Chapter 2-Speed

Motion:

Where do we see motion? _____

      Rate: _____

Linear Motion-_____

Relativity: Motion is *relative*. Define: _____

Do things at rest move?

This is relative to your own perspective...

- Examples: _____

Speed:

Definition: _____

Speed uses the variable, **v**. Formula: $v =$ _____

Units: _____

1. **Instantaneous Speed:**

    _____

- Speedometers _____
  _____
- Driving in traffic: _____

    _____

2. **Average Speed:**

    _____

- KCMO to St. Louis is 220 miles. Mapquest figures the travel time is 3.5 hours. What is the average speed?

    _____

Practice Practice Practice:

The speedometer in every car has an odometer that records the distance traveled. If the odometer in your car reads ZERO at the beginning of a trip and 80 miles, 2 hours later, what is your average speed?

_____

Velocity:

Define: _____

- Not the same as speed
- How is it different? _____
- Examples: *Speed* _____
  Velocity _____

Practice Practice Practice!

The speedometer of a car moving North read 60 km/h. It passes another car that is moving South at 60 km/h.

1. Do both cars have the same speed? _____
2. Do both cars have the same velocity? _____

Constant Velocity: **Changing Velocity:**

_____   _____

Basically, you...   Basically, you either...
1. _____   1. _____

2. _____   2. _____

Practice Practice Practice!

What are the three controls used in changing the velocity of a car? _____
_____

Acceleration:

Define: _____

When driving, it's the "pick up"; the "against the seat" feeling.

Formula: **a =** _____

Practice Practice Practice!

A car goes from 0 to 60 km/h in 5 seconds. What is the car's acceleration?

Deceleration:

Define: _____

Referred to as _____:

- Slamming on the brakes
- Moving in a circle: _____

Practice Practice Practice

Suppose a car is moving in a straight line steadily increasing its speed each second. First from 35 to 40 km/h, then from 40-45 km/h, then from 45-50 km/h. What is the car's acceleration?