Unit –D1 Overview: MOTION

|  |  |
| --- | --- |
| **Main Ideas** | **Essential Questions** |
| 1. An object’s speed depends on how far an object travels in a unit of time.  2. Acceleration describes how the velocity of an object is changing. | * How are distance and displacement different? * How is an object’s speed calculated? * What information does a distance-time graph show? * What is the difference between speed and velocity? * How are acceleration, time and velocity related? * How can an object’s acceleration be calculated? |
| **Skills** | |
| * Distinguish between distance and displacement. * Explain the difference between speed and velocity. * Interpret distance-time graphs. * Identify how acceleration, time, and velocity are related. * Explain how positive and negative acceleration affect motion. * 6. Describe how to calculate the acceleration of an object. | |
| **STANDARDS** | |
| PSc.1.1.1   * Interpret all motion as relative to a selected reference point. Identify distance and displacement as a scalar-vector pair. * Describe motion qualitatively and quantitatively in terms of an object’s change of position, distance traveled, and displacement.   PSc.1.1.2   * Compare speed and velocity as a scalar-vector pair. Velocity is a relationship between displacement and time: * Apply concepts of average speed and average velocity to solve conceptual and quantitative problems. * Explain acceleration as a relationship between velocity and time: = v a t | |

|  |  |
| --- | --- |
| **Key Vocabulary** | **Review Resources** |
| |  | | --- | | * Distance * displacement, * speed, * average speed * instantaneous speed, * velocity * acceleration | | 1. 1-Key Words Worksheet 2. 2-Unit Review Worksheet 3. 3- Ppt – Classification of Matter   4. Class Worksheets |