

Biochemistry Worksheet



2.1 Basic Chemistry

1. How many electrons are in the **outermost energy level of carbon**? How many does it need to have this energy level **filled**?
2. How many covalent bonds can carbon form?
3. How many electrons are being shared in a **single** covalent bond? **double** covalent bond? **triple** covalent bond? **quadruple** covalent bond?

2.2 – Water and Living Things

4. Why is water such an important molecule to living things?
5. Describe the chemical make up and type of bonding found in water molecules.
6. Explain why the hydrogen and oxygen atoms don't share electrons equally in a water molecule.
7. What is the effect of this uneven sharing of electrons in water?
8. Sketch a molecule of water showing the charges on the molecule.
9. What is the overall charge on a water molecule? Explain why.
10. Define polar compound and give an example.
11. Water's polarity makes it very effective in _____ other substances.
12. Name 2 types of compounds that dissolve well in water.
13. What happens when an ionic compound such as sodium chloride (table salt) dissolves in water?
14. Water molecules are _____ to other water molecules.
15. What type of bonding holds 2 or more water molecules together?
16. Are hydrogen bonds strong or weak bonds? Can they be easily broken?