

ANSWER KEY

BIOLOGICAL MOLECULES- YOU ARE WHAT YOU EAT: BIOLOGY # 3

This worksheet goes with podcast # 3 from Crash Course Biology found on youtube

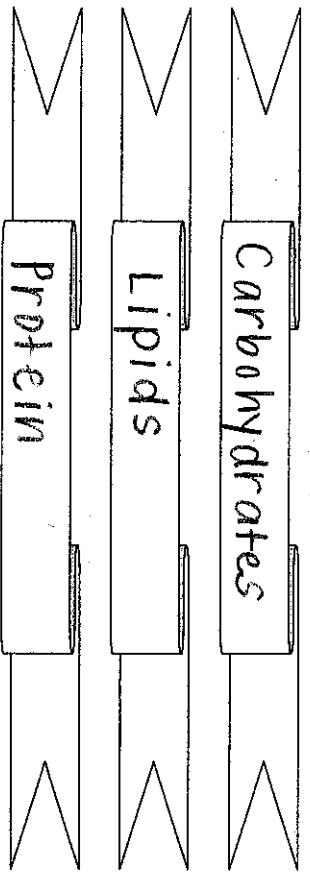
The goals for today's video are 3-fold. We will learn about
 1. the 3 most important molecules on earth
 2. grosser's sandwich
 3. obscure scientist who knows a lot about urine

- Video Outline**
- Introduction
 - William Probst & Pee
 - Carbohydrates
 - Monosaccharides
 - Polysaccharides
 - Cellulose & chitin
 - Starch and glycogen
 - lipids
 - fats
 - phospholipids
 - steroids
 - proteins
 - amino acids
 - polypeptides

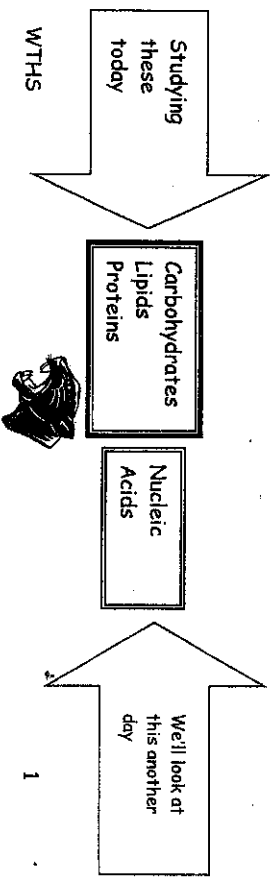
Prefix	meaning
mono	1
di	2
poly	3

Biological Molecules:

These are the molecules necessary for every living thing on earth to survive...
 They are ...



In short they are the ingredients for life _____



WTHS

Carbohydrates:

Made of sugars or monosaccharides

Glucose is perhaps the most important of the monosaccharides its energy comes from the sun. Another example is fructose.

Disaccharides have 2 sugars. An example is SUCROSE

2 Polysaccharides have MANY sugars

MANY In plants CELLULOSE is the most common structural compound. It is also the most common organic compound on the planet.

Starch provides energy for us. like that found in bread. The energy is stored in the form of glycogen which is stored in our muscles for short term storage. Or as fat for longer term storage. Which brings us to our next biological molecule, the lipid.

Lipids:

Lipids are polar non-polar (circle one) and as a result does not mix with water.

They are made of two ingredients: glycerol and fatty acids

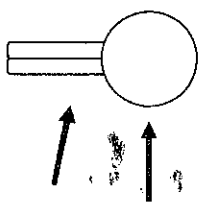
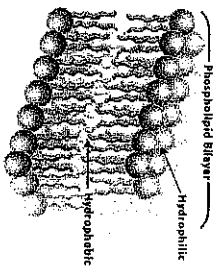
Saturated fats are in fact saturated with H. Unsaturated fats contain a double bond so that they are not completely saturated with hydrogen.

Type of fat	state at room temp. (solid/liquid/ gas)
saturated fat	<u>Solid</u>
unsaturated fat	<u>liquid</u>



WTHS

Phospholipid makes up the cell membrane



Steroids → Cholesterol → hormones

Proteins:

Extremely complex large molecules such as...

- Enzymes
- Antibodies
- Hormones

Proteins are made using only 20 different amino acids (A.A)

Side chains

When you get a bunch of these amino acids together you make a long chain called polypeptides (there's that prefix poly again!)

Triple Decker sandwich:

layer	Biological molecule it contains	importance of biological molecule	building blocks of molecule
bread	carb	energy	monosaccharides
peanut butter	lipid	energy	glycerol/fatty acids
egg	protein	enzymes	amino acids

