

# Plant Anatomy

Tissues and Organs

# Do Now

- ▶ Complete plant labeling sheet and answer the following question on the back of the sheet:
- ▶ Briefly describe the biological process of reproduction. How do you think this process is similar and/or different in plants?

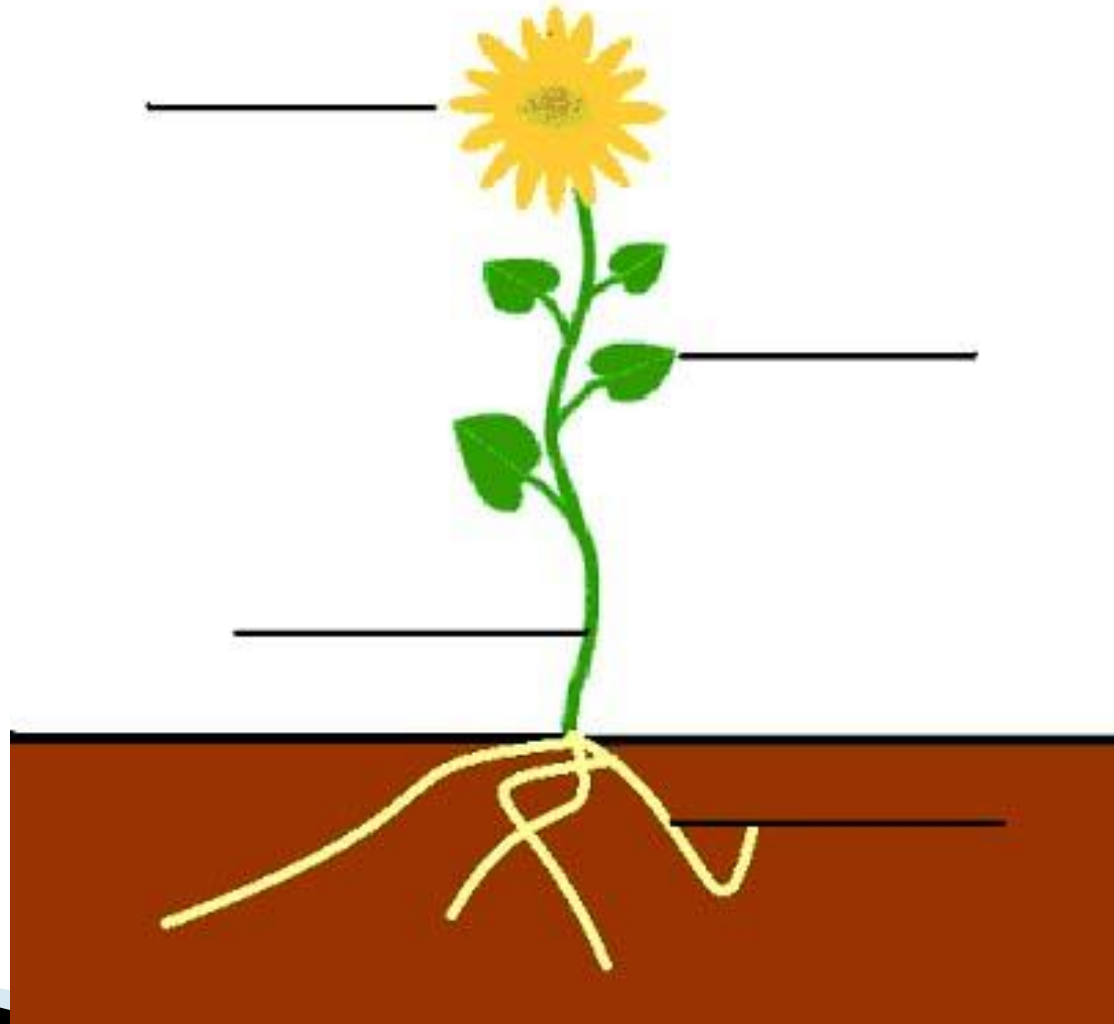
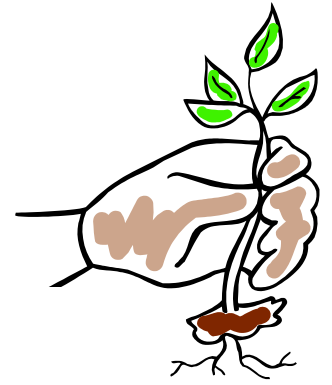


# Introduction

- ▶ Do plants and animals have any structural similarities??



