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Lesson 2: The Root System

Reading and Questions

*The Book
of Trees
pp. 8-12*

1. How do plants attain the water they need to live and grow? _____

2. What are the two basic designs for plant roots? _____
3. What is the difference between these two designs? _____

4. Trees begin their life with what root design? _____
5. What are the two types of taproots? _____

6. List examples of food-storing taproots (both from the text and from your own knowledge and experience). _____

7. What are the benefits of a fibrous root system? _____

8. List the parts of a plant root from outside to inside. _____

9. _____ are minerals and salts that are dissolved in the water the plant absorbs which help the plant grow.
10. The _____ transports water and food in the root. The _____ specifically takes the water to the stem, and the _____ receives the food made in the leaves.
11. What are cells? _____

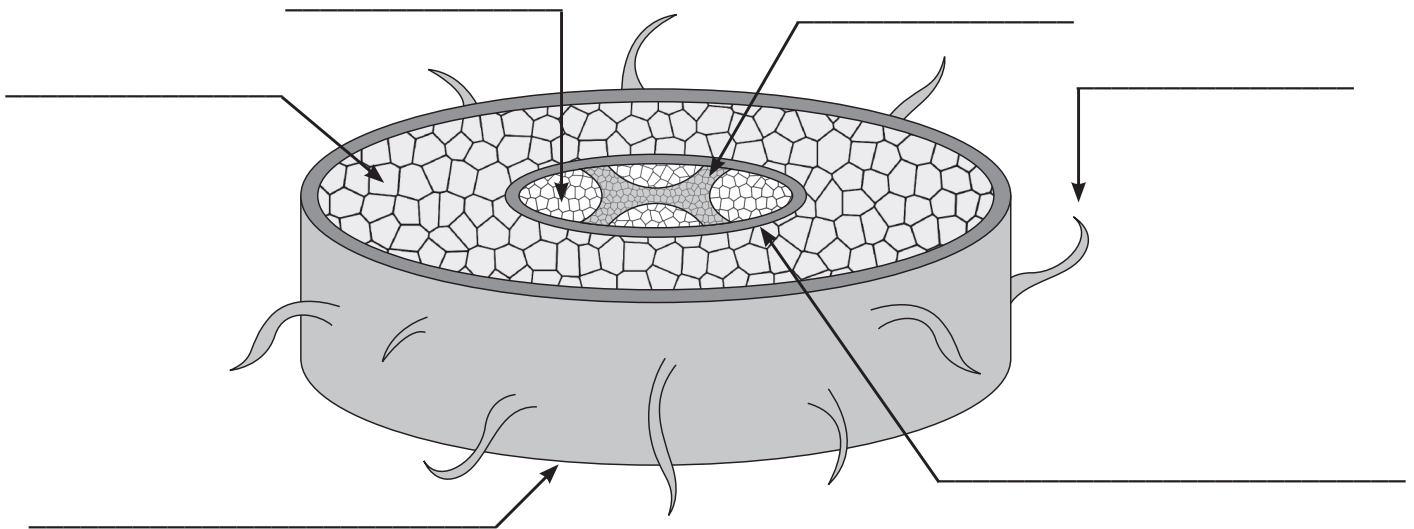
12. What are the two functions of the cortex? _____

Diagrams and Labeling

- Label the plants according to their root design.



- Label the parts of a plant root.



Activities

1. (With permission!) Gently uproot a plant near your house or building and examine its root system. (The larger the roots, the easier the activity.) What type of root system does it have? Can you see the root hairs?
2. Make a cross section (if you are holding the plant vertically, make a cut horizontally) of the root specimen you collected, and using a magnifying glass, see how many parts of the internal structure you can identify.