

PLANT STRUCTURES AND FUNCTION *pages 600-616*

I. PLANT TISSUES

- plant tissues are made up of 3 basic cell types: **Parenchyma**, **Collenchyma** or **Sclerenchyma**
- plant tissues are specialized cells that work **together** to do a specific job such as: absorption, transport, photosynthesis, reproduction and storage

- Types of Plant Tissues

1. Dermal

- : outer layer of cells
- : provides **protection** and **structure**
- : may be involved in **photosynthesis** & growth of **secondary** structures (ie. root hairs)

2. Ground

- : middle layer
- : provides protection, structure and **regeneration**
 - : classified as one of 3 types
- a) Meristematic
 - : area of cell division or **growth** (very small cells)
 - : found in growing regions where cell division is **rapid**
 - : found in **apical meristems** (tips of stems, roots) & lateral meristems (**vascular cambium** & **cork cambium**)

b) Cork

- : inner layer of **dead cells**
- : **structural** function

c) Cortex

- : ground tissue with a **storage** function

3. Vascular Tissue

- : **conductive** or transport tissue
- : may provide support (structure)
- : two types --
- a) Xylem : conduct water and dissolved minerals
- b) Phloem: conduct food

- all 3 tissues are found in **plant organs**

II. PLANT STRUCTURES

- plant organs are structures specialized to perform specific functions
- the 3 main plant organs are: **Roots** – anchor the plant & absorb water, minerals
Leaves – photosynthesize to produce nutrients
Stems – support leaves & flowers, transport materials between different plant organs

Plant Tissues and Structures

Below is a picture of a plant with cross sections through its root, stem and leaf.

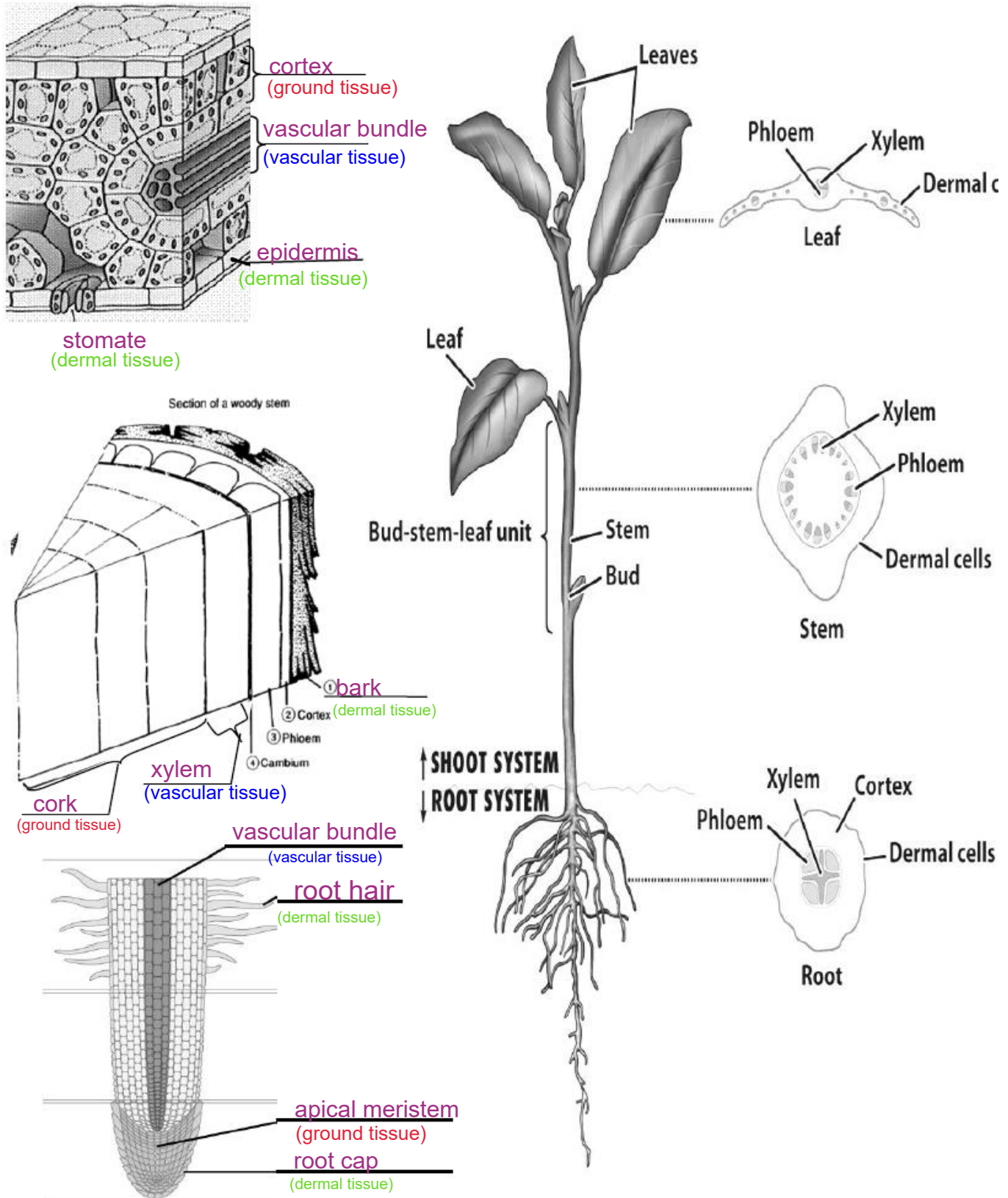
a) Label the diagrams

b) Use the following guide to identify and color the plant tissues in each cross section:

Dermal Tissue = Green

Ground Tissue = Red

Vascular Tissue = Blue



PLANT STRUCTURES AND FUNCTION pages 600-616.

I. PLANT TISSUES

- plant tissues are made up of 3 basic cell types: _____, _____ or _____
- plant tissues are specialized cells that work _____ to do a specific job such as: absorption, transport, photosynthesis, reproduction and storage

Types of Plant Tissues

1. Dermal

- : outer layer of cells
- : provides _____ and _____
- : may be involved in _____ & growth of _____ structures (ie. root hairs)

2. Ground

- : middle layer
- : provides protection, structure and _____
- : classified as one of 3 types

a) Meristematic

- : area of cell division or _____ (very small cells)
- : found in growing regions where cell division is _____
- : found in _____ (tips of stems & roots) and lateral meristems (_____ & _____)

b) Cork

- : inner layer of dead cells
- : _____ function

c) Cortex

- : ground tissue with a _____ function

3. Vascular Tissue

- : _____ or transport tissue
- : may provide support (structure)
- : two types --
 - a. _____ : conducts water and dissolved minerals
 - b. _____ : conducts nutrients

- all 3 tissues are found in _____

II. PLANT STRUCTURES

- plant organs are structures specialized to perform specific functions
- the 3 main plant organs are: **Roots** – _____ the plant & _____ water, minerals
Leaves – _____ to produce nutrients
Stems – _____ leaves & flowers, _____ materials between different plant organs

Read pages 638-641

Do Question #2 on page 641