



Thirsty Trees: Softwoods vs. Hardwoods

Activity Worksheet

Lesson objectives:

- Define herbaceous, hardwood, and softwood plant species and their differences
- Describe photosynthesis and the cell layers of a tree trunk
- Compare the xylem cells of softwoods and hardwoods

Trees are very different from *herbaceous* plants, and there are also many differences between species, even down to the cellular level. There are two main categories of trees: *hardwoods* and *softwoods*. A very noticeable difference between these types are their leaves, but even their insides function a bit differently.

1. What characteristic of trees make them different from herbaceous plants? Look out your window: what types of trees can you observe in your surroundings?

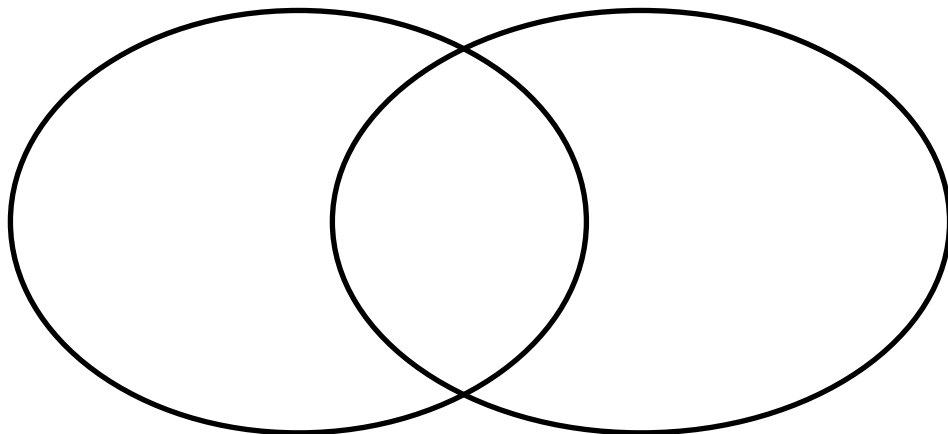
2. Photosynthesis is the process of plants making food. What ingredients do plants need to create their own food? Where do they get these ingredients from?

Use this word bank for questions 3 and 4: vessels phloem tracheids xylem

3. In a tree trunk, water is moved upward by _____ cells and food in the form of sugary sap is moved around the tree by _____ cells.

4. Hardwoods have xylem cells called _____ and softwoods have xylem cells called _____.

5. Fill in the chart with similarities and differences of the two different cell types:



6. We talked about the tallest tree in the world, a redwood in California. Use the internet and see if you can find the tallest longleaf pine tree in the world. How tall is it? Where is it located? _____

