

Plant Form & Function

05 March 2009, Bonine 5

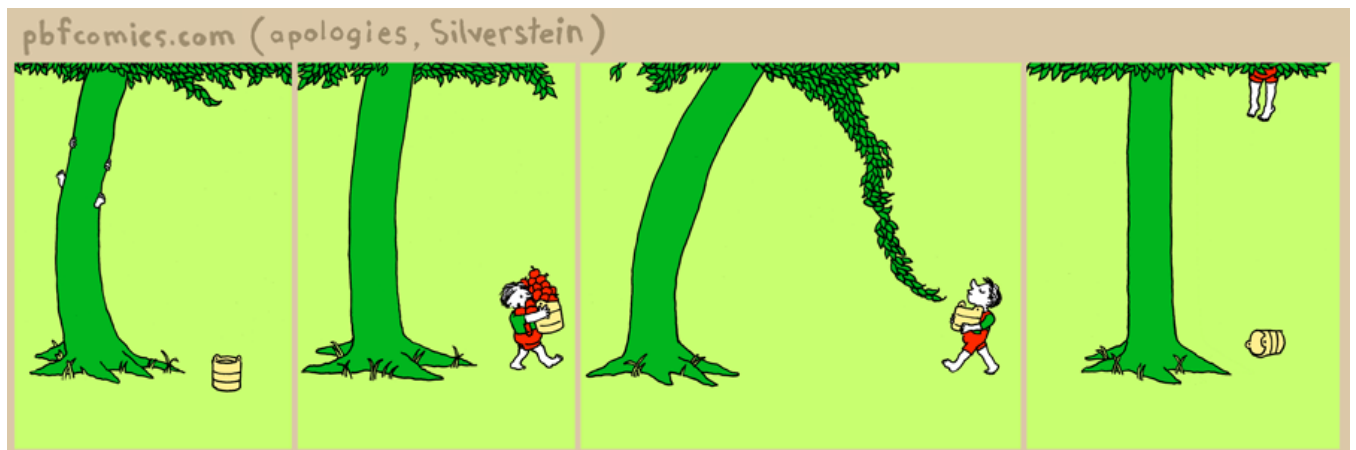


Questions to help you review the material and comprehend important points.

1. What are two important roles each for shoots and roots?
2. Give two examples each of plant structures that are derived from leaves and that are derived from stems.
3. Provide an example wherein plants have likely evolved in response to herbivory.
4. Compare and contrast the roots of mesquites, saguaros, and mangroves.
5. Define adaptive radiation and give an example from the plant world.
6. Define phenotypic plasticity and give an example from the plant world.
7. What are four ways that you can typically tell monocots from dicots? Are each of these two groups gymnosperms? Are they vascular?
8. What do xylem and phloem do and how do they do it?
9. Where do trees get all the carbon they use to build large trunks?
10. What do stomata do and how do they do it?
11. Briefly explain the functional differences among C₃, C₄, and CAM photosynthesis. What environmental conditions give one an advantage over the others?
12. What happens at apical and lateral meristems?
13. Define secondary growth. What is it and what are tree rings?
14. What are vascular bundles? Vascular cambium? In what plant groups do you find these structures?
15. Explain what a knot is in wood using the vocabulary from the previous questions on this page.
16. How does the amount of dissolved solutes on each side of a cell membrane affect movement of water? How is Turgor related?
17. How do plants get water 300+ feet into the air? Are there other forces that can also move water, but not as far?
18. What are five adaptations that give plants an advantage in desert habitats?
19. What does it mean that moving water is 'free' but moving minerals and other nutrients is 'not free'? How are nutrients moved?
20. Explain the sources and sinks of carbon in a plant and how that changes with the seasons (for plants living in temperate environments).
21. How does girdling kill a tree?



Abridged Version!
The Giving Tree, Shel Silverstein 1964,
http://z.hubpages.com/u/81582_f520.jpg



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