Name_____ Pd _____ Date _____

PLANT KINGDOM

Nonvascular (Byrophytes)

- Lack a well-developed system for transporting materials.
- Live in damp shady areas.
- Low growing

Vascular (Tracheophytes)

- Have vascular tissue to transport materials.
- Better suited to dry areas.
- Can grow quite tall.

Seedless Vascular Plants

- These reproduce by making spores
- Ex:
  - Deer Fern (pictured below)
  - Whisk Ferns
  - Horsetails (plant)
  - Club mosses

Vascular Seed Plants

Gymnosperms

- Vascular plants that reproduce by seeds.
- They do not form flowers or fruits.
- Ex: Pine (pictured below)

Angiosperm

- Vascular plants that flower and produce seeds that are surrounded by fruit.
- Ex: White Turtlehead (pictured below)

Name_____ Pd _____ Date _____

Classifying Plants

With over 250,000 species of plants, scientists must be able to differentiate between the different types. They do so using the following categories:

Vascular or Nonvascular
Seeds or Spores
Flowering or Non-flowering

What is a vascular plant?

Most plants you are familiar with are vascular plants. Some examples include rose bushes and cherry trees; these plants have special tube-like cells that help water and nutrients move throughout the plant. These special cells are found inside transport tissue. The water and nutrients enter the plant through the roots, and then move throughout the stem and leaves.

What is a nonvascular plant?

Plants that do not have the special transport tissue are non-vascular. They do not have actual roots, stems, or leaves even though they have similar structures. Nonvascular plants are small and usually only grow a few centimeters in height.

What is the difference between seeds and spores?

Seeds and spores are the reproductive parts of plants. In general, most flowering plants contain seeds and non-flowering plants contain spores.

What are angiosperms?

Angiosperms are flowering plants; all angiosperms have flowers. Angiosperms are also vascular and contain seeds, and some produce fruit. Seeds are located inside the fruit or flowers. Tulips, oak trees, apple trees, and sunflowers are all examples of angiosperms.

What are gymnosperms?

Unlike angiosperms, gymnosperms have exposed seeds that are visible. They are also vascular plants. A pine tree is an example of a gymnosperm.

Name_____ Pd _____ Date _____

Classifying Plants Chart

Directions: Fill in the table below by placing a checkmark in the correct column for each category. Then sketch the plant in the last column.

	Transport of Water		Reproduction				Flowering Plant		Sketch
	Vascular	Non-vascular	Spores		Seeds		Yes	No	
			Yes	No	Yes	No			
Moss									
Fern									
Pine Tree									
White Turtlehead									

Checking for Understanding:

1. A scientist discovers a new plant and wants to know how to classify it. She knows the plant is vascular, produces seeds, but is non-flowering.
   a. What plant would it most likely be grouped with and why?

   b. What type of plant is it least like?

2. Cindy examined a plant in her backyard and determined it is non-flowering, is vascular, and produces spores. What might she be looking at?