

Biochemistry Intro Questions

Biology

1. Define each of the following terms and explain the differences between terms in the same row:

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| <p><i>Atom</i> The smallest possible piece of a pure substance</p> | <p><i>Molecule</i> Two or more atoms locked together</p> | <p><i>Difference:</i> Atoms are the building blocks of molecules</p> |
| <p><i>Covalent Bond</i> Atoms or compounds stuck together because they are "sharing" electrons</p> | <p><i>Ionic Bond</i> Atoms or compounds stuck together because they have opposite electrical charges</p> | <p><i>Difference:</i> Much easier to break/reform ionic bonds</p> |
| <p><i>Molecular Compound</i> Groups of atoms stuck together with covalent bonds</p> | <p><i>Ionic Compound</i> Groups of atoms stuck together with ionic bonds</p> | <p><i>Difference:</i> Ionic compounds tend to dissolve readily in water (polar)</p> |
| <p><i>Protein</i> Molecules made from amino acids</p> | <p><i>Enzyme</i> A specific protein that <u>regulates</u> chemical reactions</p> | <p><i>Difference:</i> Some proteins are enzymes but not all (some are structural)</p> |
| <p><i>Acid</i> A molecule that has a H atom that it wants to get rid of</p> | <p><i>Base</i> A molecule that really could use a H atom</p> | <p><i>Difference:</i> • Complementary • Because they are reactive, they are useful in living organisms</p> |
| <p><i>Carbohydrate</i> A molecule made from mono saccharides</p> | <p><i>Fat</i> A molecule made from glycerol and fatty acids</p> | <p><i>Difference:</i> Carbohydrates are used for short-term energy; fats are used for long-term energy</p> |