.

Standards: NGSS**:** 3-LS1-1, LS1.B, MS.LS1.B, RI.3.7, SL.3.5

Objective:

After gaining knowledge of the plant life cycle and how foresters study forest health from the video students will be able to determine their age through analysis and questioning of tree rings and be able to trace environmental and historical changes using a cross-section of a tree or tree cookie.

Discipline or Subject Covered:

STEM, Forestry, Biology

Grade Level:

3-8

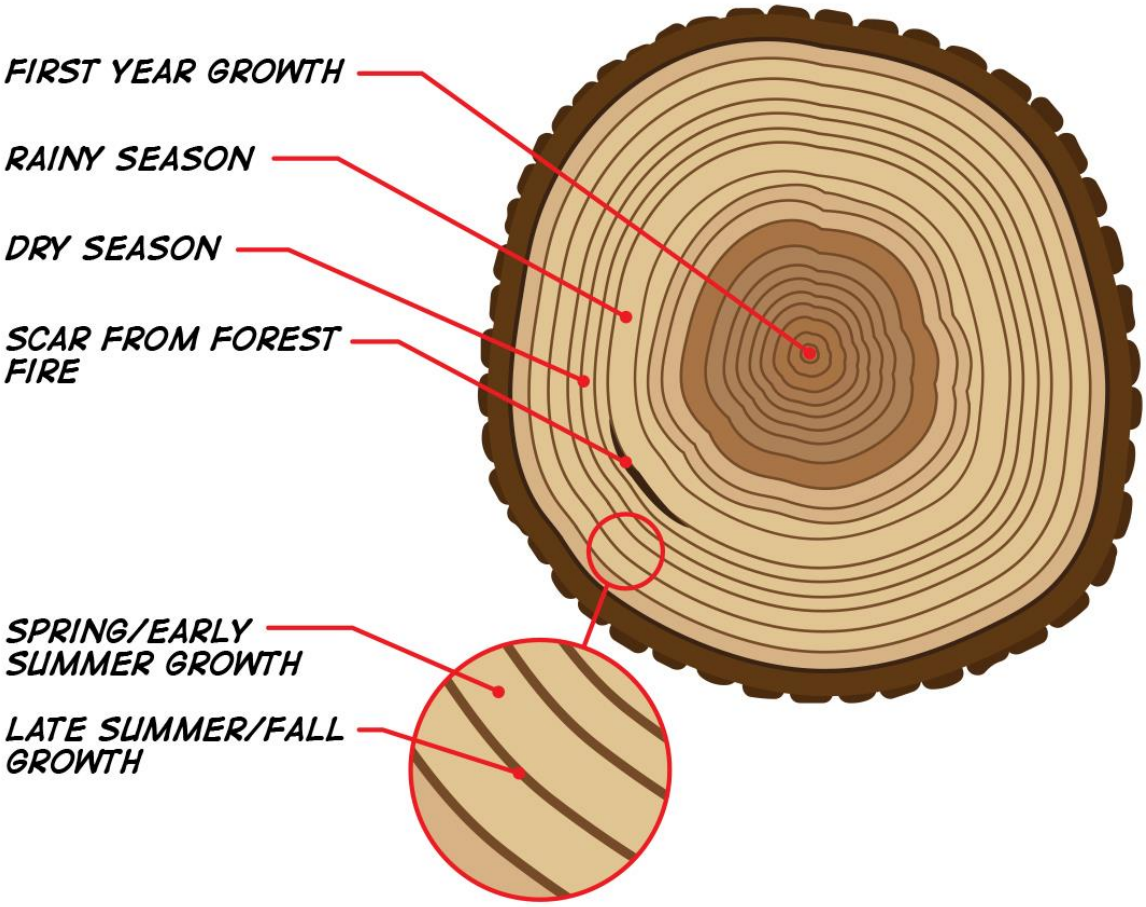
Materials:

Extra paper for drawing out tree ring

Procedure:

