Name:_____

Lab: Monocots and Dicots

Objectives: to use specimens to differentiate between monocots and dicots

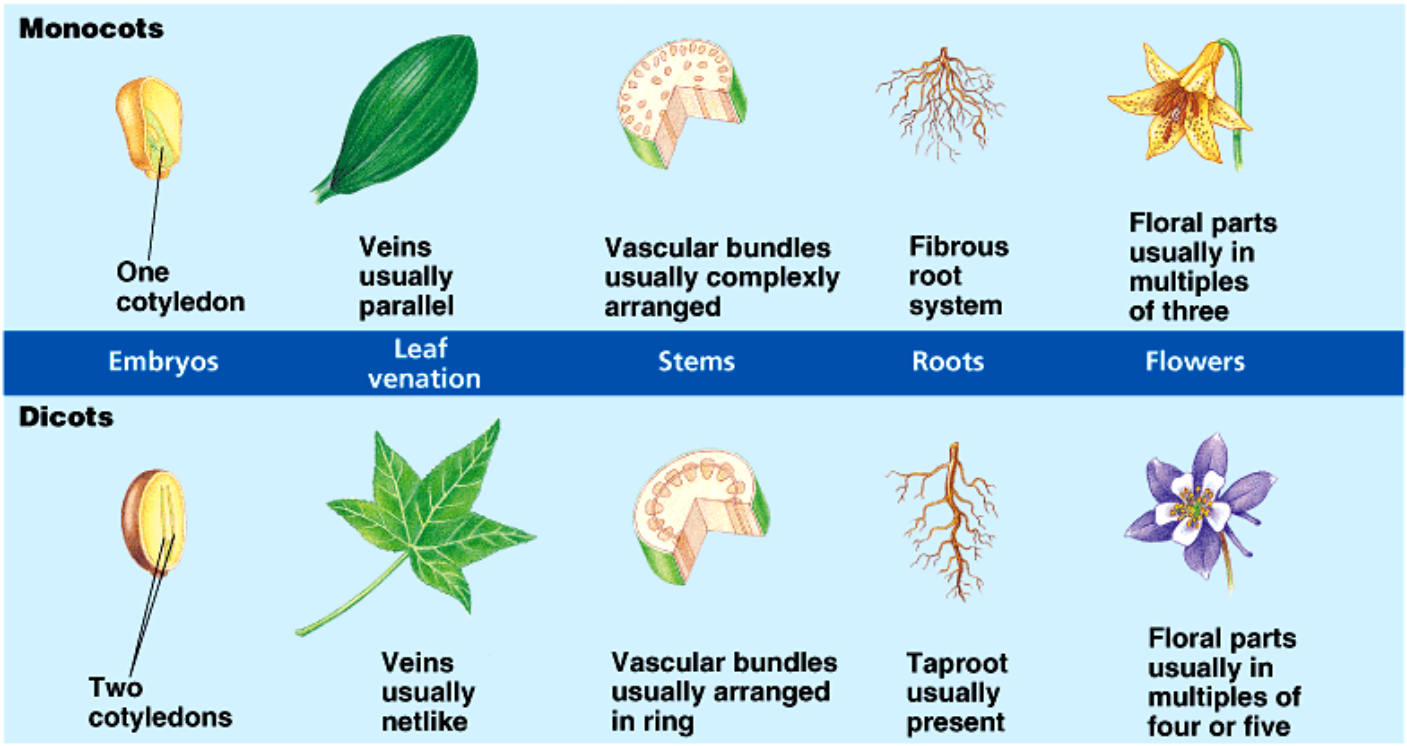
Prelab: Define the following:

Monocot_____

Dicot_____

Recall that Angiosperms (flowering plants) can be divided into two Classes: Monocots and Dicots.

Numerous characteristics separate the two classes, including the following:



Note: conifers are neither monocot nor dicot, they are simply conifers.

