1. How many and which types of elements are in a molecule of CO2?
2. *Complete the table below*

|  |  |  |
| --- | --- | --- |
| **Subatomic Particle** | **Charge** | **Location** |
|  |  |  |
|  |  |  |
|  |  |  |

1. Where is most of the mass of an atom located?
2. Why do atoms have an overall neutral charge?
3. What is the difference between a molecule and a compound?

What is the atomic number? \_\_\_\_\_\_\_\_\_

What is the atomic mass? \_\_\_\_\_\_\_\_\_\_

How many protons? \_\_\_\_\_\_\_\_\_\_\_

How many electrons? \_\_\_\_\_\_\_\_\_\_

How many neutrons? \_\_\_\_\_\_\_\_\_\_\_

1. What is a chemical reaction?
2. What is an ion?
	1. How does an atom become a positive ion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. How does an atom become a negative ion?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What is the difference between a covalent and ionic bond?
4. Complete the table below:

|  |  |  |
| --- | --- | --- |
| **Biomolecule** | **Monomer &Examples** | **Polymer &****Examples** |
| Carbohydrate |  |  |
| Lipid |  |  |
| Nucleic Acid |  |  |
| Protein |  |  |

1. What are three functions of proteins?
2. What are two functions of lipids?
3. What is the function of both carbohydrates and lipids?
4. What is the process that breaks polymers apart called? Choose one polymer we discussed and describe the process including the products.
5. What does biuret solution test for? What does a positive result look like?
6. What does Iodine test for? What does a positive result look like?
7. What does a Chemstrip test for? What does a positive result look like?
8. What term describes the energy needed to get a reaction started?
9. What effect do enzymes have on a reaction?
10. What is the function of a catalyst?
11. How are enzymes like a lock and key?
12. **True/False:** Enzymes work best at a specific pH
13. **True/False:** Enzymes work best at a specific

temperature

1. **True/False:** Enzymes are proteins
2. **True/False**: Each enzyme has a unique shape that

allows it to do its job

1. At which temperature does enzyme A perform best?

Enzyme B?

1. Knowing that one of these enzymes is found in humans and the other in thermophilic (heat-loving) bacteria, hypothesize which enzyme came from which organism.

