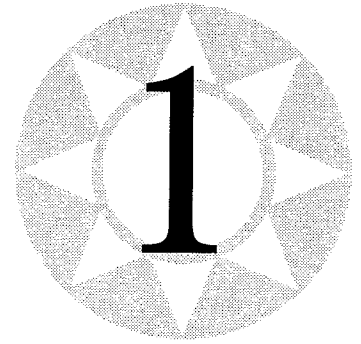


Botany Basics



**Answers to
review questions**

- 1. What unique feature of plant cells allows vegetative reproduction to be successful? Why?**
Totipotency. Almost all plant cells contain all of the genetic information necessary to reproduce a complete plant (*p. 5*).
- 2. What is the major function of root hairs?**
To absorb water and minerals from the soil (*p. 7*).
- 3. In sexual reproduction, what structure contains the genetic information and food reserve to allow for development of a new plant?**
The seed (*p. 21*).
- 4. You saved the seeds from an apple you liked. If you plant these seeds, will you be able to produce apples true-to-type of the original apple? Why or why not?**
No. The original apple contained genetic material from only the female parent. The genetic material in the seeds you saved came from the union of the female ovule and an unknown male pollen source (*p. 20*).
- 5. Which of the following does all plant and animal life depend on? (Mark the one correct answer.)**
(b) Photosynthesis (*p. 22*)
- 6. Which of the following products do living plants produce or release? (Mark all correct answers.)**
(a) Sugars and starches (*pp. 22–24*)
(b) Oxygen (*pp. 22–24*)
(c) Carbon compounds (*pp. 22–24*)
(d) Water (*pp. 22–24*)

Answers to review questions

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7. **What three things must a plant continuously balance in order to grow and develop properly?**
- Photosynthesis (*pp. 22–24*)
 - Respiration (*p. 24*)
 - Transpiration (*pp. 24–25*)
8. **What primary nutrient produces vegetative growth and is a component of protein?***
Nitrogen (*p. 43*)
9. **The new lawn you planted was made up of equal amounts of four different cultivars. Ten years from now, will the same proportion of these cultivars exist? What process is at work?**
No. Plant succession will occur as the better adapted cultivars begin to dominate. Other species, including weeds, also will become established (*p. 32*).

*You may need to use other chapters, additional reference materials, or your own experience to answer this question fully.