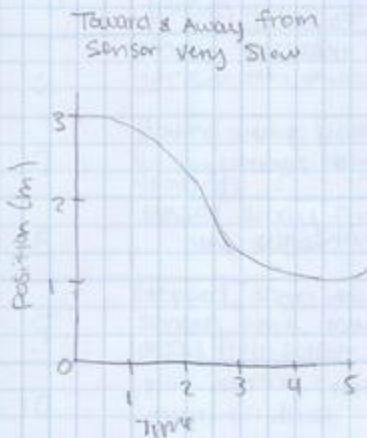
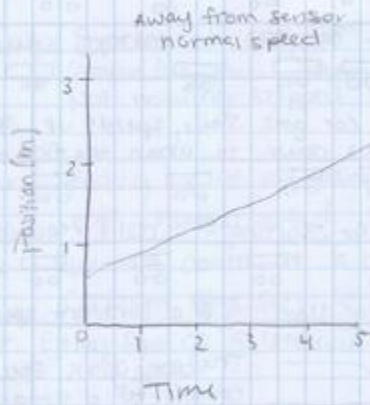
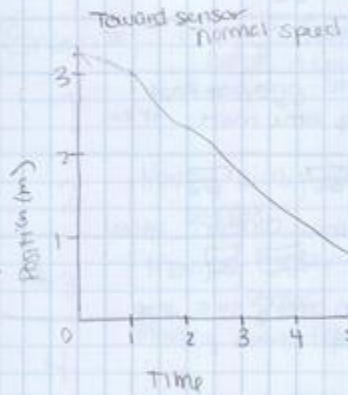


High School Physical Science Example #1

| NGSS: PE | NGSS: DCI | NGSS: SEP | NGSS: CC | CCSS: ELA | CCSS: MATH |
|----------|--|----------------------------------|---------------------------|--------------------------|------------|
| HS-PS3-4 | PS3.B Conservation of Energy and Energy Transfer | Plan and Carry Out Investigation | Systems and System Models | WHST.9-12.1, WHST.9-12.2 | MP.2 |

September 28

Motion Detectors



Toward sensor: The shape of the graph shows the person getting closer to the sensor, walking @ normal speed.

Away from sensor: The difference between this graph and the first is that this line is going up, showing the person getting farther away, while the other goes down, showing the person getting closer.

To/From Sensor Slow: This graph is similar to the first because they both go down. It's different because it changes direction part-way through and goes up like the second. To/From Sensor Fast: This is similar to 3 because it changes direction. It gets down like #2 & up like #1.

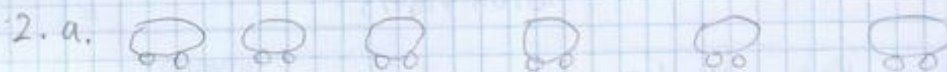
#5 The graph shows constant speed when the line goes straight across the graph. → B

High School Physical Science Example #2

| NGSS: PE | NGSS: DCI | NGSS: SEP | NGSS: CC | CCSS: ELA | CCSS: MATH |
|----------|-------------------------|----------------------------|------------------|--------------------------|------------|
| HS-PS2-1 | PS2.A Forces and Motion | Analyze and Interpret Data | Cause and Effect | RST.11-12.1, WHST.9-12.7 | MP.2, MP.4 |

Physics To Go

1. a. The car is moving at a constant speed because it is traveling an equal distance every 3 seconds.
 b. The car gets faster and starts to slow down.



3. a. The car starts at a resting position and travels at a constant speed until it stops.
 b. The car starts at rest and travels at a ^{constant speed} until it reaches to a halt. Then it turns around and, at a constant rate, a little slower than before on the way ~~travels~~ to the destination.
 c. The car starts to travel at a slow constant speed from a resting position and after a certain amount of time passes, it increases the constant rate at which the car is traveling.
 d. The car is gradually getting faster and the rate is not staying the same.

4. Distance = $110 \times 20 = 2200$ meters

7. a. $0.217 \times 25 = 5.425$ meters

b. $0.219 \times 16 = 3.402$ meters. This distance is less than the one before because you're traveling slower.

c. $0.434 \times 25 = 10.85$ meters

High School Physical Science Example #3

| NGSS: PE | NGSS: DCI | NGSS: SEP | NGSS: CC | CCSS: ELA | CCSS: MATH |
|----------|-------------------------|-----------------------------------|----------|--------------------------|------------|
| 3-PS2-2 | PS2.A Forces and Motion | Plan and Carry Out Investigations | Patterns | WHST.9-12.1, WHST.9-12.7 | MP.2 |