

Molecules of Life Worksheet

To help you prepare for Test 1 and to assess your understanding thus far, complete the chart below on the 4 macromolecules that we learned in lecture. Answer the questions below. Use your text book, study with a friend, check out the publisher's website.

Name of Macromolecule	Monomer	Describe the Polymer	Details/ This molecule used for
Carbohydrate	Monosaccharide (glucose) C:H:O in a 1:2:1 ratio	Polysaccharide	In plants: In animals:
Proteins		4 levels of structure	
Nucleic Acids			
Lipids			

Random Review Questions:

From Atoms to the biosphere, list the biological levels of organization discussed in class. Which levels are considered microbiology? Which are considered environmental biology?

What are the characteristics of Life?

What was Malthus' contribution to Darwin's ideas on evolution?

Define: emergent property, resource partitioning, competitive exclusion, symbiosis, denatured

What part of a Nucleic Acid is referred to as the backbone of the molecule? Why?

What is the difference between a simple and a complex carbohydrate

What is the difference between a glyceride and a saccharide?

There are 5 different nitrogenous bases that characterize nucleotides. Name them and whether they are found in RNA or DNA. List 2 other structural differences between DNA and RNA.

What type of macromolecule is cellulose? Where did we note the presence of cellulose in lab?

Describe the aerobic and nonaerobic components to cell respiration and in what part of the cell does each reaction take place?

Define: thylakoid, granum, carotenoids, fermentation,