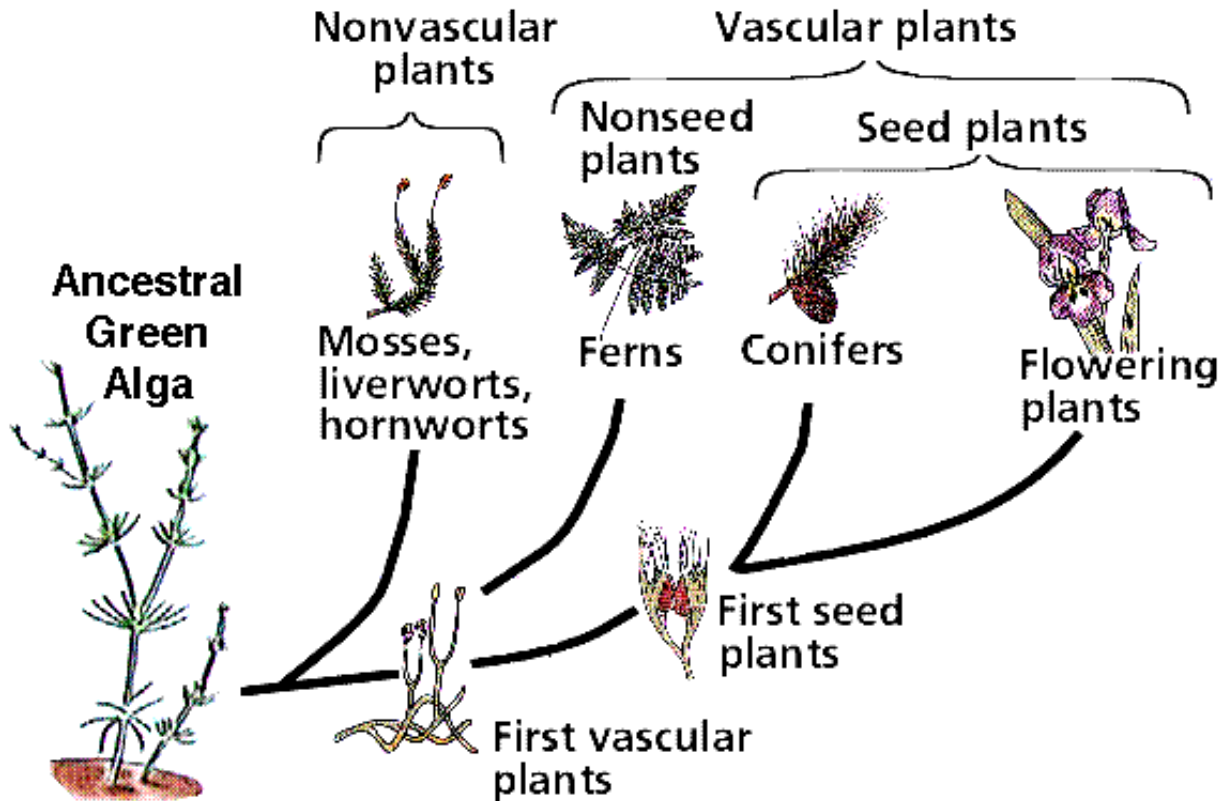


Name: _____

Plant Adaptations – Option 2

Plants share many characteristics with green algae, including DNA, which confirms that they are closely related. But algae can be unicellular and is classified as a protist. Plants evolved over time into very diverse multicellular species as they moved from water to land. Over time, the demands of life on land favored plants that were not as dependent on water. Plants had to find ways to conserve water, reproduce without water, and obtain minerals. Botanists divide the plant kingdom into four groups based on three important features: water-conducting tissues, seeds and flowers. These four groups are mosses, ferns, cone-bearing plants (gymnosperms) and flowering plants (angiosperms). As plants evolved they derived three basic traits that help us categorize them: **vascular tissue, seeds, and flowers**



1. What trait do ferns, conifers and flowering plants all have in common? _____
2. What trait separates conifers and flowering plants from ferns? _____
3. Why are algae not considered to be plants? _____
4. What are the two main vascular tissues of plants and what do they transport? _____

5. Which plants are gymnosperms? _____ Which are angiosperms? _____

Adaptations are special features that allow a **plant** or animal to live in a particular place or habitat. These **adaptations** might make it very difficult for the **plant** to survive in a different place. This explains why certain **plants** are found in one area, but not in another.

Look at the pictures or plants provided for you. Each is labeled with its adaptation(s). Explain why each adaptation likely developed.

Plant 1:

Plant 2:


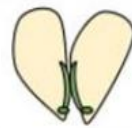


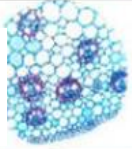



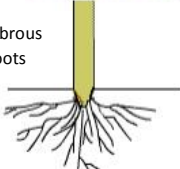
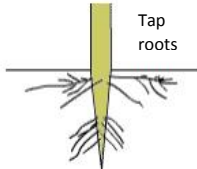
Plant 3:



Plant 4:



Plant 5:



Angiosperms – Two groups:

There are two types of angiosperms (flowering plants). Monocotyledons (monocots) and dicotyledons (dicots). A cotyledon is the embryonic first leaf of the seed. A monocot has ONE “first” leaf and a dicot has TWO. A quick visual of a plant can reveal which group it is in. Use the following to identify the group each angiosperm on the next page belongs to. Label each monocot or dicot and explain why.

MONOCOT		DICOT	
One cotyledon		Two cotyledons	
Long narrow leaf, Parallel veins		Broad leaf, network of veins	
Vascular bundles scattered		Vascular bundles in a ring	
Floral parts in multiples of 3		Floral parts in multiples of 4 or 5	
Fibrous roots		Tap roots	

Watch the following videos just because they are cool....

<http://themysteriousworld.com/top-10-most-mysterious-desert-plants/>

<http://www.wherecoolthingshappen.com/18-flowers-that-look-like-something-else/>

<http://themysteriousworld.com/most-deadliest-plants-in-the-world/>

Examples of Angiosperms: Label each of the following as a monocot or a dicot and describe the characteristic that puts it in that group.







