Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Food Chemistry Review

1. Label the following as a Carbohydrate, lipid, or protein.
	1. explain how you knew
	2. give an example of foods with this primary food group





1. Explain the major structural difference between each carbohydrate and give an example of each in our foods.



1. How do we obtain energy from carbohydrates?
2. When carbs are immersed in water they may bloat via a process known as osmosis. Explain this process.
3. When other foods are placed in salt water they may shrivel. Explain this process in terms of osmosis.
4. What is the major difference between saturated and unsaturated fats?



1. Why are lipids essential in the body?
2. Explain what observations you would see if a protein was denatured.



1. What does the Maillard Reaction refer to?
2. What are examples of additives and why are they added to our foods?
3. Physical or chemical? Explain:
	1. What occurs when carbohydrates are cooked?
	2. What occurs when fats are cooked?
	3. What occurs when proteins are cooked?
	4. What is the function of Nitrates in food?
	5. What is Baking Soda used for in cooking?
4. What are GMOs?
5. What do calories on the food packages refer to?
6. How are the calories calculated?
7. A piece of food is burned under 30.0grams of water, like the picture below. The water changes from 20.0C to 38.0C. How many calories were in the food?
8. A student eats the outside of a tootsie pop, leaving the chocolate behind. Calculate the mass of the sugar the student ate, and the percent of sugar in the pop.

Mass of tootsie pop: 4.00g

Mass of tootsie: 0.50g