# Parts of a Plant



# Copy Chart Into Your Notes

Tissue Type	Description	Purpose	Major Feature(s)	Like in Humans
Dermal				
Vascular				
Ground				

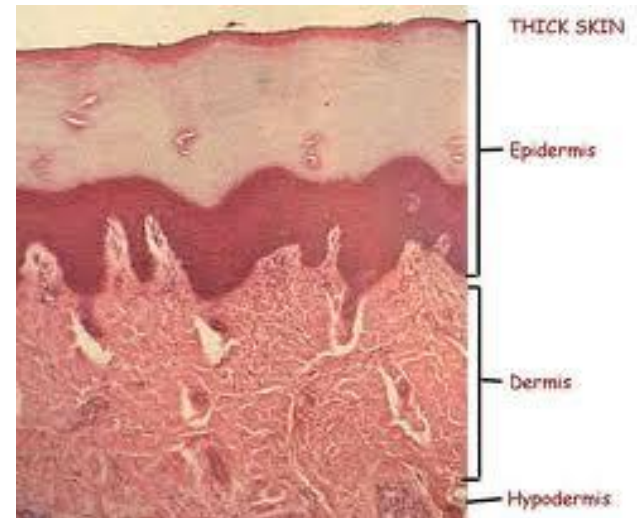
# Plants Have 3 Tissues

- ▶ **1. Dermal Tissue**
- ▶ Thick and waxy/very tough
- ▶ Protects the outside of the plant to protect from water loss



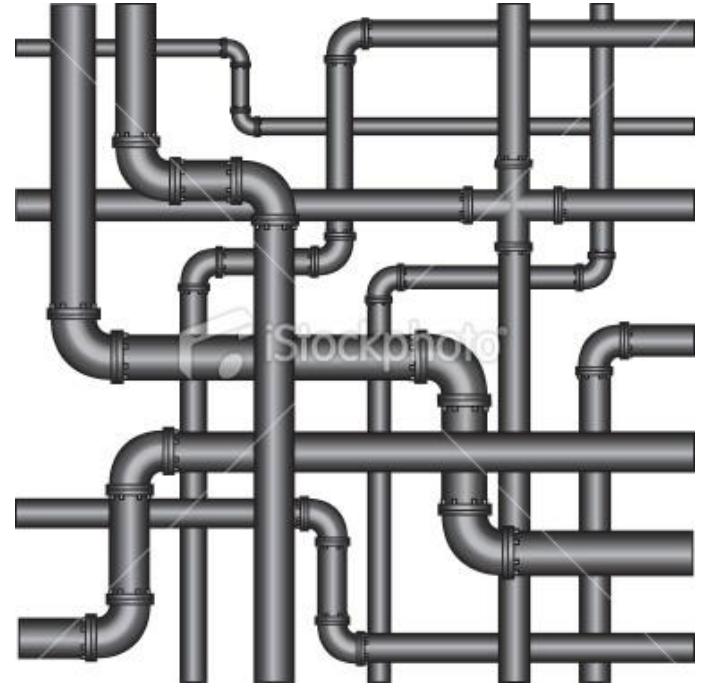
# Plants Have 3 Tissues

- ▶ 1. Dermal Tissue
- ▶ Major Feature:  
Epidermis and cuticle
- ▶ What do you think this is like in humans?
- ▶ (Think outside covering)



# Plants Have 3 Tissues

- ▶ **2. Vascular Tissue**
- ▶ A system of hollow tubes, like a pipeline
- ▶ Transports water and nutrients through the plant

