Thursday 28th January 2021

Learning Intention: To apply the process of classification to plants

Success criteria:

I can group plants in different ways.

I can explain why I have classified plants in different ways using the features they have in common.

I can describe the classification system that scientists use to classify plants and name the main plant groups.

I can use scientific vocabulary to classify plants

Look at the selection of plant pictures that you have been given. Just like animals they can be classified into groups.

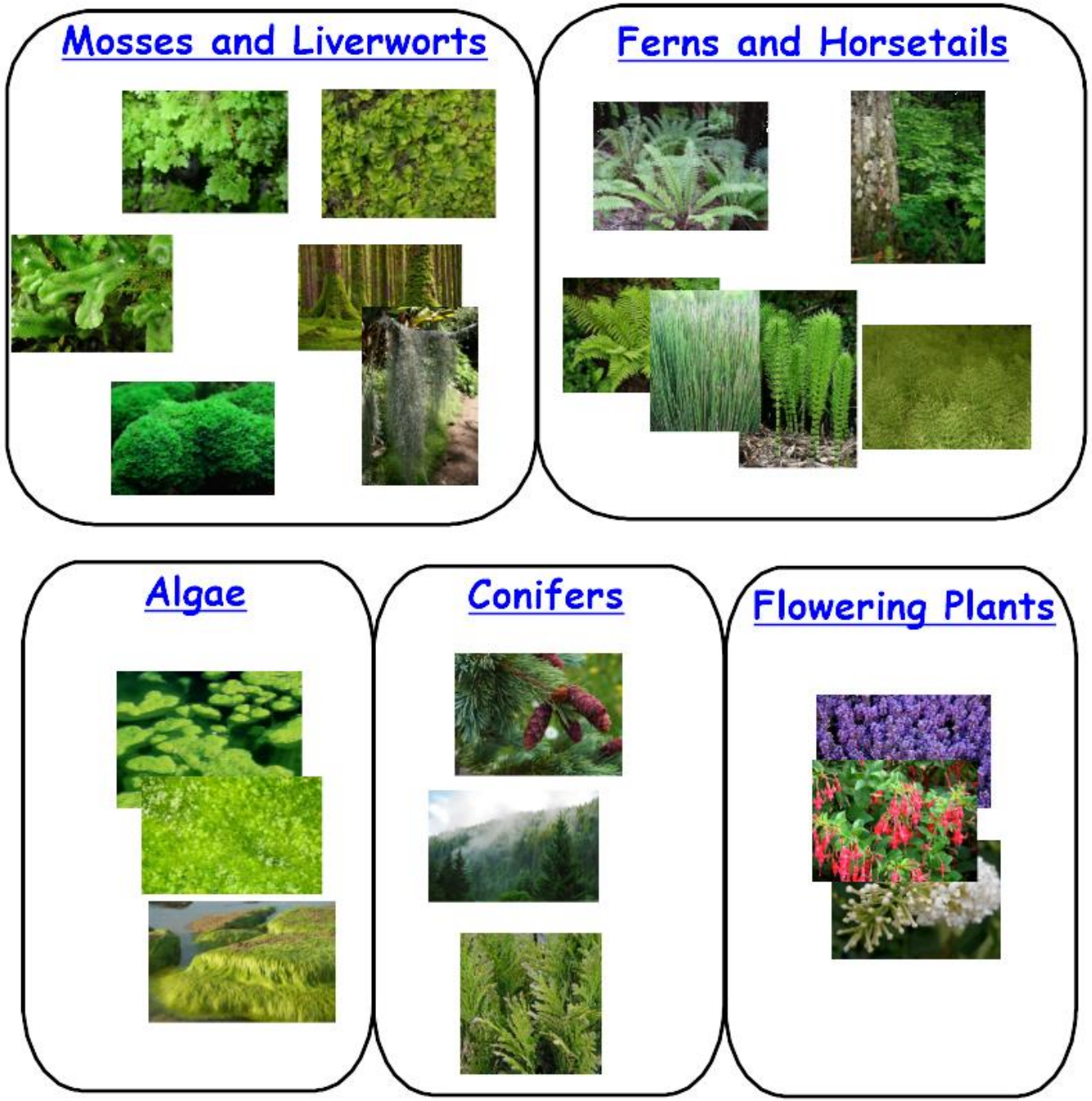
How would you classify them?

