Name_____ WTHS Biology Keystone Review 2012-2013

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. grossest sandwich
3. obscure scientist who knows a lot about urine

Video Outline

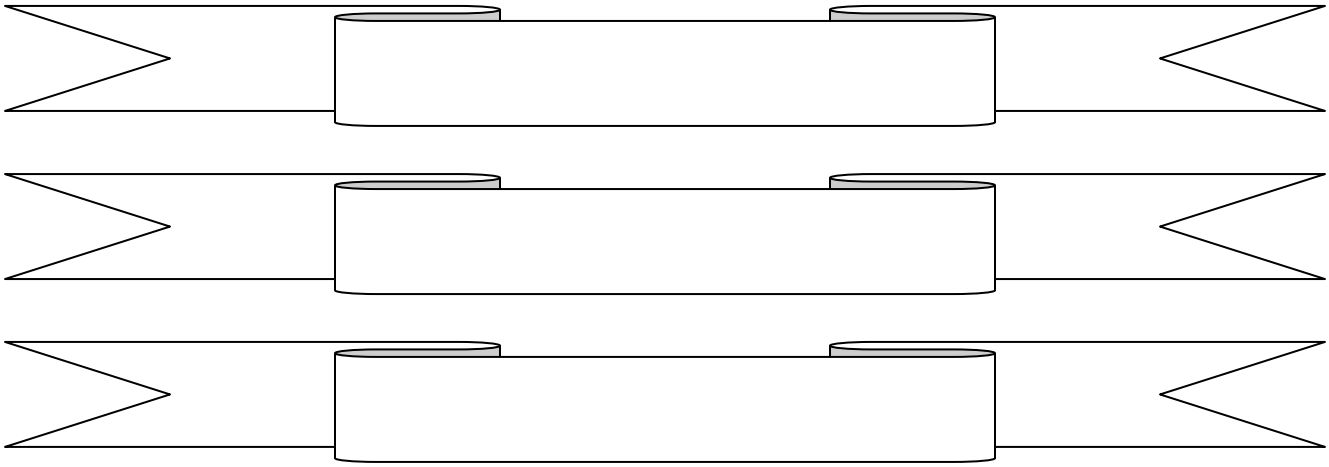
1. introduction
2. William Prout & Pee
3. Carbohydrates
   a. Mono& Disaccharides
   b. Polysaccharides
   c. Cellulose & chitin
   d. Starch and glycogen
4. lipids
   a. fats
   b. phospholipids
   c. steroids
5. proteins
   a. amino acids
   b. polypeptides

prefix	***meaning***
mono	
di	
poly	

Biological Molecules:

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

They are ...



In short they are the _____ for_____.

Studying these today

Carbohydrates
Lipids
Proteins

Nucleic Acids

We'll look at this another day

Carbohydrates:

Made of sugars or monosaccharides

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

Disaccharides have ___ sugars. An example is _____

Polysaccharides have_____ sugars

In plants _____ 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 _____, which is stored in our muscles for short term storage. Or as _____ for longer term storage. Which brings us to our next biological molecule, the lipid.

Lipids:

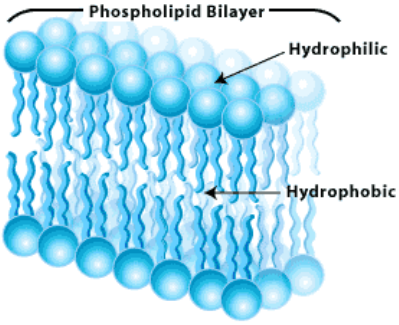
Lipids are polar/ non-polar (circle one) and as a result does not mix with water.

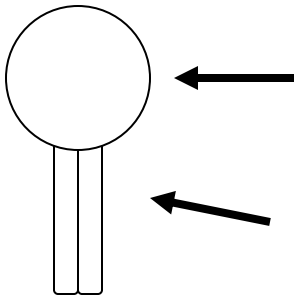
They are made of two ingredients; _____ and _____.

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

type of fat	state at room temp. (solid/liquid/ gas)
saturated fat	
unsaturated fat	

Phosopholipid makes up the _____

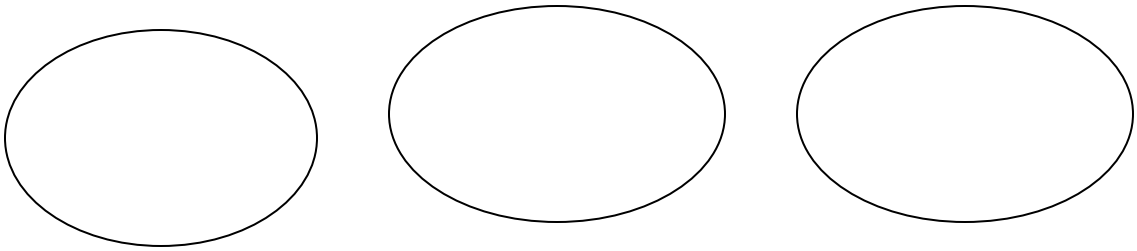




Steroids → Cholesterol → hormones

Proteins:

Extremely complex large molecules such as…



Proteins are made using only 20 different _____ (A.A.)

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

Triple Decker sandwich:

layer	Biological molecule it contains	importance of biological molecule	building blocks of molecule
bread			
peanut butter			
egg			