Education Module from Talking Talons Youth Leadership NFWF Partners

What is Dendrochronology?

We can break this word up into its Greek Origins:

dendron = tree *khronos* = time *-logia* = the sudy of

When you put that all together, you get "the study of tree time," or, the scientific practice of aging trees by looking at their growth rings.

What is Dendroclimatology?

We can break this word up into its Greek Origins:

dendron = tree *climat* = climate *-logia* = the sudy of

Putting that together, dendroclimatology is the study of determining past climactic conditions given certain qualities observed in the annual growth rings of a tree.

Using tree ring dating scientists can:

- Reconstruct historic evidence of fires
- Date archaeological sites
- Identify past droughts or periods of heavy rain or snowfall
- Use the information to predict how trees may react to various climactic changes of the future.

Forest Stewards Guild

FIREADAPTEDNM learning network

(Please Turn Over)

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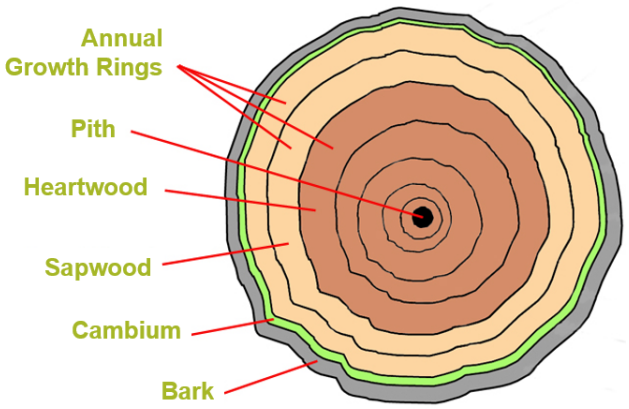
Components of a Tree Cross Section

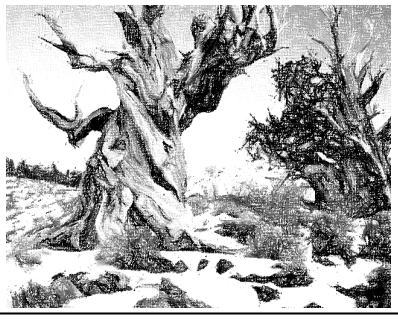


Annual Growth Rings - Rings formed each year by the tree.
Pith - The center of a tree trunk. May be hollow or rotten in certain species that grow in frequently inundated ecosystems.
Bark - Outermost layer of the tree, what you touch when you hug a tree!
Cambium - Living tissue
Sapwood - Living portion of the tree where water and minerals flow from the roots all the way up to the leaves or needles!
Heartwood - Dead tissue, usually darker that other non-bark parts - no longer moves water and nutrients.

ACTIVITY

Write a poem or short story from the perspective of this ancient bristlecone pine (*Pinus longaeva*). Your name is Methuselah, you live in the Inyo National Forest in California, you are 5,000 years old!
What do you see? Who are your friends? What is it like where you live?

Bonus Question:
What major historical events do you remember (supernova, volcanic eruptions, mega drought, comets)?



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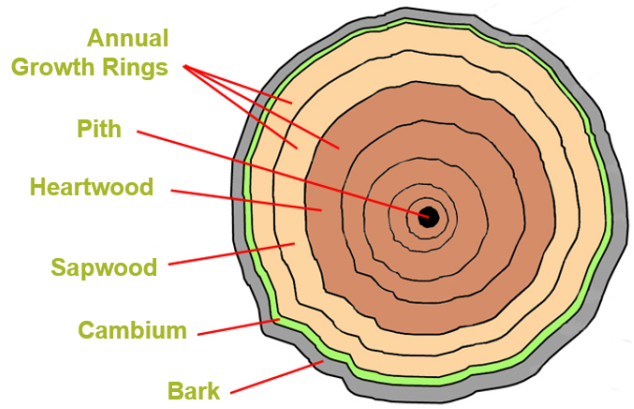

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