

Name _____ Group _____ Period _____

A Virtual Tour of Carbohydrates

FOODS CLASS Carbohydrates is a nutrient that provides _____.

CHEMISTRY CHO the chemicals are C _____ H _____ O _____

ENGLISH *What is a prefix?* _____

What do these prefixes mean?

MONO _____ DI _____ POLY _____

CHEMISTRY -

Fructose (_____ sugar) Glucose (_____ sugar) Galactose

MONO



DI



Sucrose (_____) Maltose (_____) Lactose (_____)

Fructose, glucose and galactose are _____ saccharides.

Sucrose, Maltose and Lactose are _____ saccharides.

ENGLISH *What is a suffix?* _____

What does the suffix OSE mean? _____

POLY



_____ AND _____ are Polysaccharides

CHEMISTRY Polysaccharides are _____ carbohydrates, so...

Starch and fiber are _____ carbohydrates.

Mono- and di-saccharides are _____ carbohydrates, so...

Sugar is a _____ carbohydrate

HEALTH Would simple or complex carbohydrates be digested quicker? Why?

DRAMA Say Saccharides like a Sumo Wrestler. Now like a southern belle.

CHOIR CARBOHYDRATE SONG (Sung to "Frere Jacques")

Carbohydrate	Carbohydrate
Simple and Complex	Simple and Complex
Sugars Are Simple	Sugars Are Simple
Starch Is Complex	Starch Is Complex

CARBOHYDRATE SEARCH

This experiment will help you determine if a food is a simple or complex carbohydrate. If a food is a simple carbohydrate, the iodine will turn brown-tan. If a food is a complex carbohydrate, the food will turn a dark, blue-black. Test each food below to determine if it is a simple or complex carbohydrate. Record your results in the box below.

Items needed:

- | | | | |
|--------------------------|----------------------------|------------------|----------------------|
| ½ teaspoon Iodine | 1 Tablespoon water | 1 teaspoon flour | 1 sugar cube |
| 1 slice apple | 1 marshmallow, cut in half | 1 vanilla wafer | 1 slice potato |
| 1 slice very ripe banana | 1 tablespoon honey | 1 slice bread | 1 slice green banana |

DIRECTIONS:

1. In a custard cup put one teaspoon of iodine and 1 tablespoon water. (It should be dark brown color. *Be careful, because iodine can stain your hands, clothes and table.*)
2. Put the flour and sugar on your foam plate. Use a plastic spoon to put a few drops of the iodine solution on the flour and the sugar. Record the results.

Sugar is a simple carbohydrate. Flour is a complex carbohydrate.

Compare the other foods to the sugar and flour.

3. Lay the foods on the 2nd foam plate leaving plenty of space between items.
4. Put a few drops of the iodine solution on each one of the food items.
5. Record the color each food changes to and determine which foods are simple carbohydrates and which foods are complex carbohydrates.

FOOD SAMPLE	COLOR	SIMPLE OR COMPLEX
1. Flour		
2. Sugar		
3. Apple		
4. Potato		
5. Bread		
6. Honey		
7. Vanilla wafer		
8. Marshmallow outside		
9. Marshmallow inside		
10. Green banana		
11. Ripe banana		
12. What is your theory about the marshmallow?		
13 Why use ripe bananas for banana bread?		