

Physics Target 01-01

I can use math and graphs to describe motion.

Learning Goals Record For _____

Assignment/Assessment & Date

E	Exceeds Target (Exemplary)
M	Mastery of Target (Application)
P	Proficient in Target
AP	Approaching Proficiency
ND	Needs Development
NE	No Evidence to Measure

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Motion Goal 1 I can draw and interpret diagrams and graphs to represent the motion of an object moving with a constant velocity. <i>(Position-vs-time graphs, velocity-vs-time graphs; Recognize where there is constant velocity and changing velocity; Find average velocity using the slope of an x-t graph. Find the change in position using the area beneath a v-t graph)</i>							
Motion Goal 2 I can differentiate between position, distance, and displacement.							
Motion Goal 3 I can solve problems involving average speed and average velocity.							
Motion Goal 4 I can draw and interpret diagrams to represent the motion of an object moving with a changing velocity. <i>(Position-vs-time graphs, velocity-vs-time graphs, acceleration-vs-time graphs; Find instantaneous or average velocity from the slope of the x-t graph; Find average acceleration from the slope of a v-t graph. Find the change in velocity from the area beneath a a-t graph.)</i>							
Motion Goal 5 I can differentiate between speed, acceleration, and velocity.							
Motion Goal 6 I can correctly interpret the meaning of the sign of velocity or acceleration.							
Motion Goal 7 I can solve problems involving displacement (position), velocity (speed), acceleration, and time.							
Motion Goal 8 I can draw a vector to represent displacement or velocity.							

Explain how sign is used to indicate frame of reference.

Write down expressions for velocity and position as functions of time.

Identify or sketch graphs of these quantities.

Average speed = total distance covered/time interval, $v_{ave} = v_i + v_f / 2$

Acceleration = change of velocity / time interval

Use the equation $x = x_o + vt$ to solve problems involving one-dimensional motion with constant velocity.

Use the equations $v_f = v_o + at$, $x = x_o + v_o t + \frac{1}{2} at^2$, and $v^2 = v_o^2 + 2a(x - x_o)$ to solve problems involving one-dimensional motion with constant acceleration.