

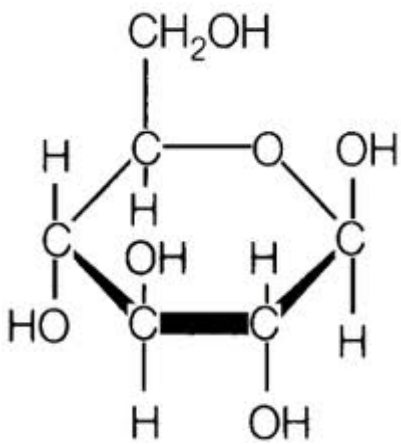
Carbohydrate Practice Sheet

So what are carbohydrates again?

Carbohydrates are macromolecules that serve as our primary source of energy. Every action we perform requires energy, and our supply of carbohydrates is the major “fuel” that drives these actions.

Carbohydrates, or “carbs” for short, are often referred to as sugars, or starches. They can consist of a single sugar molecule (monosaccharide), two sugar molecules (disaccharide), or many sugar molecules (polysaccharide).

Examine the figure below, and answer the questions.

<ol style="list-style-type: none"> 1. Name the 3 elements present in this compound. 2. How could you identify this organic compound as a carbohydrate? 3. Is this a monosaccharide, disaccharide, or polysaccharide? 	
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So how do sugar molecules combine to form bigger carbohydrates again?

Single sugar molecules bond together during the chemical reaction called:

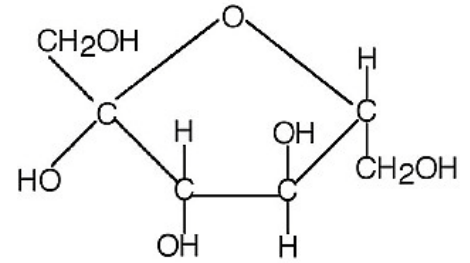
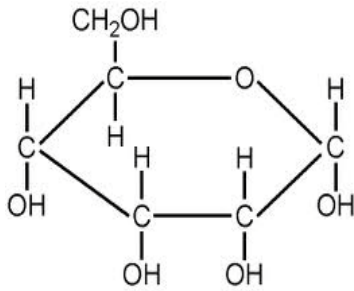
During this chemical reaction, what molecule is removed when monosaccharides join?

Use the space below to draw a polysaccharide. Make it a chain of 4 glucose molecules (the monosaccharide you see above in the table is glucose). Make sure the monosaccharides are correctly bonded together.

During the formation of the polysaccharide you just drew, how many water molecules were lost?

What is the process of putting monomers together to form polymers called?

Let's say that the following monosaccharides are going to form a bond. Below each individual monosaccharide, write its chemical formula. Then, in the center blank, write the formula for the resulting disaccharide.



Chemical Formula: _____

Chemical Formula: _____

Resulting disaccharide chemical formula: _____

Testing for Carbohydrates

When conducting the following tests, what color would the indicator turn?

Benedict's Test

Monosaccharide:

Disaccharide:

Polysaccharide:

Iodine Test

Monosaccharide:

Disaccharide:

Polysaccharide:

Check the foods you think would test positive for a high carbohydrate content:

Food	Check	Food	Check
Breads		Jello	
Fruits		Pasta	
Celery		Rice	