Course: Physics

(AP Physics C) Unit: Kinematics: **Motion in One Dimension**

https://apcentral.collegeboard.org/media/pdf/ap-physics-c-mechanics-course-and-exam-description.pdf

Topic 1.1, Page 30

(AP Physics 1) Unit: Position, Velocity, and Acceleration and Newton's 1st Law

https://www.gusd.net/cms/lib/CA01000648/Centricity/Domain/179/ap-physics-1-course-and-exam-description.pdf

Topic 1.1, Page 36: Position, Velocity, and Acceleration

Topic 2.4, Page 51: Newton's 1st Law

Standard: Describe constant and accelerated one-dimensional motion graphically, pictorially, algebraically, and verbally.

Level	Description
4.0	**In addition to score 3.0 performance, the learner will be able to:** ☐ use the idea that the area "under the curve" of a velocity graph (between the line and time-axis) represents the displacement. ☐ apply the constant acceleration equations correctly ☐ Use the slope of a v vs t graph to find acceleration ☐ Explain the difference between positive acceleration, negative acceleration, speeding up, and slowing down
3.0	**In addition to score 2.0 performance, the learner will be able to:** ☐ Generate velocity and acceleration graphs from a position graph ☐ Translate between velocity graphs, written description of motion, and velocity vectors ☐ Use the slope of a d vs t graph to find velocity ☐ Without an external force, objects move at a constant velocity. ☐ Mass is a measurement of an object's resistance to acceleration
2.0	**In addition to score 1.0 performance, the learner will be able to:** ☐ Determine which of the constant acceleration equations applies to a particular situation. ☐ Generate a written description of motion, velocity vectors, and velocity graph from a position graph. ☐ Apply d=vt correctly.
1.0	**The learner will be able to:** ☐ write out equations correctly. describe the difference between: ☐ Scalars vs. vectors ☐ Distance vs. displacement ☐ Average vs. instantaneous velocity ☐ Speed vs. velocity

Pre-Requisites:

Metric Prefixes

Unit Conversions