

**Unit 3 Study Guide- Cell Biochemistry**

1. Draw a diagram of a carbohydrate monomer (ie. Glucose molecule)

What are the elements that make up a carbohydrate molecule?

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What is the function of carbohydrates?

2. Draw a diagram of a protein monomer (amino acid)

What are the elements that make up a protein molecule?

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What is the function of protein?

3. Draw a diagram of a lipid molecule (fatty acid).

What are the elements that make up a lipid molecule?

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What is the function of lipids?

4. Draw a diagram of a nucleic acid.

What are the elements that make up a nucleic acid?

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What is the function of nucleic acids?

5. Describe polarity.

6. Give one example of how a functional group affects a molecule's properties.

7. Define the following:

-Metabolism:

-Anabolism:

-Catabolism:

-Denaturation:

-Inhibition:

-Activation Energy:

-Catalyst:

8. Draw a diagram of a lock-and-key enzyme reaction.

9. Describe what is meant by the following equation:  $E + S \rightarrow ES \rightarrow E + P$

10. Name and describe 3 factors that can affect enzyme activity.

11. Give an example of an enzyme found in the human body and what role it has.