**BIOLOGY 2022-23 October 21, 2022**

**Today’s Agenda (Day 41)**

1. HOUSEKEEPING ITEMS

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1. Homework Check:

🡪Chapter 6 Reading Guide

1. Class Activity:

🡪 **SLC: Exemplar by Seniors**

🡪FRIDAY: DAY 4: Chapter 6 PPT Review

1. **Section 6.2 – Chemical Reactions**
2. Section 6.3 – Water and Solutions
3. Section 6.4 – The Building Blocks of Life

🡪**DAY 3: Mock SLC**

HOMEWORK:

* READ: Chapter 6 – Chemistry in Biology
* COMPLETE:
* **STUDY**: Chapter 6 Test

CHAPTER 6 – Chemistry in Biology

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| --- | --- | --- | --- | --- | --- |
| Acid | Activation energy | Active site | Amino acid | Atoms | Base |
| Buffer | Carbohydrate | Catalyst | Chemical reaction | Compound | Covalent bond |
| Electron  | Element | Enzyme | Hydrogen bond | Ion | Ionic bond |
| Isotope  | Lipid | Macromolecule | Mixture | Molecule | Neutron  |
| Nucleic acid | Nucleotide | Nucleus | pH | Polymer | Polar molecule |
| Product | Protein | Proton | Reactant | Solute | Solution |
| Solvent | Substrate | Van der Waals force |  |  |  |

REMINDERS:

* **TEST: Ch 6 🡪 Oct. 27 !!NOTE CHANGE OF DATE!!**

**BIOLOGY 2022-23 READING GUIDE**

Chapter 6 Chemistry in Biology

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| Review pages 148 – 171 in the Glencoe Science *Biology*Textbookand answer the following questions.1. Define **matter**.  Describe atoms in terms of matter.
2. State the location and charge of the three subatomic particles of an atom.
3. Why are elements in the periodic table placed in the groups (vertical columns)?
4. List the most abundant element in living organisms and then nonliving matter.  Do the same for least abundant.
5. What are **isotopes**?  Give an example.
6. What are **compounds**?  Explain how they are the same, or how they are different, then the individual elements they are made of.
7. Describe how **covalent bonds** form.  Give an example.
8. Describe how **ionic bonds** form.  Give an example.
9. What types of elements tend to donate electrons?  What type of elements tend to accept electrons?
10. What are **van der Waals forces**?  What factors determine the strength of these forces?
11. Why must all chemical reactions be balanced?
12. Label the reactants and products in the following equation:

6CO2 + 6H2O + sunlight 🡪 C6H12O6 + 6O21. How do enzymes work in terms of **activation energy**?
2. Describe what is taking place in the diagram below:

 1. Explain why water is **a polar molecule**.
2. Compare and contrast **homogeneous mixtures** and **heterogeneous mixtures**.
3. Describe the difference between acids and bases in terms of ions.
4. List 2 common **acids** and two common **bases**.
5. How do **buffers** help organisms maintain homeostasis?
6. List and describe the four most essential macromolecules in organism.
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