Unit 7: Motion in One Dimension Copied from: General Science, Copied on: 07/29/25

Content Area: **Template**
Course(s):
Time Period:
Length:
Status: **Published**

State Mandated Topics Addressed in this Unit

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N/A	N/A

Unit Name

Learning Objectives

- How are speed, velocity and acceleration related?
- How can you distinguish between uniform motion and uniform acceleration?
- How does gravity affect the motion of an object?
- How is the graphical representation of motion analyzed using equations?
- How is the motion of an object related to different graphs of the motion of an object.
- How will you be able to describe a change in position?

Essential Skills

- Calculate the velocity and the displacement of an object undergoing constant acceleration
- Define velocity and acceleration operationally.
- Determine from the curves on a velocity-time graph both the constant and instantaneous acceleration.
- Interpret a v-t graph to find the time at which an object has a specific velocity
- Interpret graphs for a moving object and describe in words the information presented in graphs.
- Recognize the meaning of the acceleration due to gravity.
- Relate the direction and magnitude of velocity and acceleration to the motion of objects.
- Use the motion equations to solve problems involving freely falling objects.
- Write equations that describe the position of an object moving at constant velocity.

Standards

SCI.HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

Instructional Tasks/Activities

- Common assessment chapter test
- Common assessment quiz
- Constructed response
- Do now’s and/or exit slips
- Exit Cards (answer to daily objective questions)
- Graphic organizers or models
- Gravitational Acceleration
- Gravity between 2 objects
- Guided practice
- Homework
- Homework
- Individual, small, and large group work
- Intro to Physics and Newton's Laws
- Laboratory investigations within small groups
- Motion Virtual Lab
- Review Activity
- Section Review Questions
- Speed, Vel, Acc, Graphs and Practice
- Speed, Velocity, and Acceleration
- Using Newton's Laws of Motion
- Vocabulary flash cards or map (word, picture, sentence, example)

Assessment Procedure

- • Student progress will be measured by formative and summative assessments. To maximize student understanding current and cumulative topics will be assessed weekly. This unit is sequenced to begin with an informal assessment of prior knowledge of topics within the unit and determine any misconceptions. Students will then build small concrete blocks of information pertinent to mastery of this unit. Finally, students will be asked to use this information to evaluate higher level problems. This unit will end with a formal assessment common to all college prep students.)
- Flashcards and/or drill and practice
- Inquiry based activities with reflective discussion
- Laboratory groups
- Lecture with note taking or guided notes
- Online models and simulators

- Power point presentations
- Whole and small group discussions

Recommended Technology Activities

- Appropriate Content Specific Online Resource
- Chromebook
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Copy/Paste Content Specific Link Here
- Gimkit
- GoGuardian
- Google Classroom
- Google Docs
- Google Forms
- Google Slides
- Kahoot
- MagicSchool AI
- Other- Specified in Lesson
- Quiziz
- Screencastify

Accommodations & Modifications & Differentiation

Accommodations and Modifications should be used to meet individual needs. Their IEP and 504 plans should be used in addition to the following suggestions.

Gifted and Talented

- Compare & Contrast
- Conferencing
- Debates
- Jigsaw
- Peer Partner Learning
- Problem Solving
- Structured Controversy
- Think, Pair, Share
- Tutorial Groups

Instruction/Materials

- alter format of materials (type/highlight, etc.)
- color code materials
- eliminate answers
- extended time
- extended time
- large print
- modified quiz
- modified test
- Modify Assignments as Needed
- Modify/Repeat/Model directions
- necessary assignments only
- Other (specify in plans)
- other- named in lesson
- provide assistance and cues for transitions
- provide daily assignment list
- read class materials orally
- reduce work load
- shorten assignments
- study guide/outline
- utilize multi-sensory modes to reinforce instruction

Environment

- alter physical room environment
- assign peer tutors/work buddies/note takers
- assign preferential seating
- individualized instruction/small group
- modify student schedule (Describe)
- other- please specify in plans
- provide desktop list/formula

Honors Modifications

Resources

- Resource 1
- Resource 2
- Resource 3
- Resource 4
- Resource 5