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Unit 1A Test Review

1. Review lab safety and symbols from the safety powerpoint.

2. Review the names of all lab equipment in the safety powerpoint.

3. Be able to read the volume from a graduated cylinder.

4. Give examples of testable and nontestable hypotheses.

5. What is a controlled variable/constant? Why is it necessary?

6. What is a control group and why is it a necessary part of an experiment?

7. Explain independent and dependent variables.

8. How many independent variables should be tested at one time?

9. What are the 3 types of graphs discussed in class? When is each used?

10. List the characteristics of all living things.

11. List the levels of organization (cell🡪biosphere) in order and explain each.

12. Draw a pH scale. Label strong acid, weak acid, strong base, weak base and neutral substance.

13. What elements are contained in each of the 4 biomolecules?

14. What are the monomers for carbohydrates? Proteins? Nucleic acids?

15. What are 2 examples of a nucleic acid?

16. Which organic compound is the main source of energy for living things?

17. What are the functions of proteins?

18. What is the purpose of a peptide bond?

19. What is the purpose of an enzyme?

20. What does it mean when we say enzymes are “substrate specific?”

21. Are enzymes used up by the reactions they catalyze?

22. Name 3 things all cells contain.

23. Which 3 scientists contributed to the development of the cell theory?

24. List the principles of the cell theory.

25. What are the differences between plant and animal cells?

26. List at least 2 functions of a cell’s nucleus.

27. What are the differences between prokaryotic and eukaryotic cells?

28. Give an example of a prokaryotic cell and a eukaryotic cell.

29. What are the two parts of a virus?

30. Why are viruses not considered to be alive?

31. Describe virus size in general and in relation to other viruses.

32. Why does a cold virus affect people but not cats or dogs?

33. What characteristics of living cells are found in a virus?

List the functions of the following:

34. Lysosome

35. Vacuole

36. Chloroplast

37. Ribosome

38. Endoplasmic reticulum

39. Golgi apparatus

40. Mitochondrion

Using the microscope drawing below, identify and give the function of the

following microscope parts.

41. diaphragm

42. fine adjustment

43. coarse adjustment

44. nosepiece

45. eyepiece

