

Electrons and Chemical Bonding

Complete the following questions. Question #s match the page numbers in the digital lesson.

1. a. The model shown is what kind of molecule? _____
b. Connections between atoms are called _____.
c. Carbon atoms share _____ electrons with other atoms.
d. Hydrogen atoms share _____ electron with another atom.
2. Define valence electron: _____

3. When matter is _____, it is changed into a new substance.
4. a. When sodium bicarbonate and acetic acid are combined, _____ is released as gas bubbles.
b. The chemical reaction between oxygen and wood releases energy in the form of _____ and _____.
5. a. The attractive force in a chemical bond is really the attraction of opposite _____.
b. In a chemical reaction, chemical bonds can be _____ and _____, to form a new substance.
10. a. Electrons in the outermost energy level are called _____.
b. The first energy level of an atom can hold up to _____ electrons.
c. Neon's outermost energy level contains _____ electrons.
11. Atoms react to fill their outermost energy level with the maximum number of _____.
12. _____ and _____ have unfilled outermost shells so they are more likely to react.
13. For most elements, the number of valence electrons can be determined from the _____.
14. Elements in Group 1 have _____ electron in their outer shell. Elements in Group 17 have room for _____ electron in their outer shell. Sodium in Group 1 will react with Chlorine in Group 17 to form _____.
16. Elements likely to react: _____, _____, _____
Elements unlikely to react: _____, _____, _____
18. _____ are organized into energy levels, and _____ react to fill the outermost energy level.