https://vimeo.com/user112422568/review/406302622/47aaf1e49e

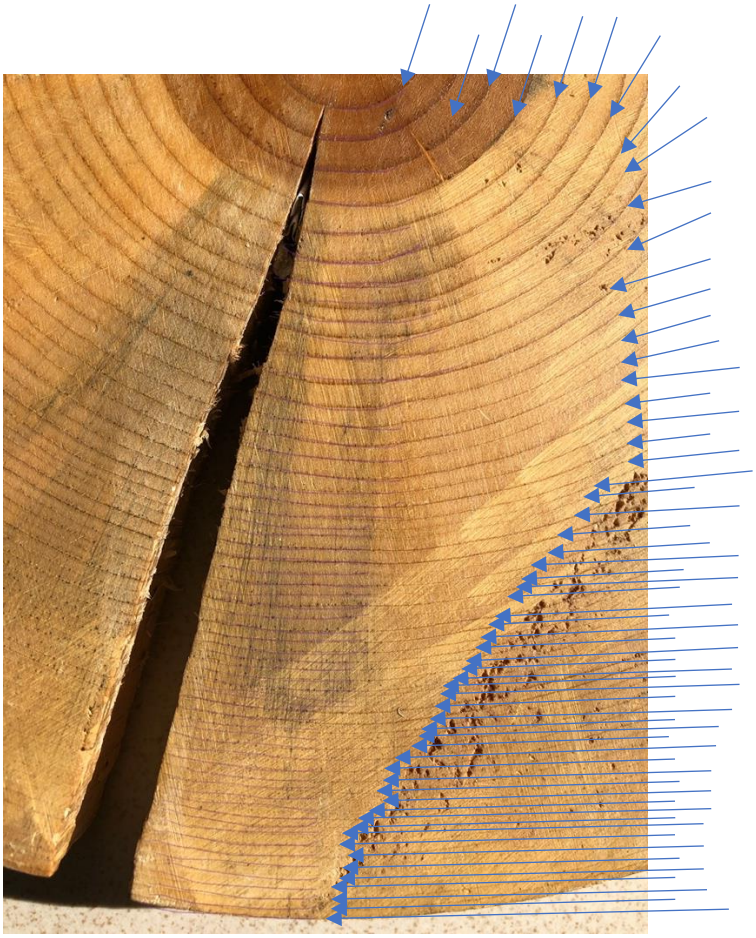
Copy and paste the link above into your internet browser to gain an understanding of the plant life cycle and foresters study forest health.



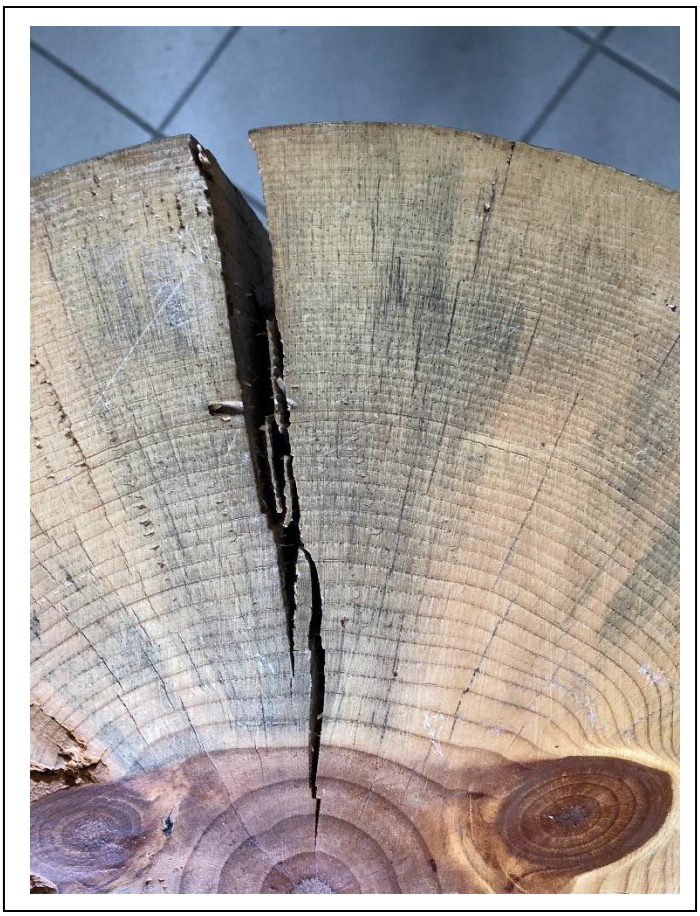
This picture shows what a tree ring can show us about the life of the tree and what happened in the environment throughout its life.

Note:

- One light ring plus one dark ring equals one year of the tree's life.
- The light-colored rings represent wood that grew in the spring and early summer, while the dark rings represent wood that grew in the late summer and fall.
- Tree rings usually grow wider in warm, wet years and they are thinner in years when it is cold and dry.
- If the tree has experienced stressful conditions, such as a drought, the tree might hardly grow at all in those years.
- Scientists can compare modern trees with local measurements of temperature and precipitation from the nearest weather station.



This tree was 60 years old (60 rings)when it died!



Look at the pictures above when answering these questions:
1. How old was this part of the tree when the cookie was cut? Give it your best guess.

2. Can you see different markings? Evidence of scars or narrow, misshapen rings?

3. What might have happened to the tree to cause these different markings?

4. Zoom in on the page to see the tree ring's texture.

5. Can you see any holes or channels that might allow water and nutrients to travel up the tree?

Discussion:

Students should draw a tree cookie below the same age as themselves.

- What can you do to show when important events in their lives took place?

What might scientists infer from this information?

How can they better protect forests from looking at the tree rings?

Other Resources/Further Information:

https://climatekids.nasa.gov/tree-rings/

Dendrochronology: https://www.environmentalscience.org/dendrochronology-tree-rings-tell-us