Unit -B Overview: ATOM AND PERIODIC TABLE

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| **Main Ideas** | **Essential Questions** |
| 1. Protons and neutrons form the nucleus of an atom, and electrons are located in an electron cloud surrounding the nucleus.
2. All atoms of the same element have the same number of protons, but can have different numbers of neutrons
3. Atoms of elements that are in the same group of the periodic table contain the same number of outer energy level electrons.
 | 1. What are the names and symbols of common elements?
2. What is the structure of an atom?
3. What is the electron cloud model of the atom?
4. How do you determine the atomic mass and mass number of an element?
5. What are isotopes?
6. How do you determine the average atomic mass of an element?
7. How is the periodic table organized?
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| **Skills** |
| 1. Identify the names and symbols of common elements.
2. Describe the electron cloud model of the atom.
3. Explain how electrons are arranged in an atom.
4. Compute the atomic mass and mass number of an atom.
5. Identify the components of isotopes.
6. Interpret the average atomic mass of an element.
7. Explain the composition of the periodic table.
8. Use the periodic table to obtain information.
9. 9. Explain the terms metal, nonmetal, and metalloid mean.
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| **Key Vocabulary** |
| 1. atom, nucleus, proton, neutron, electron, quark, electron cloud
2. element, atomic number, average atomic mass, isotope, mass number
3. periodic table, period, group, electron dot diagram
4. metal, malleable, ductile
5. 5. nonmetal, diatomic molecule, metalloid, semiconductor
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| **STANDARDS**  | **Review Resources** |
| **PSc.2.1 Understand types, properties, and structure of matter.** 1. PSc.2.1.4 Interpret the data presented in the Bohr model diagrams and dot diagrams for atoms and ions of elements 1 through 18.

**PSc.2.2 Understand chemical bonding and chemical interactions.** 1. PSc.2.2.1 Infer valence electrons, oxidation number, and reactivity of an element based on its location in the Periodic Table.
 | 1. 1-Key Words Worksheet
2. 2-Unit Review Worksheet
3. 3- Ppt – Classification of Matter

4. Class Worksheets |