

Power Point Notes for Teachers - Tree Ring Extras

3 of the student samples are irregular and these slides show these real examples.

#2 This tree ring sample from South Dakota has several burn scars that are labeled. The oldest scar shown is from 1652, but that is nowhere near the center of the tree, so the tree is much older than that. You might also point out the intervals between fire scars, demonstrating that fire occurred about every 20 years in this location.

#3 This is a close up view of the 1667 burn scar showing the appearance of the rings as the tree heals the damage.

#4 Early tree branches may die and be enveloped by the trunk growth. Others continue to protrude through the bark. Cutting across the trunk to collect a tree “cookie” shows the cross section of the branch as well. Branches also have growth rings. When the tree is cut lengthwise into lumber, the old branches are visible as knots and you can see how the tree trunk rings grow around the branch.

#5 Environmental factors can prevent even growth from the center of the tree. Predominant winds can kill the branches on the windward side, or shade from a neighboring tree or building can restrict photosynthesis on one side, resulting in retarded growth. This is especially apparent in overcrowded forest conditions.

#6 These slices of Ponderosa Pine are on display at the Rocky Mountain Research Station, Manitou Experimental Forest in Teller County, CO. Both of these trees are 74 years old – one from an unthinned area, and one from an area that was thinned in 1962. When a tree suddenly begins growing in diameter it is called “release”. The increase in growth following forest thinning is amazing. The unthinned sample (upper left) is an example of poor growth in overcrowded conditions.

#7 The number of trees in the forest can be reduced in several natural ways – insects, disease, and fire - and the results are out of human control. If the forest is thinned by man for prevention of these naturally occurring processes, the results are more predictable. The short video is a forester pointing out poor growth and “starvation” of trees in overcrowded circumstances.