Define speed, velocity, momentum, and acceleration.
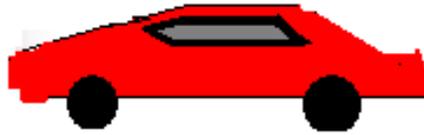
SPEED
VELOCITY
MOMENTUM
ACCELERATION

Define speed, velocity, momentum, and acceleration.

Use a toy car to compare speed, velocity, momentum, and acceleration.

Make up word problems with the speed of a car.

Discuss the velocity if a car went 50 mph in one direction for 2 hours, then turned back for 30 minutes. Compare speed and velocity. Think of an airplane that travels in 3-dimensions.

SPEED
Amount of distance in a given time

Rate = distance
           time

    r= d/t

"60 mph"

VELOCITY

Speed in a specific direction

"North at 15 mph "

MOMENTUM

Power of a moving object to keep moving

Mass X Velocity

ACCELERATION
The change in speed over time

Measured in meters per second per second

Change in speed
     Time…….

"6 m/s/s"

What would cause more damage – a small car or a large truck going 25 mph that hit a building? Discuss momentum and the formula to calculate it.

Example: Your toy car is going 5 meters per second for 2 seconds, then 10 meters per second for 2 seconds, then 15 meters per second for two seconds. What is the acceleration?

F&M - 6   Information Pieces

Amount of distance in a given time F&M-6	*"60 mph"* F&M-6
Speed in a specific direction F&M-6	*"North at 15 mph"* F&M-6
Power of a moving object to keep moving F&M-6	**Mass X Velocity** F&M-6
The change in speed over time F&M-6	**Change in speed** **Time** F&M-6
Rate = distance **time** F&M-6	Measured in meters per second per second F&M-6
r= d/t F&M-6	*"6 m/s/s"* F&M-6

To Make Your MatchCard more durable:

1. *Put the student MatchCard and instructor MatchCard back to back in a clear plastic page protector.*

2. *Laminate the information pieces. Or you can make them sturdier by covering the paper with transparent tape prior to cutting the pieces out.*

3. *For more ideas on how to use the MatchCards, and for keeping a notebook for review, see the Instructor's Guide.*