What characteristics do the plants have in common? Could you use these characteristics to help you to classify them?

You might include leaf shape, size, colour of leaves or flowers, growing conditions, the growth form (does it grow tall or spread out?) and whether it produces fruit.

In tables group them and write down your ideas. Use your own knowledge about plants as well as what you can see in the examples.

This is the official method of grouping these plants:



How does your grouping compare? Did you group your pictures in the same way?

Here are the main classification groups for the plant kingdom:

Liverworts and Mosses

Liverworts are small flowerless green plants with leaf-like stems or lobed leaves, occurring in moist habitats. They do not have true roots and reproduce by means of spores released from capsules.

Mosses are small flowerless green plants which lack true roots. They grow in low carpets or rounded cushions in damp habitats and reproduce by means of spores released from stalked capsules.

Ferns and Horsetails

Ferns are flowerless plants which have feathery or leafy fronds and reproduce by spores released from the undersides of the fronds. Ferns have a vascular system for the transport of water and nutrients.

Horsetails are plants with hollow jointed stems which sometimes bear narrow leaves. They produce spores in cones at the tips of the shoots.

Algae

Algae are simple, non-flowering, and typically aquatic plants from a large family which includes seaweeds. Algae contains chlorophyll but lacks true stems, roots, leaves and vascular tissue (the tubes which transport fluids around the plants).

Conifers

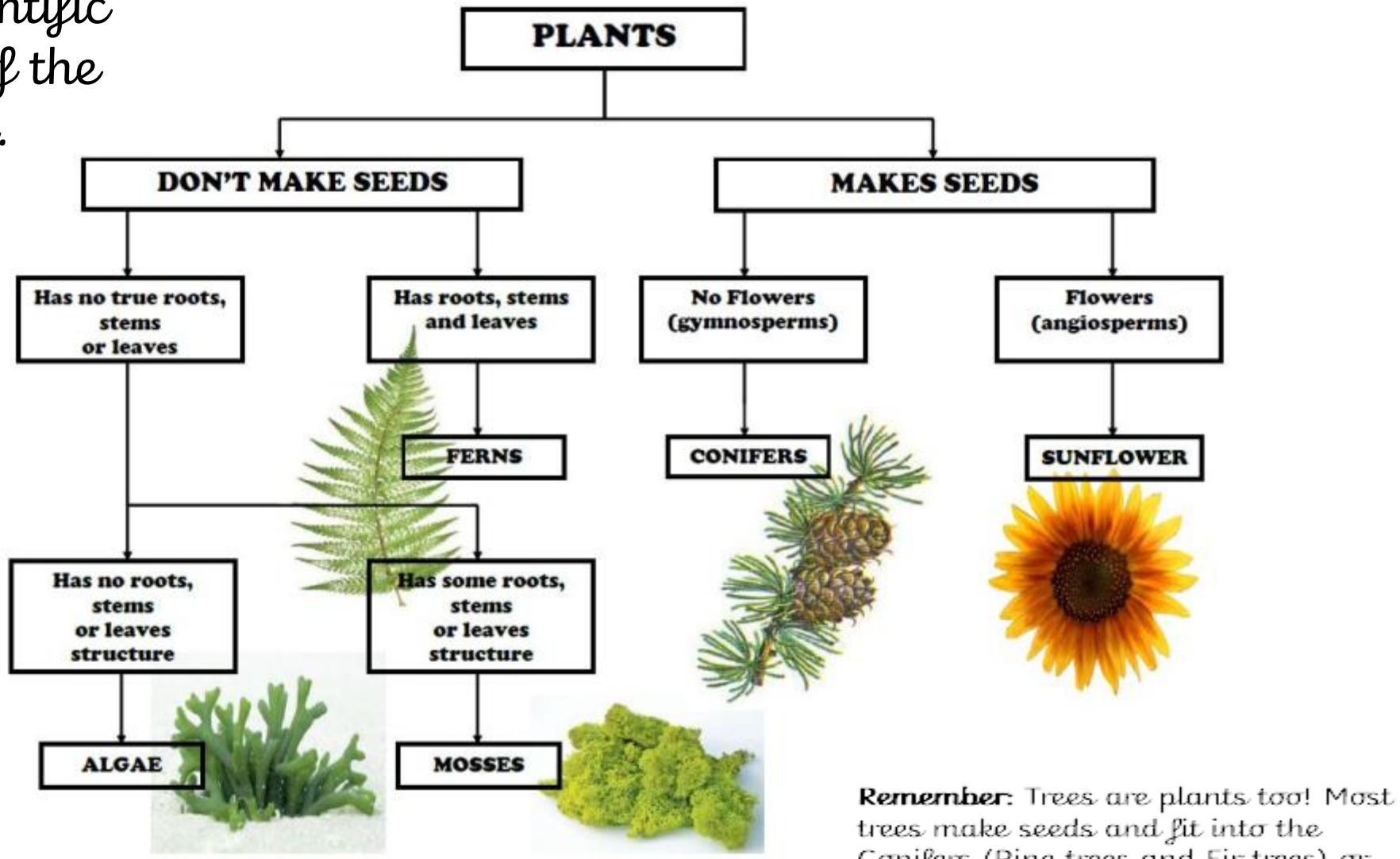
Conifers are trees which bear cones. They have needles or scale-like leaves that are typically evergreen. Conifers are of major importance as the source of softwood.

