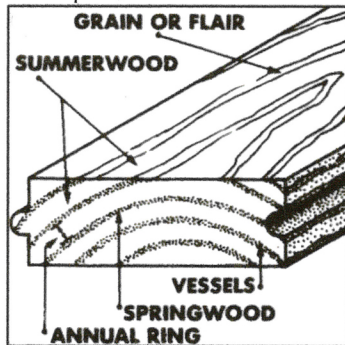


## SAW CUTS

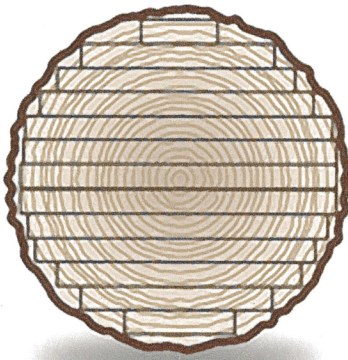
Wood's annual growth rings show the difference in density and color between wood formed early and late in the growing season. The inner part of the growth ring, formed first, is called "spring wood"; the outer part, formed later in the season, is called "summer wood."



Spring wood is characterized by cells having relatively large cavities and thin walls. Summer wood cells have smaller cavities and thicker walls, and consequently are denser than those in spring wood. The growth rings, when exposed by conventional sawing methods, provide the grain or characteristic pattern of the wood. The distinguishing features among the various species results in part from differences in growth-ring formation. And within species, natural variations in growth ensure the unique character and beauty of each piece of wood.

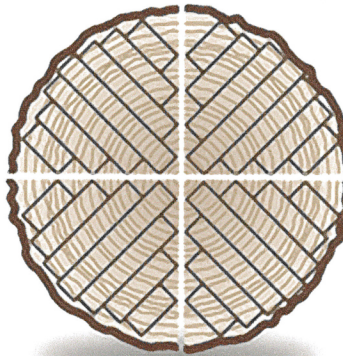
How flooring is cut in relation to a log's growth rings will create flooring with different looks and dimensional stability:

PLAIN SAWN



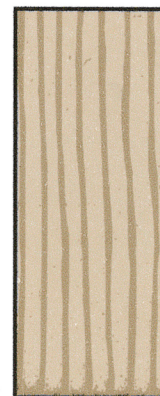
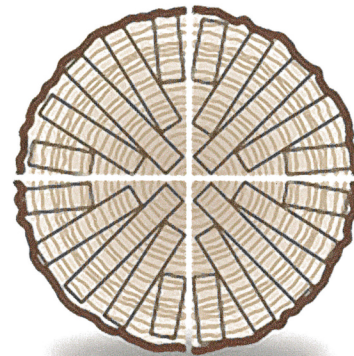
**Plain Sawn:** Easily recognized by its parabolic (arched or "cathedral") effect. Lumber is considered "flat-grained" when the annual growth rings make an angle of less than 45 degrees with the wide surface of the board. This method is the most economical, because it provides results in the least waste.

QUARTER SAWN



**Quarter Sawn:** (or Vertical or Edge Grain): Vertical-grain boards are less likely to expand or contract in width with changes in moisture. Lumber is considered "vertical-grained" when the annual growth rings make an angle of 45 to 90 degrees with the wide surface of the board.

RIFT SAWN



**Rift Sawn:** The angle of the cut is changed slightly so that fewer saw cuts are parallel to the medullary rays, minimizing the ray flake effect common in quarter sawn oak. Rift sawing creates more waste than quarter sawing, making it more expensive. Growth rings are 30° to 60° to face of the board.