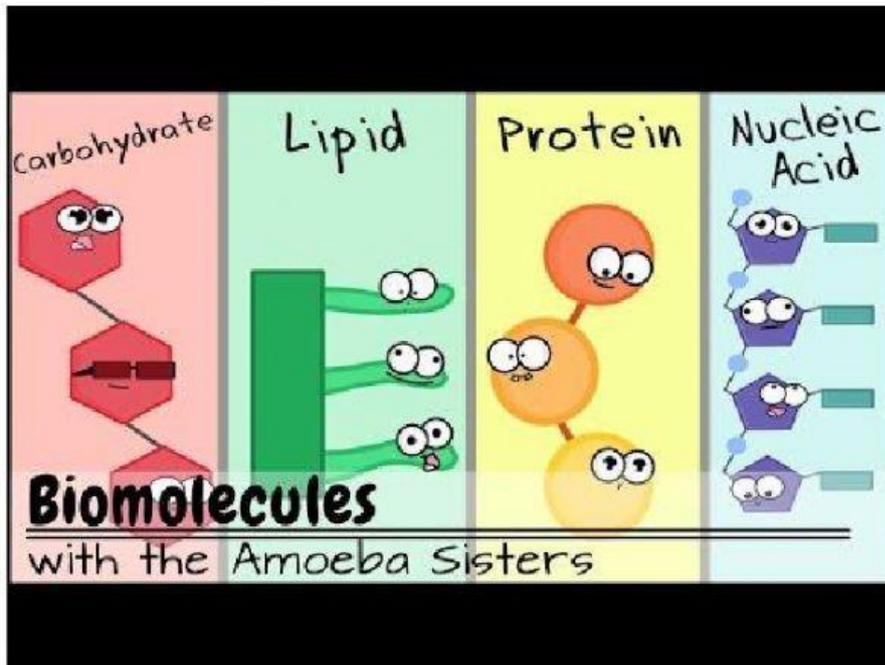


Macromolecules Worksheet

Watch the following video, to help you:



Which food molecule (monosaccharide, polysaccharide, lipid, protein) would you eat if.....

- .you needed a quick boost of energy?
- .you wanted to grow strong nails?
- .you haven't eaten in days?
- .you wanted to grow healthy hair?
- .you had a race tomorrow afternoon?
- .you were getting ready for hibernation?
- .you wanted to get bigger muscles?
- .your next meal will be in a week?

Classify each as a carbohydrate, protein or lipids

Starch

Cholesterol

Steroid

Glycogen

enzyme

saturated fat

polypeptide chain

Glucose

Polysaccharide

Phospholipid

Glycerol

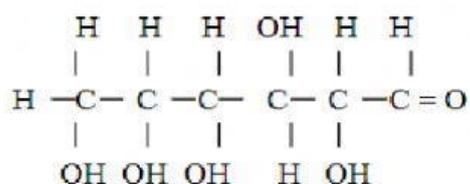
Monosaccharide

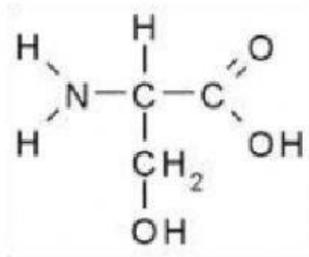
Cellulose

amino acid

unsaturated fatty acid

Indicate whether the substance is a carbohydrate, lipids, or proteins:





$C_{12}H_{22}O_{11}$

$C_3 H_5(C_{17}H_{35}O_2)_3$

BIG 4 MACROMOLECULES	Number of Calories it provides
Carbohydrates	4
Proteins	4
Lipids	9
Nucleic Acids	0

According to the above diagram, the number of the calories is per gram:
 1- If you eat a sandwich of 46 g of carbs and 24 grams of proteins and 10 g of fats, how many calories in total would you consume?

2- Which macromolecule is broken first for energy?

3- Why do people on diet avoid carbs and fats and exercise more often?

Fill in the table:

The biomolecule (macromolecule)	Elements forming this macromolecule	Monomers
Carbohydrates		
	Nitrogen, phosphate, carbon, hydrogen, oxygen	
		Amino acids
Lipids		