

1. Draw and label an atom according to Bohr's model of the atom.
2. Draw and label an atom according to Rutherford's model of the atom.
3. Draw and label an atom according to Thomson's model of the atom.
4. Why can't you draw the current model of the atom?
5. Name the one of the two men who helped develop the current model.
6. What is the name of the current model of the atom.
7. Explain the difference between an **orbit** and an **orbital**.
8. Draw a wave and label the peak, trough and where you would measure to find the wavelength. (3 points)

9. Define FREQUENCY:

10. Define WAVELENGTH:

11. Define SPEED:

12. Light can behave as a \_\_\_\_\_ and as a \_\_\_\_\_.

13. What is a photon?

14. Put the following types of visible light in order from most energy (1) to least energy (6):

Orange \_\_\_\_\_  
Yellow \_\_\_\_\_  
Blue \_\_\_\_\_  
Green \_\_\_\_\_  
Violet \_\_\_\_\_  
Red \_\_\_\_\_

15. Put the following in order from longest wavelength (1) to shortest wavelength (6):

Orange \_\_\_\_\_  
Yellow \_\_\_\_\_  
Blue \_\_\_\_\_  
Green \_\_\_\_\_  
Violet \_\_\_\_\_  
Red \_\_\_\_\_

16. Put the following in order from most energy (1) to least energy (6):

ultraviolet \_\_\_\_\_  
microwave \_\_\_\_\_  
x-ray \_\_\_\_\_  
radio \_\_\_\_\_  
visible light \_\_\_\_\_  
infrared \_\_\_\_\_

17. Put the following in order from longest wavelength (1) to shortest wavelength (6):

ultraviolet \_\_\_\_\_  
microwave \_\_\_\_\_  
x-ray \_\_\_\_\_  
radio \_\_\_\_\_  
visible light \_\_\_\_\_  
infrared \_\_\_\_\_

18. Define QUANTIZED:

19. What two things does the Principle Energy Level tell you?

20. What are used to represent the different sublevels?

21. What does the sublevel tell you?

22. The lowest energy level is known as the \_\_\_\_\_.

23. If energy is added to an atom it is said to be in an \_\_\_\_\_.

24. The closer an orbital is to the nucleus the \_\_\_\_\_ energy it has.

25. What is the complete electron configuration of Phosphorus atomic # = 15)

26. What is the complete electron configuration of Xenon (atomic # = 54)

27. What is the abbreviated electron configuration of Silver (atomic # = 47)

28. What is the abbreviated electron configuration of Gold (atomic # = 79)

29. Draw an orbital diagram of the electron configuration of Arsenic (atomic # = 33)

30. Draw an orbital diagram of the electron configuration of Iron (atomic # = 26)