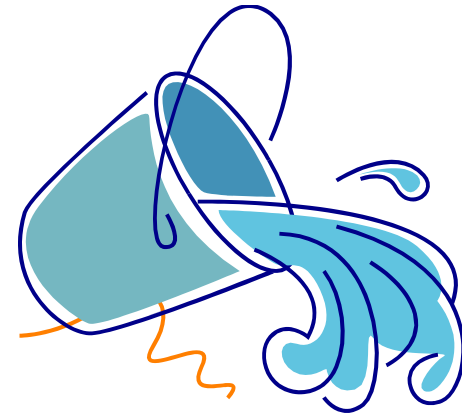




# Plants Have 3 Tissues

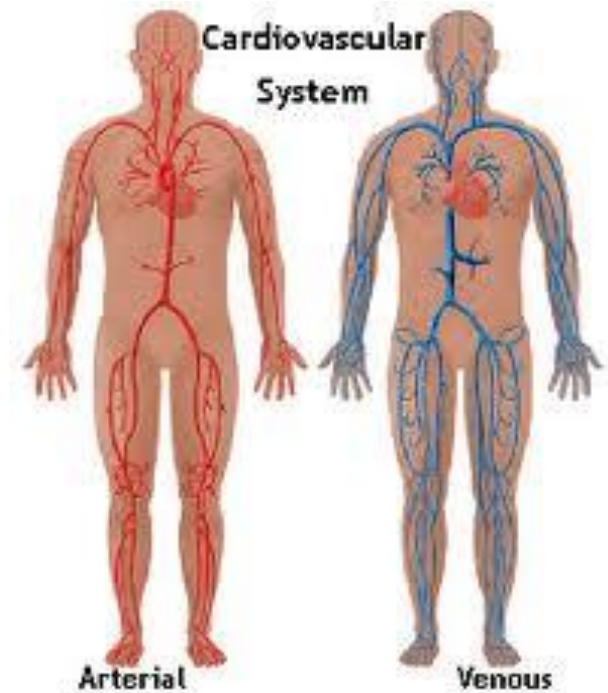
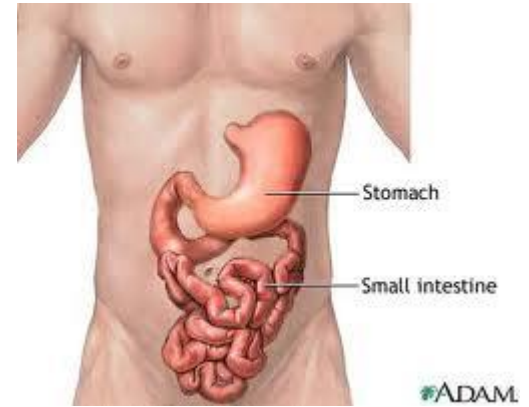
## ▶ 2. Vascular Tissue

- ▶ 2 types:
- ▶ Xylem = water
- ▶ Phloem = food



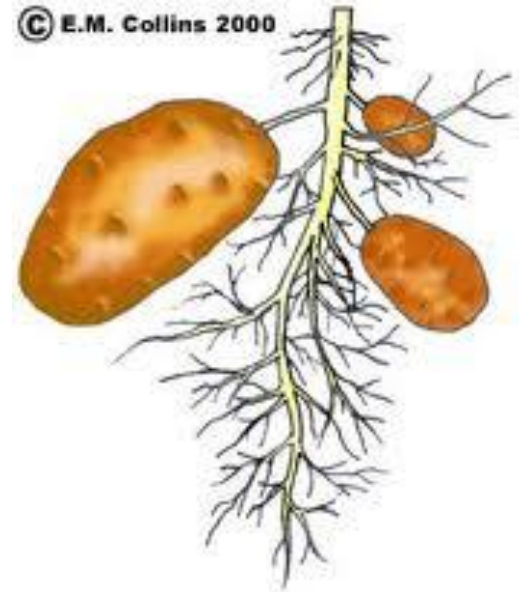
# Plants Have 3 Tissues

- ▶ 2. Vascular Tissue
- ▶ What do you think this is like in the human body?



