Molecules of Life Worksheet

1. Name the $\bf 4$ main classes of macromolecules (organic molecules) & tell what $\bf 3$ elements all of these contain.

Carbohydrates store energy for organisms!

17. Long chains of amino acids are called ____

2. In what ratio are hydrogen & oxygen atoms in carbohydrates? 3. In what 3 forms do carbohydrates exist? 4. What are the monomers of carbohydrates called? What is their common name? Give the ratio of carbons, hydrogens, & oxygens. 5. Name the 3 MOST common monosaccharides. How do they compare? Write the chemical formula $6. \ Because \ all \ 3 \ simple \ sugars \ have \ the \ same \ chemical \ formula, but \ different \ structural \ formulas, \ they$ 7. What are double sugars called? Name & describe the process that forms them. 8. Name a disaccharide. 9. What forms a polysaccharide? Name a polysaccharide found in animals. Name 2 found in plants? 10. What chemical reaction formed these large molecules? What reaction would be needed to break Proteins are used to build cells, & they act as enzymes! 11. What are the 4 main elements making up proteins? How many covalent bonds does each of these elements form? 12. What are the monomers of proteins called? How many are there? Name the 4 things bonded to the center carbon of this monomer. 13. The main difference among amino acids is their $___$ group. What is the R-group on glycine? on alanine? 14. Differences in R-groups give different proteins different ___ 15. How does a dipeptide form? 16. What do you call the covalent bonds that hold amino acids together?

_____ and these join together to make a