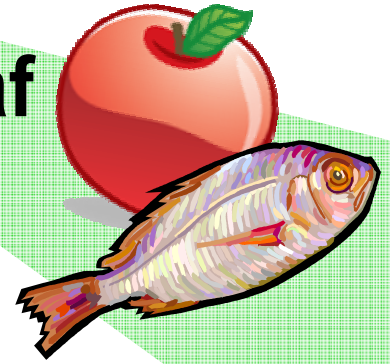


Please, Just Leaf Me Alone



QUESTION: What are the structures of vascular plants and their functions?

MATERIALS:

Leaf Margins ID sheet
Leaf Shapes ID sheet

leaf specimens
Leaf Shapes and Vocabulary sheet

PROCEDURE:

1. Pick out one of the leaves from the specimens provided. Use a pencil to draw a detailed diagram of the leaf showing its external features including detail on shape, margin and venation.
2. Use colored pencils to color the leaf diagram so it matches the actual leaf color as close as possible
3. Complete the data section for the specimen you chose.
4. Repeat Steps 1 and 3 for at least 5 of the leaf specimens provided.

DATA:

Specimen 1 -

Leaf size (mm)		Leaf surface	
Leaf type		Leaf margin	
Leaf arrangement		Leaf base	
Leaf shape		Leaf venation	

LS – Activity #32

Specimen 2 -

Leaf size (mm)		Leaf surface	
Leaf type		Leaf margin	
Leaf arrangement		Leaf base	
Leaf shape		Leaf venation	

Specimen 3 -

Leaf size (mm)		Leaf surface	
Leaf type		Leaf margin	
Leaf arrangement		Leaf base	
Leaf shape		Leaf venation	

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Specimen 4 -

Leaf size (mm)		Leaf surface	
Leaf type		Leaf margin	
Leaf arrangement		Leaf base	
Leaf shape		Leaf venation	

Specimen 5 -

Leaf size (mm)		Leaf surface	
Leaf type		Leaf margin	
Leaf arrangement		Leaf base	
Leaf shape		Leaf venation	

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QUESTIONS:

1. Describe the function of each of the following parts of a leaf.

STRUCTURE	FUNCTION
Cuticle	
Epidermis	
Guard cell	
Palisade cell	
Petiole	
Spongy layer	
Stomata	
Vein	

2. What is the function of the leaf?
3. List several adaptations of leaves?
4. What is the difference between simple and compound leaves?
5. Draw a simple sketch to show the difference between pinnate venation and palmate venation in leaves.

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Leaf Shapes Vocabulary List

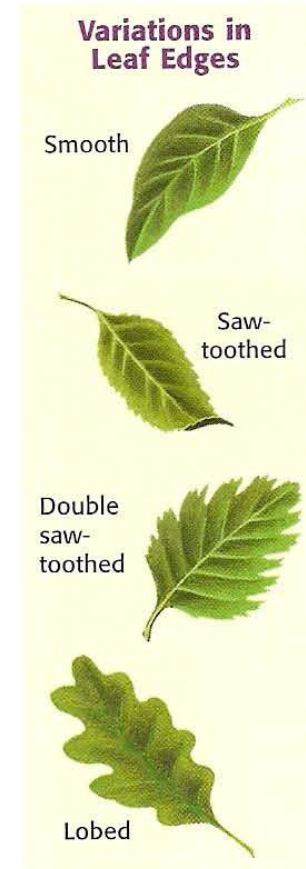
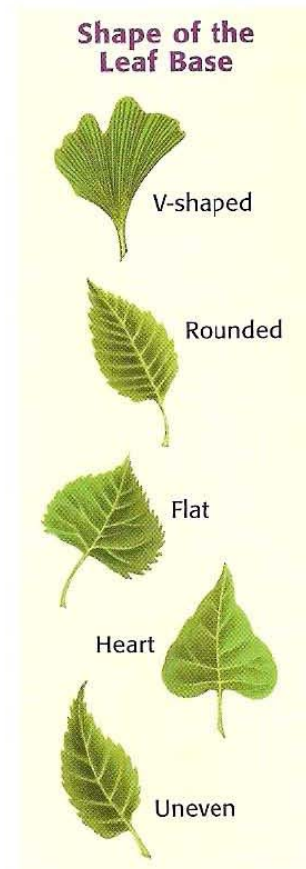
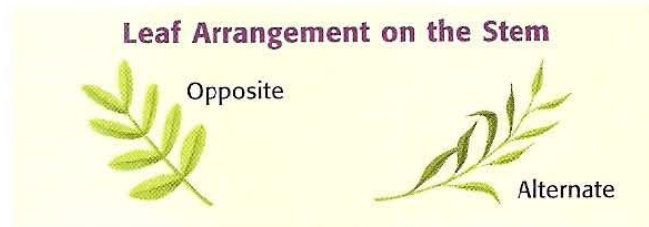
- cordate**—heart shaped
- lanceolate**—sword shaped
- lobate**—lobed
- oblong**—leaves rounded at the tip
- orbicular**—disk shaped
- ovate**—oval shaped, widest at base of leaf
- peltate**—shield shaped
- reniform**—kidney shaped
- sagittate**—arrow shaped

Stems Vocabulary List

- woody**—bark or barklike covering on stem
- herbaceous**—green, nonwoody stems

Leaf Arrangements Vocabulary List

- alternate**—alternating leaves or leaflets along stem or petiole
- compound**—leaf divided into segments or several leaflets on a petiole
- opposite**—compound leaf with several leaflets arranged oppositely along a petiole
- palmate**—single leaf with veins arranged around a center point
- palmate compound**—several leaflets arranged around a center point
- petiole**—leaf stalk
- pinnate**—single leaf with veins arranged along a center vein
- pinnate compound**—several leaflets on either side of a petiole
- simple**—single leaf attached to stem by a petiole



Compound Leaf

