

# TEAM MIDTERM

**OVERVIEW:** You and your classmates have worked hard over the first half of the semester. In the process you have learned about what we are made of, where did those materials come from, why water is so important, how we get what we need to survive, how food can get to our cells, and how does our body communicate to do these things. Using the provided paper you and your partner(s) will create a diagram/poster that will:

- 1) Describe the creation of elements from the earlier universe, through stars, and ultimately to Earth.
- 2) Track carbon as it cycles (biogeochemical) through this closed system called Earth through organic and inorganic transitions. Minimum of 4 transitions.
- 3) Describe how macromolecules are built (monomer and polymer), and how they are broken down in the digestion system (mechanically and chemically), including:
  - a) Biological polymers (Carbohydrates, Proteins, Lipids)
  - b) Digestion (both mechanical and chemical) and the role of gut microbes
  - c) The role of enzymes
- 4) Finally, describe how these broken down materials are absorbed into our cells for use, Including:
  - a) The role of water and polarity
  - b) Osmosis and Diffusion
  - c) Active and passive transport
  - d) Bulk Transport (endo and exocytosis)

## TIPS:

- Topics should mostly be illustrated with minimal words describing your illustrations.
- Arrangements can be in a flow chart, in a line, or in a circle, or in any way that has meaning.
- Between sections of illustration, make a simple statement as to how they connect to each other.

\*\* Use your notes to help you with each prompt.

## GRADING RUBRIC:

5 = This level is like a 4, but must include two of the following:

- The specific role of chemicals in digestion.
- detailed explanation of enzyme action and denaturing
- an in depth differentiation of diffusion and osmosis
- the role of specific nutrients, prebiotics, and probiotics
- the harmful effects of poor nutrition
- the role of adhesion and cohesion

4 = This level is like a 3, but...

ALL essential questions and key terms are appropriately displayed and explained.

3 = Addresses all of the four essential questions, and most of the key concepts are used appropriately.

Illustration is primarily used.

0-2 = Incomplete or Unacceptable work.