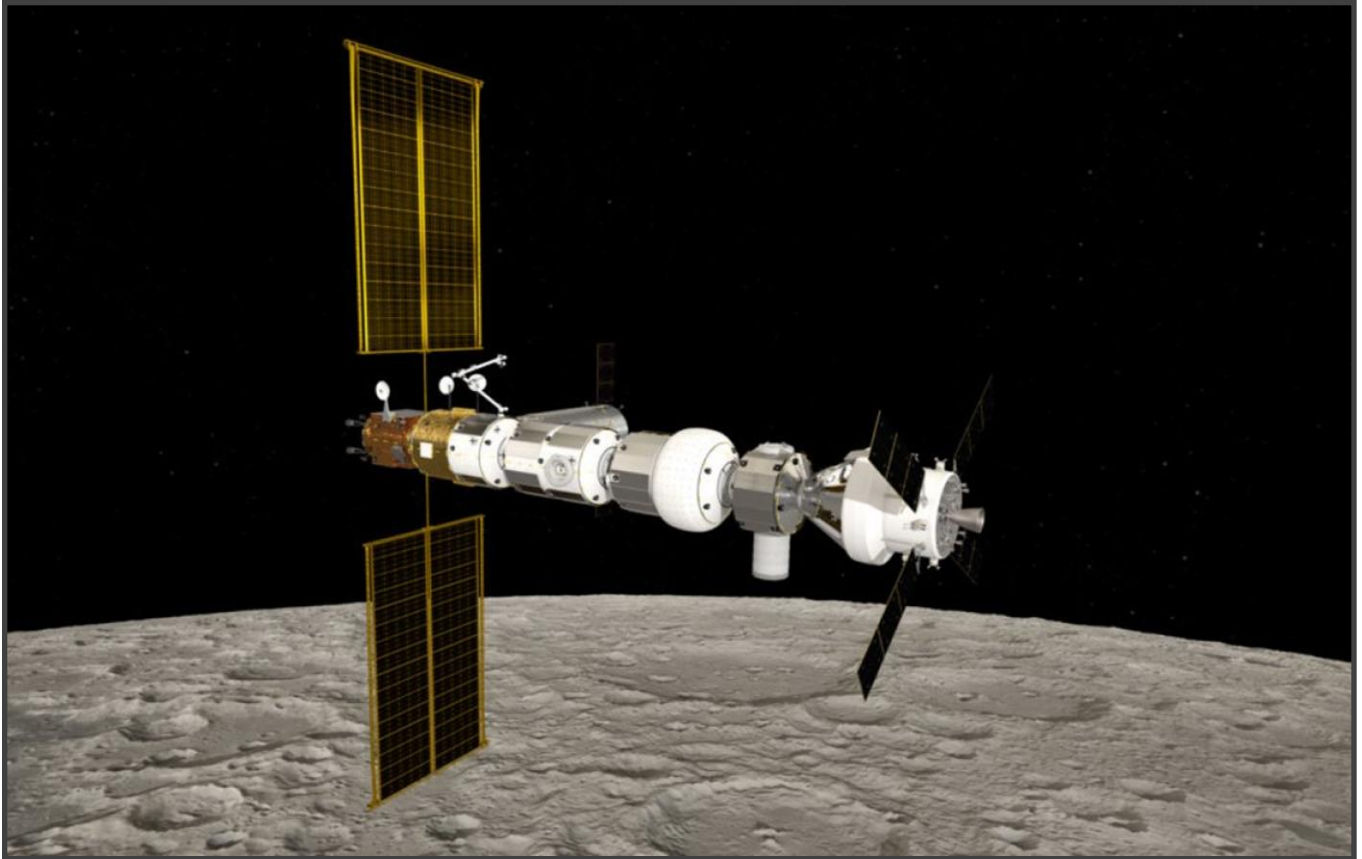


Spacegate Station Season 2

Episode 2 Resources



Resource Contents

- Guided Notes
- Next Generation Sunshine State Standards

This program was designed specifically to be used as part of science subject instruction, science remediation and science enrichment. The determination of the appropriate science standards that correlate to this program was established by a board of Science Specialists and teachers in Duval County Public Schools, Jacksonville, FL.

Spacegate Station Episode 2

Word Bank

amino acids	antibodies	blood glucose	building block
carbohydrates	cell structure	cellulose	chemical reactions
chemical signals	DNA	energy provision	energy storage
enzymes	fats	fatty acids	genetic information
glucose	glycerol	grease	hormones
keratin	lipids	macromolecule	monomer
monosaccharides	nucleic acids	nucleotides	oils
phospholipids	polymer	proteins	RNA
selective	starch	steroids	structural elements
sucrose	thermal insulation	waxes	

A _____ is a very large molecule that is composed of thousands of atoms all bonded together. They are referred as “macro” because they are large compared to other, smaller molecules.

A _____ is a small molecule that acts as a _____ for a larger molecule. These building blocks, when put together, provide the identify for the larger molecule

When a large molecule is made of repeating subunits or monomers is then known as a _____ .

The four most important macromolecules are:

- 1) _____
- 2) _____
- 3) _____
- 4) _____

Proteins are made up of the monomer _____.

Proteins provide _____, send _____, speed up _____ and make up motor and other _____ in the cell.

Examples of proteins are

- 1) _____
- 2) _____
- 3) _____
- 4) _____

Lipids have two monomers, _____, and _____.

They are used for long term, _____, _____, and protection.

Lipids help make up cell membranes and allow for the, _____ passage of nutrients through the walls of cells.

Examples of lipids are

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____

Carbohydrates are made up of monomers called _____, which are simple sugars. That cannot be broken down by the body through metabolism any further.

These simple sugars are _____, _____, and _____ and are considered a basic building block.

These simple sugars are combined to make up a polymer called a _____ which is another name for a carbohydrate.

Carbohydrates' major functions include

short term _____, _____ regulation and are used to break down fatty acids.

Sources of carbohydrates are:

- 1) _____
- 2) _____
- 3) _____
- 4) _____

Nucleic acids are made up of the monomer called _____ which are organic molecules that forms Deoxyribonucleic acid (DNA) and Ribonucleic acid (RNA).

_____ is a long, double-stranded molecule made up of bases, located in the cell's nucleus. The order of these bases determines the genetic blueprint for the cell.

To 'read' these blueprints, the double-helical DNA is unzipped to expose the individual strands and an enzyme translates them into a mobile, intermediate message, called _____.

Essentially these nucleic acids store and pass on _____ and are essential to biological processes.

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Next Generation Sunshine State Standards (Florida)

SC.912. L.14.1 Describe the scientific theory of cells and relate the history of its discovery to the process of science.

SC.912. L.14.2 Relate structure to function for the components of plant and animal cells. Explain the role of cell membranes as a highly selective barrier.

SC.912. L.16.3 Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.

SC.912. L.18.1 Describe the basic molecular structures and primary functions of the four categories of biological macromolecules.