BIOLOGICAL MOLECULES PROJECT

Objectives: 1. SWBAT investigate the role of biological molecules in real life situations and applications.
2. SWBAT to describe the structure and function of the various biological molecules.

Part One:
Research a science news article that was published within the last six months (possible sites include, but are not limited to: BBC Science, Nature, New Scientist, Popular Science, Live Science, National Geographic or Smithsonian Magazine.) Please ***do not*** choose a blog or journal. Search for an article on ***one*** of the four biological molecules. Read the article, and complete the requirements below in a word document. Then upload the completed document in DISCourse.
All of these must be included:

1. Link for the site
2. Summary of the article (5-10 sentences):
3. What new information did you learn about the biological molecule? What was the significance or importance of what you read?

Part Two: There are six options for this part of the project. Choose *one* of these to complete.

Create a 3D structure of the four different types of macromolecules. The structure does not have to include the individual atoms of the molecule but just the major monomer connected to each other. You can use repeating blocks of "small" items to build your macromolecule. The macromolecules must be labeled (with individual parts such as Phosphate – nitrogenous base – ribose). Functions of the macromolecules must be included.	Create a song or rap about the macromolecules. You must have at least 3 verses and a beat. You must submit a recorded version as well as a written version. Functions of the macromolecules must be included.	Create a children's book about the macromolecules in our body. Make sure you include illustrations, definitions and make it easy enough to be understood by an elementary age student. Functions of the macromolecules must be included.
Create a Youtube video describing the four different types of macromolecules regarding the structure and function. You MUST be in the video and cannot be based on a power point presentation. Functions of the macromolecules must be included.	Write a letter (2 pages typed or 4 pages handwritten) as if you are a nutritionist writing to a patient about living a healthier lifestyle. Include the necessary biological molecules that your patient needs to keep his/her body in homeostasis. Functions of the macromolecules must be included.	Create a comic for the macromolecules. This comic should explain in detail each molecule and include pictures as examples for each one and pictures of the structure. Function of each molecule must be included. The different macromolecules could be the characters in your comic book.

Biology Concepts that *must* be included:

H-bonding	Lipid	Fatty Acids	Nucleic Acids	Protein
Organic molecule	Starch	Carbohydrate	Nucleotides	Peptide bond
Macromolecule	Glycogen	Monosaccharide	Phosphate	Amino acid
Monomer	Cellulose	Polysaccharide	Ribose	
Polymer	Saturated		DNA	
	Unsaturated		RNA	
	Glycerol			

Grading:

Part One: Link _____ (5 pts)

Summary: Completely explains what the article was about and its significance (in a paragraph of 5-10 sentences): _____ (10 pts)

Well-written _____ (5 pts)

Final question answered (new information): _____ (5 pts)

Part Two:

	0	2	4	6	8	10
Analogy Creativity and overall design	Not completed	Minimal effort in design	Design still lacking minimal requirements	An average design. Minimal requirements met.	Exceeding the minimal requirements. Demonstrated good design.	Demonstrated a very creative and original design.
	0	**2**	**4**	**6**	**8**	**10**
Required Biology Terms	None included	At least 5 terms included	At least 10 terms included	At least 15 terms included	At least 20 terms included	All terms included
	0	**2**	**4**	**6**	**8**	**10**
Structure and Function of your Biomolecules	Not completed	Minimal understanding	Lack of function and structural understanding	Structures and functions are present but with error	Most structures and functions are correct	All are correct