**Relationship between forests and other natural resources**

* Forests play important roles in the water cycle the forest filters the rain as it falls and serve as storage areas.
* A forest regulates water flow, making it possible for fish and other animal and plant life to survive
* Forests filter rain and help reduce the erosion of soils. Trees and shrubs are responsible for removing much of the pollutant materials from the air and water run-off.
* Forests and living organisms have many relationships, Algae, fungi, and other plants make their homes in the forest.
* Forests also protection and nesting sites for many species of birds and fish.
* Forests and wildlife relationships greatly vary Depending on species; the wildlife in each forest region varies due to climate and harvesting times.

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**How Do Trees Affect a Forest?**

* They break the wind and with less air movement, there is less drying.
* They shade the ground from the sun thereby lowering air temperature; forests tend to be cool, humid places and the soil is moist there.
* Forest soil is also very rich in nutrient because of all the leaves, branches, and stems which decompose into humus.

**Trees and Shrubs**

**A tree** is a woody plant, typically large with a well-defined stem and a more or less defined crown.

**A shrub** is a woody plant, usually having several persistent woody stems branching from the ground.

**Tree Types:**

There are many thousands of different kinds of trees but all true trees are separated into two (2) basic classifications:

1- Coniferous trees which are also known as “evergreens” or “softwoods”

2- Broadleaved trees which are also known as “deciduous” or “hardwoods”.

**Coniferous Trees**

* Includes the pines, firs and other evergreens that usually have narrow needles instead of broadleaves.
* The term “evergreen” comes from the fact that the needles appear not to turn brown and fall to the ground at the approach of winter.
* The evergreens do shed their needles however, they do it so slowly that there are always green needles on the trees.

**Broadleaved Trees**

* This group of trees includes the oak, maple, poplar, birch and many others.
* These trees have broad, flat leaves instead of needles.
* Broadleaved trees produce flowers and after pollination these flowers develop seeds.

**Difference between Plants & Trees**

All other plants differ from trees in at least one of these ways.

**1-** No plant with a soft, juicy stem is a tree.

**2-** Most plants are much shorter than trees.

**3-** Shrubs, like trees, have woody stems; but most shrubs have more than one stem, none of the stems grow so thick as to be called a trunk.

**4-** Some jungle vines grow several hundred metres long and have a woody stem. However, the stems of vines cannot support themselves.

**Four main parts of a tree**

**1- Crown:** Where the tree increases each year in height and spread of branches by adding on a new growth of twigs.

**2- Leaves:** Make up the crown and produce food for the tree (photosynthesis).

**3- Trunk:** Supports the crown and produces the majority of the tree’s useful wood.

**4- Roots:** Anchors the tree, absorbs and stores water and nutrients.

**Tree Classification**

Trees can be classified according to the position they occupy in the forest canopy or understory. Such as system measures how well a tree has grown relative to its closet competitors. (Trees that get the most sunlight generally grow fastest).

**Crown Classes:**

There are five **crown classes:**

1. **Dominant:** have tops that rise above the general canopy level. They receive full sunlight from above and all sides.
2. **Co-dominant**: These trees make up the canopy level. Their crowns get full sunlight from above, but dominant and other co-dominate trees restrict some side sunlight.
3. **Intermediate**: These trees also occupy the average canopy level, but receive sunlight only from above.
4. **Suppressed**: These are trees that receive no direct overhead or side sunlight. They are usually are slow growing and are weak.
5. **Dead trees (snags)**: These can be found in the canopy, understory or forest floor.