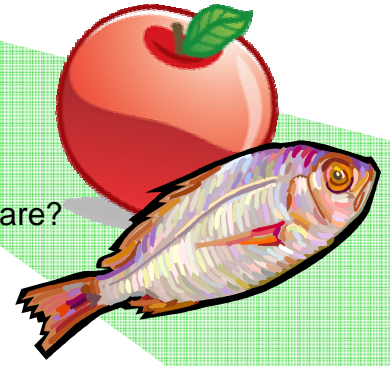


Tree Cookies



QUESTION: How do the cross sections of different trees compare?

MATERIALS:

magnifying lens
metric ruler

tree round set *(A-F)
Tree Species Clue sheet

*available from NASCO Science

PROCEDURE:

1. Look carefully at tree round A.
2. Describe the color and texture of its bark. Record this information in the Data table.
3. Use your metric ruler to measure the thickness of the bark, the sapwood and the heartwood. Record these measurements in the Data table.
4. Use the magnifying lens to count the total number of rings. Record this number in the Data table.
5. Determine whether the sample is a hardwood or softwood. Record this in the Data table.
6. Look at the features of the cross section and compare it to the clues on the Tree Species Clue sheet and identify the type of tree the cross section is from. Record this in the Data table.
7. Repeat steps 2-6 with the remaining 5 tree rounds.

DATA: See next page

QUESTIONS:

1. Which tree is the oldest? Which tree is the youngest?
2. Is the tree with the largest diameter always the oldest? Explain.
3. What is the difference in appearance between sapwood and heartwood?
4. What actually creates the “ring” appearance of these cross sections?
5. What aspects of a tree’s history will be recorded in its cross section?

LS – Activity #45

TREE ROUND DATA

TREE ROUND FEATURE	TREE ROUND A	TREE ROUND B	TREE ROUND C	TREE ROUND D	TREE ROUND E	TREE ROUND F
BARK COLOR AND TEXTURE						
BARK THICKNESS (mm)						
SAPWOOD THICKNESS (mm)						
HEARTWOOD THICKNESS (mm)						
NUMBER OF RINGS						
SPECIAL FEATURE						
HARDWOOD OR SOFTWOOD						
SPECIES NAME						

LS – Activity #45

TREE SPECIES CLUE SHEET

ASH

Bark: grayish-brown with grooves
Bark thickness: moderate
Sapwood: light-colored
Heartwood: brown to reddish-brown
Special features: distinct growth rings, dense annual rings, narrow sapwood region, hardwood

BASSWOOD

Bark: grayish-red or greenish with shallow grooves
Bark thickness: thin
Sapwood: whitish to cream-brown color
Heartwood: similar to sapwood
Special features: growth rings evident, softwood

OAK

Bark: light to dark gray and scaly, rough texture, some shallow furrows
Bark thickness: moderate
Sapwood: creamy-white to light brown
Heartwood: grayish to reddish-brown
Special features: distinct growth rings, light-colored radial lines that form wood rays, hardwood

RED PINE

Bark: reddish-brown, smooth scaly
Bark thickness: thin
Sapwood: white to light yellow
Heartwood: red to reddish-brown
Special features: growth rings evident, sample has a reddish hue, softwood

BLACK WALNUT

Bark: reddish-brown to dark brown, deeply furrowed
Bark thickness: thick
Sapwood: creamy-white to cream-brown color
Heartwood: chocolate brown
Special features: growth rings less apparent, wide annual rings, narrow sapwood region, heartwood very dark, hardwood

WHITE PINE

Bark: greenish-gray, smooth to moderately rough
Bark thickness: moderate
Sapwood: light-cream to cream-brown color
Heartwood: cream-colored with a tinge of red
Special features: growth rings evident, softwood, sample has a yellowish hue, softwood