KEY
5/2011

CH 17 #1-32

PER XX
CH 17 #1

1. There are about 100 known elements today

2. Hydrogen has the lightest atoms.

3. The number of atoms in your lungs is about the same as the number of breaths in the world.

4. Heavy elements are from exploding stars (Supernovae)

5. Atoms are much smaller than the wavelength of visible light.

6. Most atoms are older than the solar system.

7. Atoms migrate and spend little time with us.

8. Dust particles are bombarded by moving molecules.

9. The image was made using electrons.

10. A model is used to make predictions.

11. A molecule is a combination of atoms.

12. a. Two ; Hydrogen and Oxygen

b. Three ; 2 Hydrogen and One Oxygen

13. a. Water (or other)

b. Iron, Silicon, Aluminum

14. False ; molecules float in

15. a. A substance made of two or more elements chemically combined in fixed proportion.

b. CO_2, H_2O, $NaCl$, NH_4

16. Rutherford found scattering that suggested existance of a nucleus. ★

17. Almost all the mass is in the nucleus. ★

18. The nucleus is very small compared to the atom. ★

19. Protons and Neutrons are the two types of nucleons.

20. a. An isotope is an atom with a specific number of neutrons.

b. Carbon-12, Carbon-14

21. The atomic number is the same as the number of protons in the nucleus.

22. The atomic number is the same as the number of electrons (non-ion). ★

23. The electron's mass is about 1/1800 of the nucleon mass. (very small)

24. a. An ion is an atom that has lost or gained an electron. ★

b. Na^+, Cl^- (others)

25. Atoms themselves are mostly empty space. ★

26. The Periodic Table is a chart showing the elements organized according to their properties.

27. The atomic number tells the number of protons in the nucleus

28. Hydrogen ⇒ 1 shell
Lithium ⇒ 2 shells
Aluminum ⇒ 3 shells

29. 4 Phase of Matter:

Solid
Liquid
Gas
Plasma

30. Plasmas conduct electricity; Gasses do not conduct electricity

31. Only one kind of atom in a sample of an element.

32. Water ⇒ 3 atoms
2 H; 1 O