Procedure:

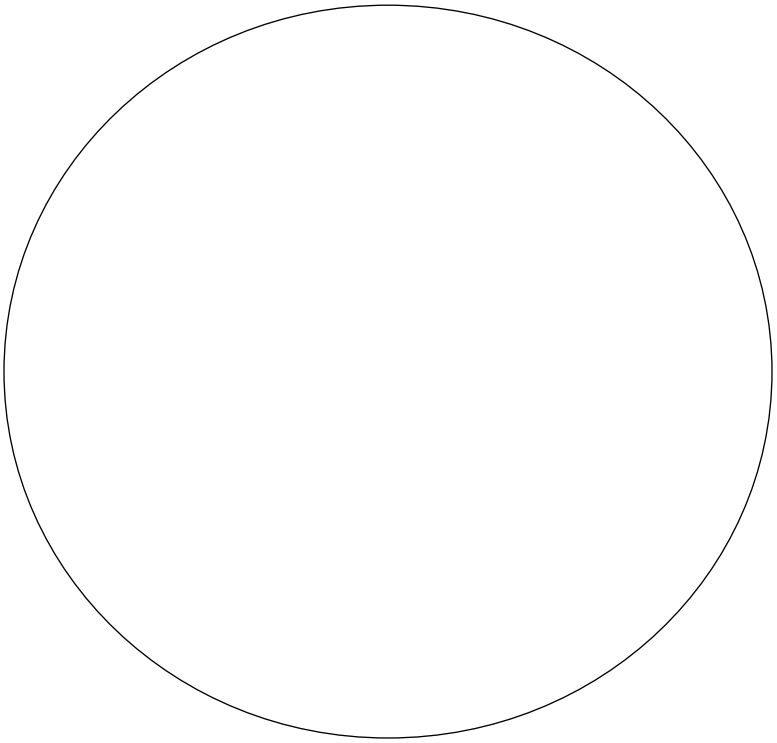
You will need to make biological drawings of various monocot and dicot roots, stems and leaves. Please see data sheets to view the 6 micrographs.

Please show your workings when calculating total magnification, field of view and specimen size.

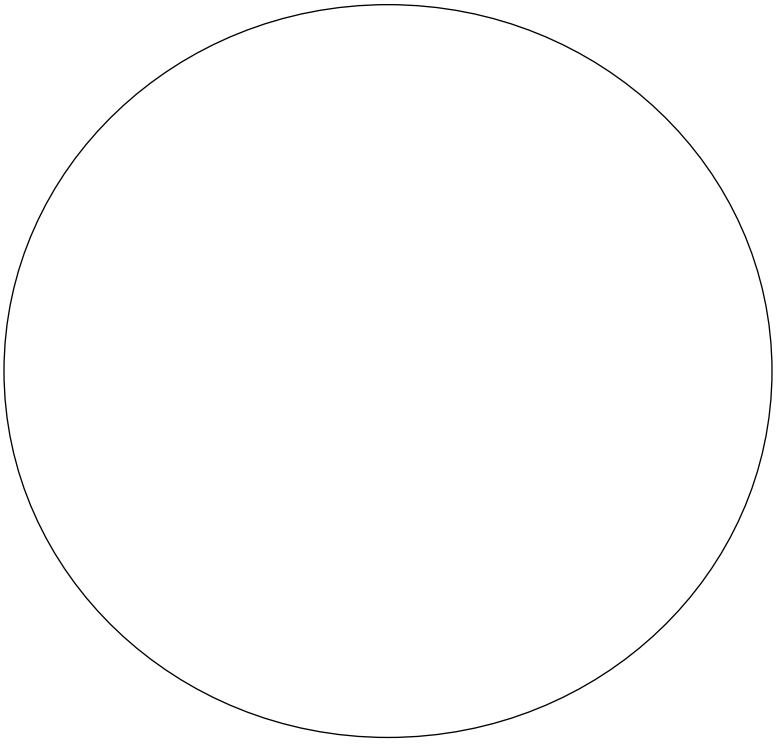
All biological drawings should follow the rules given in class and please complete in pencil. Don't forget titles!

1. Look at the prepared slide of the **<u>monocot and dicot roots</u>**. Draw what you observe (one of each type). Label them as either monocot or dicot. Label the xylem and phloem.

Specimen Name	
Total Magnification	
Field of View	
# of Specimens in Field of View	
Actual Size of Specimen	

