**BIOLOGY 2022-23 October 11, 2022**

**Today’s Agenda (Day 33)**

1. HOUSEKEEPING ITEMS

🡪

1. Homework Check:

🡪 Chapter 5 Reading Guide

1. Class Activity:

🡪 **QUIZ: Chemicals and Symbols [elements, polyatomic ions, acids]**

 **\* Go to** [**www.socrative.com**](http://www.socrative.com) **🡪 enter room “MSBBIOLOGY” 🡪 enter ID #**

🡪DAY 4: Chapter 5 PPT Review

1. **Section 5.2 – Threats to Biodiversity**
2. **Section 5.3 – Conserving Biodiversity**

🡪WEDNESDAY: PSAT – NO CLASS

HOMEWORK:

* READ: Chapter 5 – Biodiversity and Conservation AND Chapter 6 – Chemistry in Biology
* COMPLETE: Chapter 6 Reading Guide
* **STUDY**: Chapter 5 Test, Ch 5 & 6 Vocabulary Quiz

CHAPTER 5 – Biodiversity and Conservation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Background extinction | Biological augmentation | Biological magnification | Bioremediation | Ecosystem diversity | Edge effect |
| Endemic | Eutrophication | Extinction biodiversity | Genetic diversity | Habitat fragmentation | Introduced species |
| Mass extinction | Natural resource | Overexploitation | Renewable resource | Species diversity | Sustainable use |

CHAPTER 6 – Chemistry in Biology

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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 |  |  |  |

ELEMENTS AND SYMBOLS

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Hydrogen -  | Helium -  | Lithium -  | Beryllium -  | Boron - | Carbon - | Nitrogen - | Oxygen - | Fluorine - |
| Neon -  | Sodium -  | Magnesium - | Aluminum -  | Silicon - | Phosphorus- | Sulfur - | Chlorine - | Argon - |
| Potassium- | Calcium -  | Chromium -  | Manganese - | Iron - | Cobalt - | Nickel - | Copper - | Zinc - |
| Arsenic -  | Selenium -  | Bromine -  | Krypton -  | Palladium - | Silver - | Cadmium - | Tin - | Iodine - |
| Xenon -  | Cesium -  | Barium -  | Platinum -  | Gold - | Mercury - | Lead - | Radon - | Radium - |

POLYATOMIC IONS & COMMON ACIDS

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Acetate | Acetate | Ammonium | Bromate | Carbonate | Chlorate | Chlorite | Chromate | Cyanate |
| Cyanide | Dichromate | dihydrogen phosphate | hydrogen carbonate / bicarbonate | hydrogen phosphate | hydrogen sulfate / bisulfate | Hydroxide | Hypochlorite | Iodate |
| Nitrate | Nitrite | Oxalate | Perchlorate | Permanganate | Peroxide | Phosphate | Phosphite | Sulfate |
| Sulfite | Thiocyanate | Thiosulfate |  |  |  |  |  |  |
| Acetic | Bromic | Chloric | Chlorous | Hydrobromic | Hydrochloric | Nitric | Phosphoric | Sulfuric |

REMINDERS:

* **~~QUIZ: Chemicals and Symbols [elements, polyatomic ions, acids] 🡪 Oct. 11~~**
* ~~Chapter 5 Reading Guide – Oct. 11~~
* **TEST: Ch 5 🡪 Oct. 13**
* Chapter 6 Reading Guide – Oct. 17
* **QUIZ: Ch 5 & 6 Vocabulary – Oct. 18**
* **TEST: Ch 6 🡪 Oct. 20**

**BIOLOGY 2022-23 READING GUIDE**

**Chapter 5 Biodiversity & Conservation**

Review pages 116 – 135 in the Glencoe Science *Biology*Textbookand answer the following questions.

1. How do extinctions affect biodiversity?
2. List and describe three types of **biodiversity**.
3. Give an example of the three types of biodiversity you listed in number 2.
4. Why does maintaining biodiversity have a direct economic value to humans?
5. Differentiate between the direct and indirect economic value of biodiversity.
6. What types of events can lead to **extinction**?
7. According to the table, which of these groups has suffered the largest percentage loss due to extinction?



1. According to the table above, which of these groups has suffered the smallest percentage loss due to extinction?
2. Why are **non-native species** introductions potentially so dangerous to island organisms?
3. How are today’s high rates of extinction different from past **mass extinction** events?
4. What normally happens after a mass extinction?  Why might this not happen after this mass extinction?
5. What is **overexploitation**?  How does it affect biodiversity?
6. How can disruption of a habitat be as harmful as destruction of a habitat?

1. Describe how **habitat fragmentation** can lead to edge effects (describe **edge effects** as part of your answer).
2. What causes **eutrophication**?  What are the problems associated with eutrophication?
3. Why are **introduced species** a threat to biodiversity in their new habitat, but not their original habitat?
4. What conclusion can be made based on this graph?



1. What is the difference between **renewable** and **nonrenewable resources**?  Give two examples of each.
2. Based on the graph below, how long does it take an area to recover from a landslide?

  

1. Based on the graph above, what has the greatest influence on disaster recovery time?
2. Choose a human-caused disaster from the graph above.  Discuss the methods that could be used to restore biodiversity.
3. Read the article on page 136 and what Wangari Maathai did in Kenya and how it has positively impacted her country.

**BIOLOGY 2022-23 READING GUIDE**

Chapter 6 Chemistry in Biology

|  |
| --- |
| 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.
 |
|  |