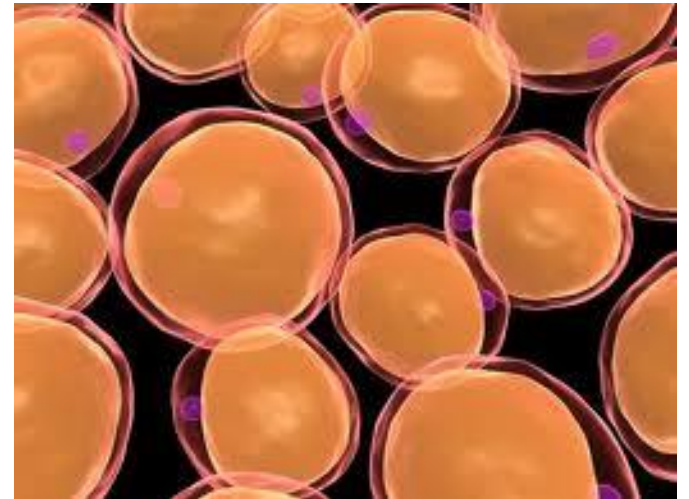
# Plants Have 3 Tissues

- ▶ **3. Ground Tissue**
- ▶ This is the edible part of the plant
- ▶ Storage of sugar/supports the plant

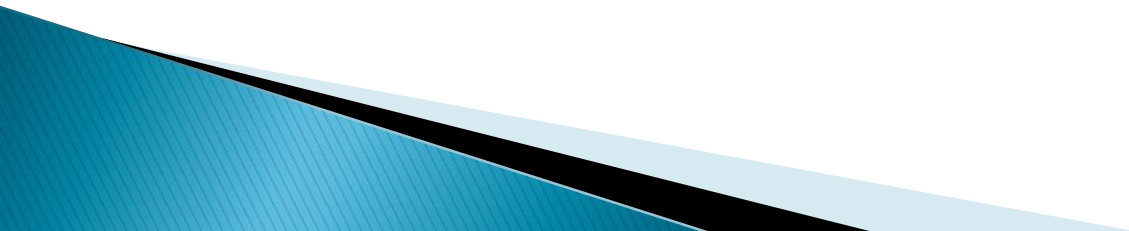


# Plants Have 3 Tissues

- ▶ **3. Ground Tissue**
- ▶ Major Feature:  
Chloroplasts found here
- ▶ What is it like in humans?



So... Do plants and animals have any structural similarities...?



List some things plants need to survive



# Where do plants get their water?

- ▶ The xylem transports it around the plant like the heart pumps our blood
- ▶ What do you think plants do that don't have xylem?



# Moss

- No Vascular Tissues

- Reproduces with spores



# Ferns

- Have vascular tissues

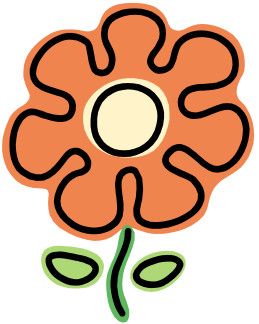
- Reproduces with spores



# Angiosperms

- Have vascular tissues

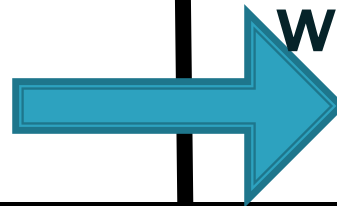
- Reproduce with seeds (in fruits)



# Gymnosperms

- Have vascular tissues

- Reproduce with seeds (in cones)





# Independent Practice

1. What are the three major requirements for plants?
  2. How did plants adapt to life on land?
  3. What type of tissue was most important to plant's adaptation to life on land?
  4. What do ferns and gymnosperms have in common?
  5. What do spores, seeds, cones, and flowers have in common?
  6. How does plant reproduction compare to human reproduction?
  7. How might a plant be affected if it lacked ground tissue?
  8. Which types of tissues are you eating when you eat a plant: dermal, vascular, or ground?
  9. How are xylem and phloem like veins and intestines?
  10. Why do you think cavemen used to use moss like we use paper towels? Hint: What tissue do they lack that other plants have?
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