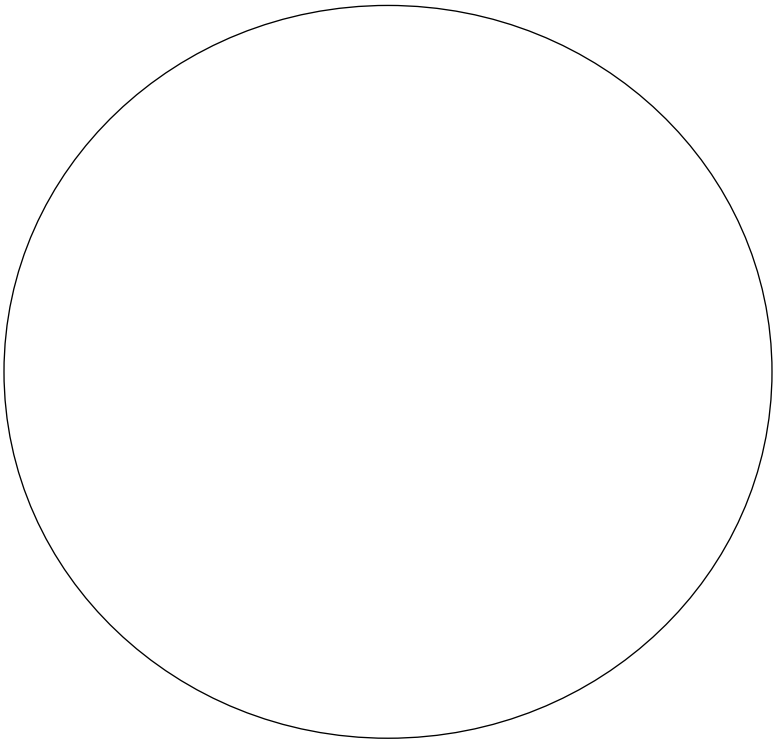


Specimen Name	
Total Magnification	
Field of View	
# of Specimens in Field of View	
Actual Size of Specimen	

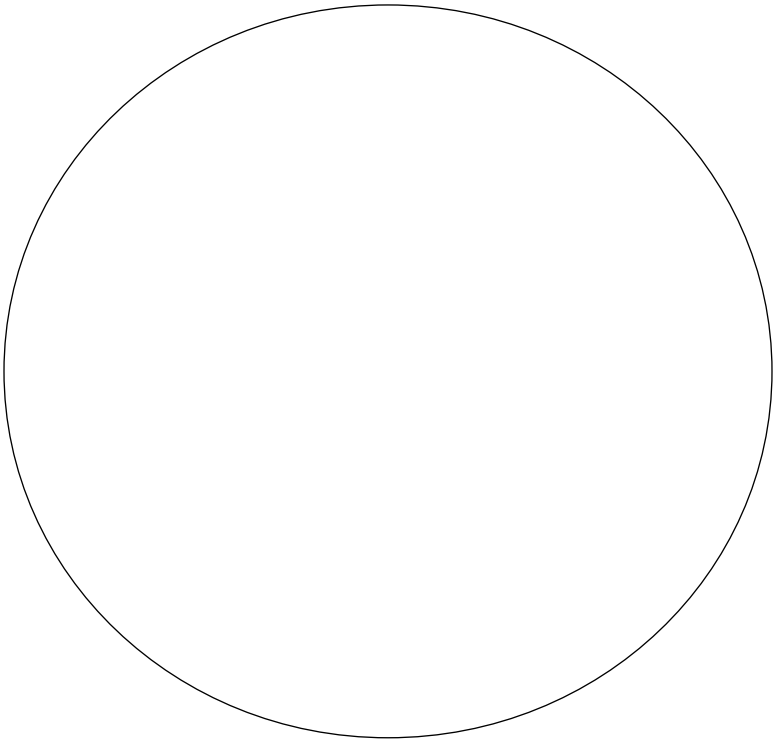


2. Look at the prepared slide of the **<u>monocot and dicot stems</u>**. Draw what you observe (one of each type). Label them as either monocot or dicot. Label the xylem and phloem.

Specimen Name	
Total Magnification	
Field of View	
# of Specimens in Field of View	
Actual Size of Specimen	

