Ch1 Growth and production of wood

Trees respire
Hardwoods (more complex, have vessels) versus softwoods
Wood is cellular
  Lumen
  Pits
  Closed ends (except for vessels)
Sap – nutrient or sugar-rich water
Rays – horizontal transport
Cambial meristem versus aprical
  Lengthen and widen
  Carved initials test
  Fusiform (spindle) and ray initials
  Periclinal (new xylem or phloem mother cells – which divide and expand) versus anticlinal (new initials) division
“Secondary xylem” is true wood

Days – time scale

Cambial zone – cambium and mother cells
  Living cells
Final cells are lignified and dead

Controlled by hormones (plant growth regulators)
  Begins at tips – IAA, gyberellin, and ethylene