

1. What is an element? _____
2. What is an atom? _____
3. A compound consists of two or more different _____ bonded together.
Give some examples of a compound. _____
4. What are the subatomic particles of an atom? _____
Which ones are found in the nucleus? _____
5. What is the charge of a proton? _____
What is the charge of a neutron? _____
What is the charge of an electron? _____
6. An atom has a _____ charge because the number of _____ equals number of _____.
7. What is the atomic number? _____
8. What is the atomic weight? _____
9. What are isotopes? _____
How are they different? _____
What are radioactive isotopes? _____
10. What do the rows on a periodic table tell you about the elements?

What do the columns tell you?

11. How are the inert gases (last column) different from the other elements? _____

12. Which nutrients (carbohydrates, proteins, lipids/fats) can be made from the elements CHO?

13. Which nutrients (carbohydrates, proteins, lipids/fats) can be made from the elements CHON? _____
14. The ending "ose" indicates what type of nutrient? _____
Give some examples _____
15. An atom that becomes charged because it loses or gains electron(s) is called an _____.
An atom that loses an electron(s) and becomes positive is a _____.
An atom that gains an electron(s) and becomes negative is called an _____.
16. What type of bond is formed when atoms gain or lose electrons? _____
Give an example of a compound formed by this bond. _____
17. What are electrolytes? _____

18. What type of bond is formed when atoms share electrons? _____
Give some examples of compounds formed by this bond. _____
19. What type of covalent bond is formed when electrons are shared equally? _____
Give an example. _____
20. What type of bond is formed when electrons are shared unequally? _____
Give an example. _____
21. What type of charge is on the atoms that are formed by polar covalent bonds?

1. A substance that cannot be broken down to another substance by normal chemical reactions.
2. The smallest unit of matter that retains the properties of an element.
3. elements; CO_2 , H_2O , $C_6H_{12}O_6$
4. Subatomic particles - protons, neutrons, electrons; those in nucleus - protons and neutrons
5. proton - positive; neutron - neutral; electron - negative
6. neutral; protons = electrons
7. number of protons
8. total mass of the atom; the weight of the protons and neutrons
9. Isotopes - different atomic forms of an element;
have same number of protons, but different number of neutrons;
isotopes that decay spontaneously and give off energy in the form of subatomic particles
10. Rows - number of protons (and electrons, because atoms are neutral)
Columns - elements have similar characteristics (during reactions) because they have a similar number of electrons in the valence shell
11. Valence shell is completely filled with electrons. They do not react with other elements.
12. carbohydrates and fats
13. proteins
14. some carbohydrates (glucose, sucrose, cellulose)
15. ion; cation; anion
16. ionic; $NaCl$ ($Na^+ + Cl^- \rightarrow NaCl$)
17. A substance that when dissolved in water dissociates to form charged ions.
18. covalent; H_2 , O_2 , CO_2
19. nonpolar covalent; CO_2
20. polar covalent; H_2O
21. partial positive and partial negative