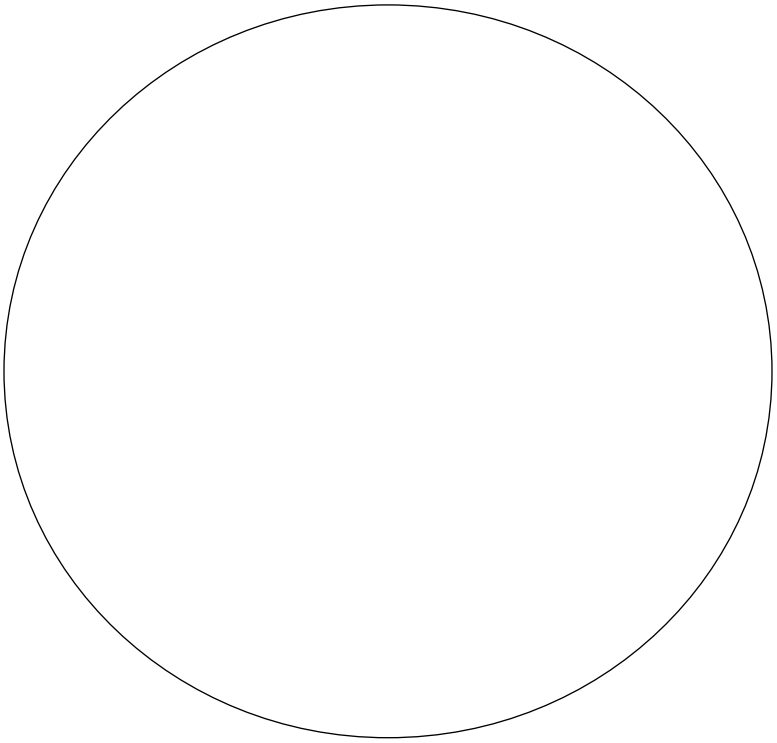


Specimen Name	
Total Magnification	
Field of View	
# of Specimens in Field of View	
Actual Size of Specimen	

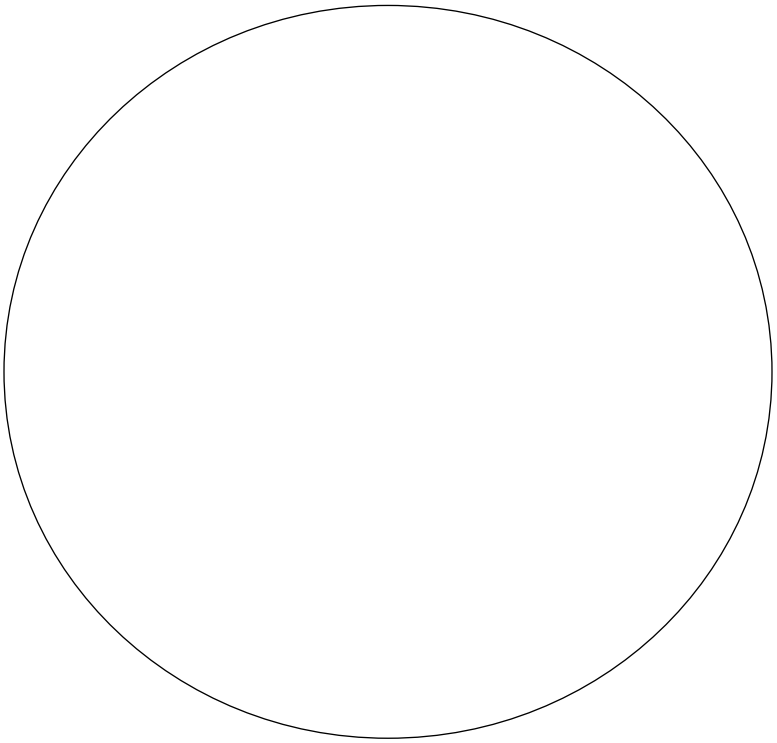


3. Look at the prepared slide of the monocot and dicot leaves. Draw what you observe (one of each type). Label them as either monocot or dicot. **Label the xylem and phloem**.

Specimen Name	
Total Magnification	
Field of View	
# of Specimens in Field of View	
Actual Size of Specimen	

