

GROUPING OF PLANTS

How Plants Are Grouped

Plants are often put into groups by the type of parts or structures they have. They can be grouped according to their **types of leaves, stems, flowers, roots, and even seeds.**

Many plants have **leaves** that look similar while others have totally different kinds of leaves. Plant and tree leaves may be different in size, shape, and color.

Trees

Trees can be placed into groups according to whether or not they lose their leaves in the fall.

- **Deciduous trees** are trees that lose their leaves in the fall. An oak tree is a deciduous tree.
- **Coniferous trees** do not lose their leaves in the fall. Coniferous trees have leaves that look like needles. An evergreen tree is a type of a coniferous tree.



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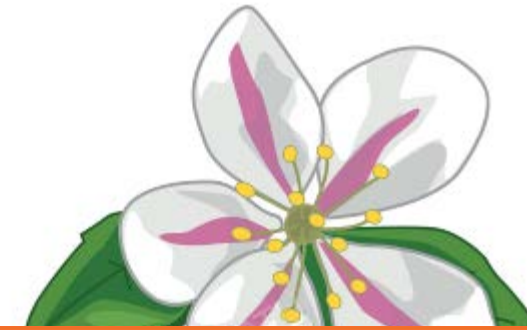
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Lesson Checkpoint:
What is the difference between a deciduous tree and a coniferous tree?

Plants and trees also have various **stems**. For example, the stems of most trees are thick, strong, and have bark protecting them, while a stem of a tulip is thin, green, and fragile.

Whether a plant or tree produces **flowers** can determine what group plants and trees belong in as well. Some plants and trees produce flowers, while others do not. Flowering plants have parts that make seeds or pollen. Plants that flower grow new flowers by producing seeds. Plants that do not produce flowers or seeds make new plants in a variety of other ways.



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Lesson Checkpoint: ***How do flowering plants make new plants?***

Plants and trees can also be put into groups depending on whether or not they produce **seeds or cones**. Flowering plants and trees produce flowers. Coniferous trees do not produce flowers. They produce cones instead.

Two different kinds of cones grow on coniferous trees. One kind of cone that grows on coniferous trees is a small pollen cone. Another kind of cone that grows on coniferous trees is a large seed cone.

In order for a coniferous tree to make seeds, pollen from a small pollen cone needs to land on the large seed cone. The wind carries pollen from a small pollen cone to a large seed cone on a coniferous tree. When pollen mixes with the seeds on a large seed cone, seeds start growing. Seeds grow under the scales of a large seed cone on a coniferous tree.

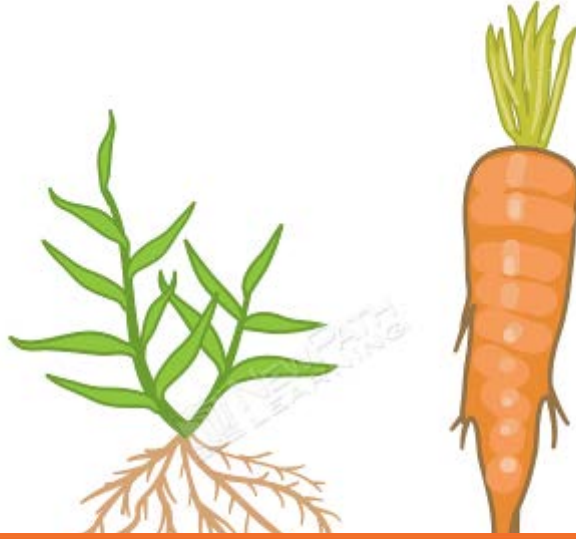
 **PREVIEW**

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Lesson Checkpoint:
How do coniferous trees make seeds?

Let's not forget one of the most important parts of a plant...the **roots**. A variety of plants and trees have long roots that grow deep into the ground, while others have short roots that grow very shallow.



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Wait there's r

There are other properties to consider when grouping plants besides their parts: Plants can be put into groups according to **how they grow**. For instance, some plants may grow low to the ground while other kinds of flowering plants may grow high off the ground. For example, violets grow close to the ground, while sunflowers grow to a few feet above the ground.

Plants can also be put into groups according to **how long they live**. Some flowering plants only live one year, called annuals. Other plants die during the fall and then in the spring they grow again, called perennials.

Lesson Checkpoint:
Name two ways plants can be grouped besides by their parts.