

Name \_\_\_\_\_

Period \_\_\_\_\_

AP Biology

Date \_\_\_\_\_

**RAVEN CHAPTER 35 GUIDED NOTES: PLANT FORM**

1. Explain the structure and function of meristematic tissue in plants. How do they provide for renewable growth in plants?

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2. Where are apical meristems located? Briefly describe the structure and function of the apical meristems of a plant.

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3. How are lateral meristems distinguished from apical meristems? What type of growth do they create in the tree?

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4. Distinguish between cork cambium and vascular cambium.

a. \_\_\_\_\_

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b. \_\_\_\_\_

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5. How is the growing root tip protected from damage as it moves through the soil?

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6. How is the apical meristem protected in a growing seedling as the new shoot moves through the soil?

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7. List the two system that make up the plant body:

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8. Identify and briefly describe the four tissue types that exist in plants

a. \_\_\_\_\_

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b. \_\_\_\_\_

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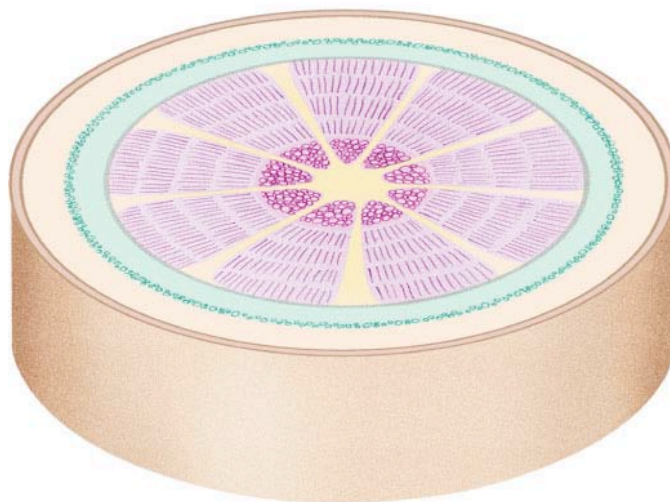
c. \_\_\_\_\_

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d. \_\_\_\_\_

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9. Label the diagram of the cross section through a woody stem and indicate the function of each of the tissues.



10. Identify and describe three specialized cell types which occur in the dermal tissue of a plant.

a. \_\_\_\_\_  
\_\_\_\_\_

b. \_\_\_\_\_  
\_\_\_\_\_

c. \_\_\_\_\_  
\_\_\_\_\_

11. Identify and describe three specialized cell types which occur in the ground tissue of a plant.

a. \_\_\_\_\_  
\_\_\_\_\_

b. \_\_\_\_\_  
\_\_\_\_\_

c. \_\_\_\_\_  
\_\_\_\_\_

12. Describe the structure and function of xylem. What cells make up this vascular tissue?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

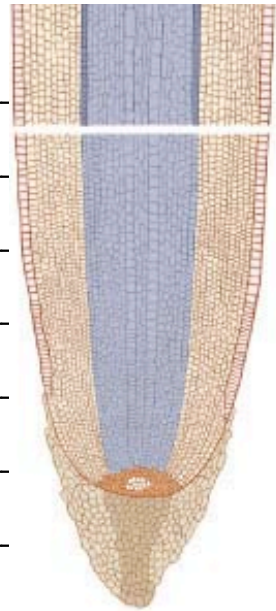
13. Describe the structure and function of phloem. What cells make up this vascular tissue?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14. What are plasmodesmata? \_\_\_\_\_

15. Identify and describe the four regions of the developing root. Explain their function.

- a. \_\_\_\_\_  
\_\_\_\_\_
- b. \_\_\_\_\_  
\_\_\_\_\_
- c. \_\_\_\_\_  
\_\_\_\_\_
- d. \_\_\_\_\_  
\_\_\_\_\_



16. What is the function of the Casparian strip? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

17. What is the adaptive value of root hairs? \_\_\_\_\_  
\_\_\_\_\_

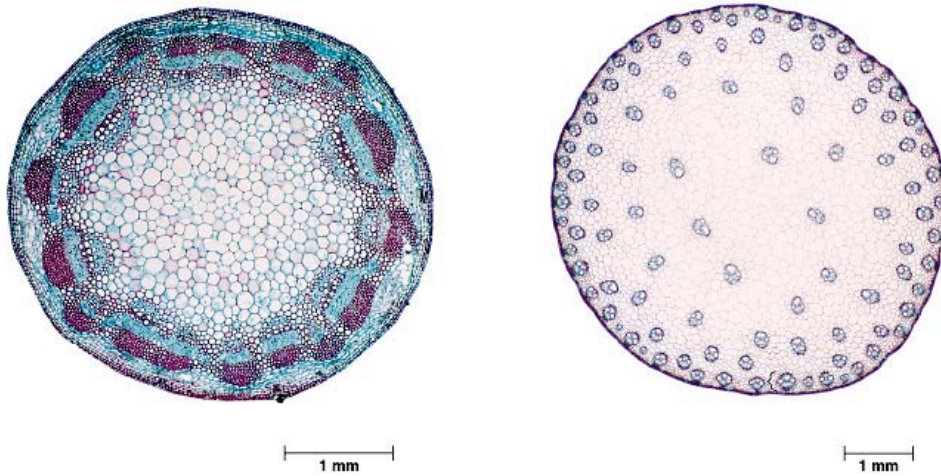
18. Review some modifications of roots seen in plants.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

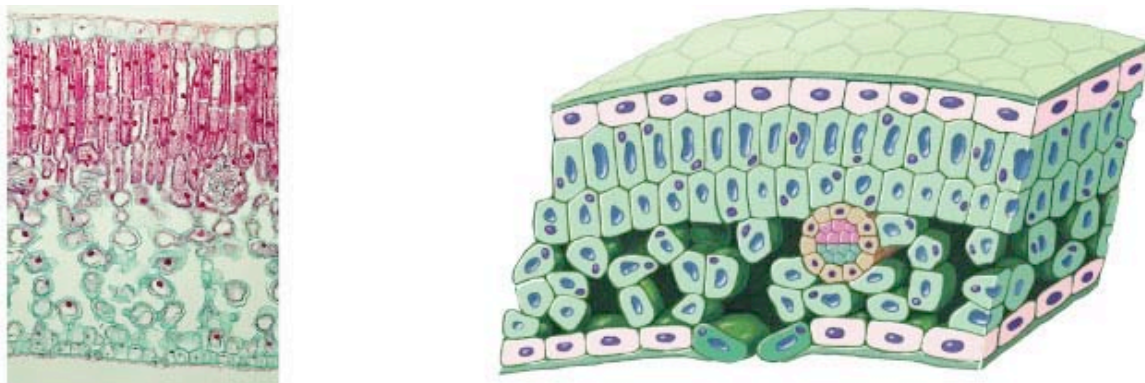
19. Review some modifications of stems seen in plants.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

20. Label the diagrams of the stems and indicate the functions of the tissues.



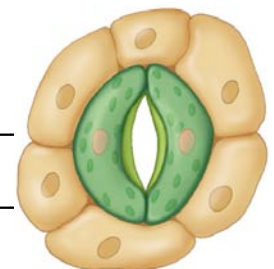
21. Label the diagram of the leaf and indicate the function of the tissues.



22. What is the role of the stomata?

\_\_\_\_\_

\_\_\_\_\_



23. Review some modifications of leaves seen in plants.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_