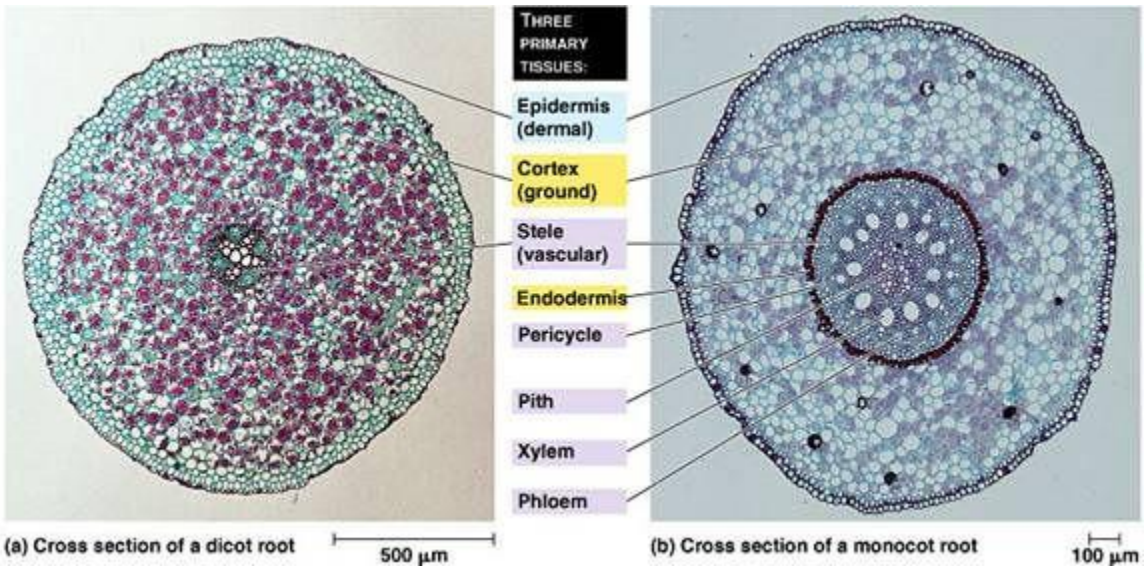


Specimen Name	
Total Magnification	
Field of View	
# of Specimens in Field of View	
Actual Size of Specimen	



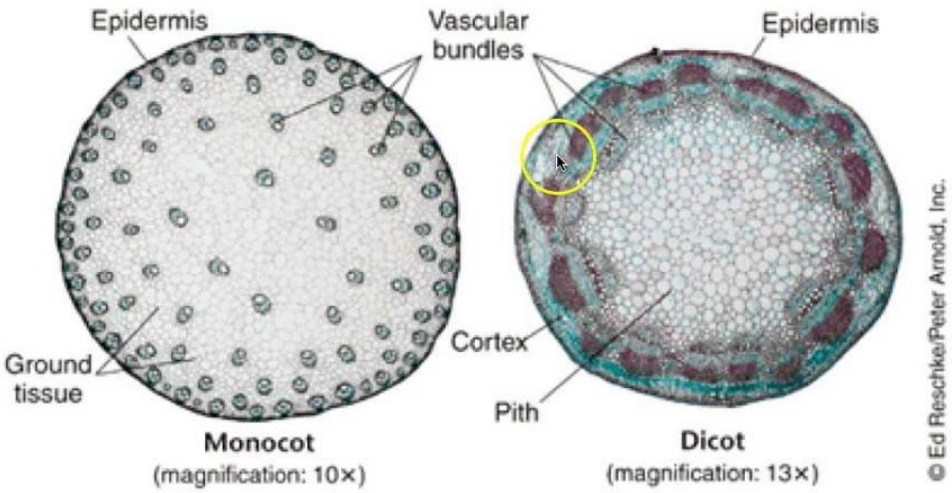
Data for Monocot/Dicot Lab

Microscope where micrographs were taken - Low Mag FOV = 2.5 mm Low objective = 4x Eyepiece= 10x



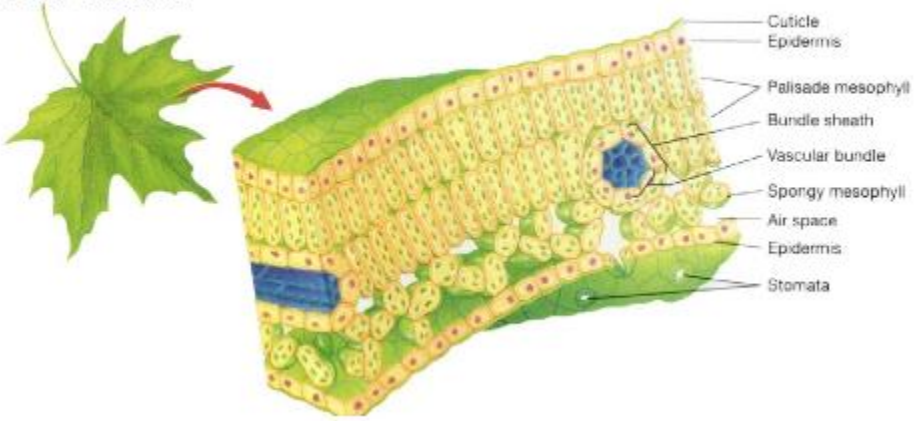
Objective 10x Objective 10x

Root Structures



Leaf Structure Illustrations

Dicot Leaf Structure



Objective lens for both is 40X

Dicot Leaf, *Syringa*, Cross Section

Monocot Leaf, *Zea*, Cross Section

Monocot Leaf Structure