



Beach Ball Quiz

Time: 10-15 minutes

Get your students thinking by answering soil science questions with a beach ball! Number the beach ball on all of the different sections from #1-18. When you toss the numbered ball to a student, he or she should read the number where their right thumb landed on the ball. Ask the question with the corresponding number. After the student answers correctly, have him or her to toss the ball to another person and proceed with another question.

(Most of the questions below are from the Elementary and Middle school *Nourishing the Planet in the 21st Century* lesson pre and post-tests.)

1. How many different elements do plants need to be healthy? Answer: **17**
2. Nutrients enter root cells through what process? Answer: **Diffusion**
3. True/False: Soil contains both organic and inorganic mater. Answer: **True**
4. Plants primarily extract nutrients from where? Answer: **Soil**
5. Approximately what percentage of land is devoted to farming? Answer: **11%**
6. Fertilizers help increase or decrease food productivity? Answer: **Increase**
7. Plants transport water from the roots through the _____? Answer: **Xylem**
8. Plants transport food from the leaves through the _____? Answer: **Phloem**
9. True/False: Soil serves as a nutrient bank for plants. Answer: **True**
10. What do plants primarily use to absorb water? Answer: **Root hairs**
11. What are the 3 essential components of most fertilizers? Answer: **N-P-K**
12. Soils _____.
 - a) serve as a nutrient bank for plants
 - b) contain both organic and inorganic material
 - c) differ in their ability to hold and transmit water
 - d) all of the aboveAnswer: **D**

14. What country did Dr. Borlaug leave the U.S. to work as a geneticist and plant pathologist?
Answer: **Mexico or India**

15. Soils have _____ nutrients in them after plants grow.
a) more b) less c) the same amount

Answer: **B**

16. Fertilizers
- a) make soil change color
 - b) keep soil moist
 - c) remove nutrients from the soil
 - d) add nutrients to the soil
- Answer:
- D**

17. True/False Soil includes nonliving things and living microorganisms. Answer: **True**

18. Plants require similar or different essential elements to humans. Answer: **Similar**