Flowering Plants

Flowering plants are plants and trees which produce flowers.

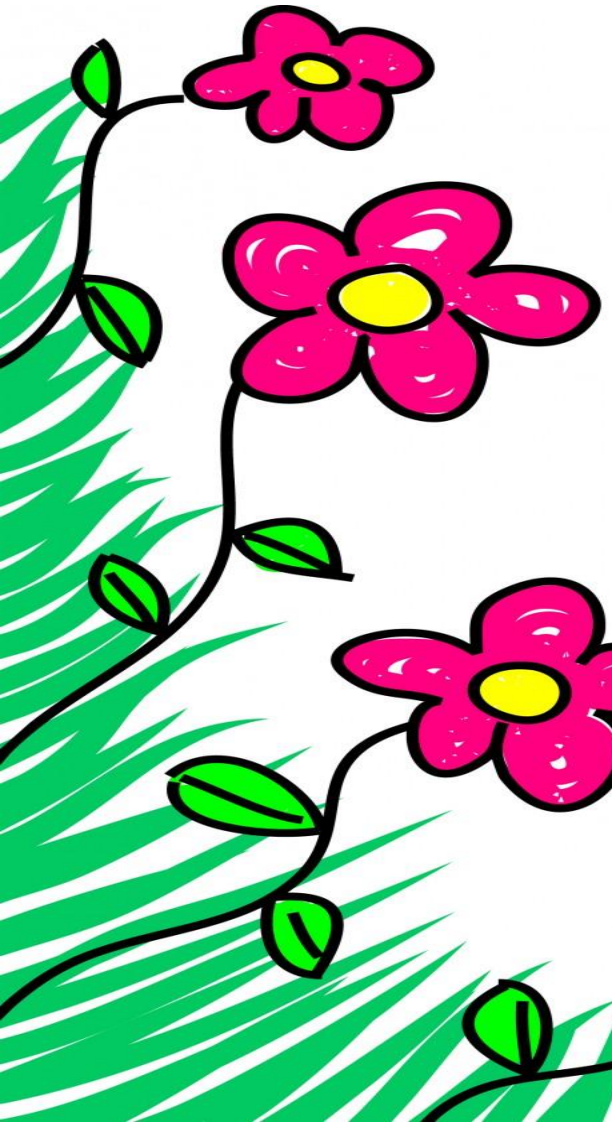
Here is the scientific classification of the Plant Kingdom.

Copy out the classification diagram for plants



Remember: Trees are plants too! Most trees make seeds and fit into the Conifers (Pine trees and Fir trees) or Flowering Plants classes

Extension:



If you still have time, find a plant in your house/classroom or in the garden/school grounds. If possible, take a photo of it and use its characteristics to try to decide which of the five classes of plants you think it would fit into. Use the diagram and information for each class of plant (in this PowerPoint) to write your reasons for classifying your plant as you have.

Remember: Flowering plants don't flower all year round!