

**QUIZ 3:  
NUTRIENTS PART II**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Hour:** \_\_\_\_\_

**Topic # 2031  
Nutrients Part II  
Becky McGuire**

**True/False**

- \_\_\_\_\_ 1. The atmosphere contains 78% oxygen.
- \_\_\_\_\_ 2. Potassium is a micronutrient
- \_\_\_\_\_ 3. Zinc is essential for plant growth
- \_\_\_\_\_ 4. Lime improves the availability of plant growth

**Short Answer**

5. Name two compounds used to adjust soil pH.
- a.
- b.
6. List 3 primary nutrients
- a.
- b.
- c.
7. Name 3 secondary nutrients
- a.
- b.
- c.
8. Soil pores contain either \_\_\_\_\_ or \_\_\_\_\_. Soils are anaerobic or \_\_\_\_\_ (give definition) if all the pores contain \_\_\_\_\_.
9. When plants are lacking N and the leaves are starting to turn yellow or brownish, \_\_\_\_\_ is occurring.
10. The substance that gives plants their green color is called \_\_\_\_\_.
11. The only form of N that plants can utilize is \_\_\_\_\_.
12. If you were a plant, you would know that the four ways you can lose N from soil include volatilization, \_\_\_\_\_, erosion and \_\_\_\_\_.

13. Through \_\_\_\_\_ (denitrification/nitrification) ammonium is converted to nitrate form.
14. Define denitrification:
15. What are plants doing when they're "fixing" N? (No, they are NOT repairing it, N cannot be broken.)
16. \_\_\_\_\_ are one plant that likes a more acid soil.
17. Draw and label the pH scale below. Include optimum crop range. (7 points)
18. Why should landscapers, gardeners and farmers know the soil pH of their area?
19. \_\_\_\_\_ is the substance that can raise the pH while \_\_\_\_\_ lowers pH.
20. Your little cousin Wyatt wants to know if the peanuts in the peanut butter he's eating came from legumes. How do you answer?
21. Not all kids are as smart as Wyatt. Your other cousin Billy Bob wants you to tell him what a legume is. Please answer.
22. Draw a bean plant root below. Label AND DEFINE the following on your drawing:
  - a. rhizobia
  - b. nodules
23. Billy Bob's sister Norma Bob wants to know if the strawberry jam on her sandwich came from legumes. Please answer.
24. Your Aunt Mabel notices the leaves on her sweet corn plants are turning purple. What's your diagnosis?
25. As you're walking around the same garden you see tomato plants with very weak stems and brown leaf margins in the lower leaves. What do you tell Aunt Mabel about her plants?
26. Why do plants need N?