

INSTRUCTIONS

Tree Cookies

Grades 3-8

Background information: By counting a tree's growth rings, you can tell the age of the tree when it was cut. Every growth season, a tree adds a new layer of wood to its trunk and limbs. Each ring has two parts: a wide, light part (early wood), and a dark, narrow part (late wood). Early wood grows during the wet spring, while late wood grows during the dry fall. The rings can tell you about the climate, disturbances, floods, fires, etc... Rings also reflect a tree's response to stressors such as insects or disease.

Activity

- Pass out a copy of the tree cookies worksheet.
- Explain that by counting a tree's growth rings, you can tell the age of the tree when it was cut. Explain how to count rings: count only the light rings, or only the dark rings. Have the students estimate how old this tree was...
- Pass out a copy of *Reading Tree Cookies* to each student.
- List the following terms on the board: outer **bark**, **phloem** (or inner bark), **cambium**, **xylem**, and **heartwood**. Have the students label these parts on their worksheets.
- Explain different types markings that a tree cookie (or cross section) might display, such as scars from a forest fire or dead branch, narrow rings from a drought, etc...). Have them look for clues in the three tree cookies at the bottom of the worksheet.

Answers to worksheet:

1. Heartwood
2. Xylem
3. Cambium
4. Phloem
5. Outer bark
6. Dead branch (the black mark, beginning in the year 13, is what remains of a branch that died and fell off. After a few years, the trunk grew over the scar.
7. Drought or insect attack (or other growth inhibiting factor)
8. Fire (the scarring shown is due to a fire that came through when the tree was 12 years old.



Tree Rings

