**Middle School Physics Day 3**

Distance vs Displacement Speed vs Velocity

Acceleration:

Demonstrate positive and negative acceleration by running between cones.

**Newton Says:** Pick a positive direction and call out commands: Positive velocity, negative velocity, no velocity, positive velocity with positive acceleration, positive velocity with negative acceleration, negative velocity with positive acceleration, and negative velocity with negative acceleration.

**Marble Roll**: Mark the distance the marble rolls each second. We pick positive direction down the noodle.

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| --- | --- | --- | --- |
| Time | Displacement traveled  | Velocity | acceleration |
| t1 = 1second |  |  | (**v**2 – **v**1)/ (t2 – t1) |
| t2 = 2 seconds |  |  |  |

Freefall is a special case of acceleration toward earth

A car is driving East at 25m/s. The driver sees a deer in the road and slams on the breaks. The car stops in 2.1 seconds. What is the acceleration?