

5/27/14

- ON THURSDAY WE ARE HAVING
THE FINAL TEST
- CAN USE ALL YOUR NOTES & PAST
ASSIGNMENTS

SPEED $\text{SPEED} = \frac{\text{DISTANCE (m)}}{\text{TIME (s)}} \quad v = \frac{d}{t}$

m/s

VELOCITY $\text{VELOCITY} = \frac{\text{DISPLACEMENT (m)}}{\text{TIME (s)}} \quad v = \frac{d}{t}$

m/s

VECTOR

ACCELERATION $\text{ACCELERATION} = \frac{\Delta \text{VELOCITY}}{\text{TIME (s)}} \quad a = \frac{v - v_0}{t}$

m/s^2
 m/s/s

$v_0 = \text{INITIAL VELOCITY}$

NEWTON'S 1ST LAW

IT TAKES A NET FORCE TO CHANGE AN OBJECT'S MOTION.

NEWTON'S 2ND LAW

$\text{FORCE} = \text{MASS} \times \text{ACCEL}$

$\text{N} \quad \text{kg} \quad \text{m/s}^2$

$F = m \times a$

NEWTON'S 3RD LAW

EVERY FORCE ACTING ON SOMETHING HAS AN EQUAL & OPPOSITE FORCE ACTING BACK

FREEBODY DIAGRAMS

- ARROWS SHOW FORCES
- LABEL FORCES
- ARROW LENGTH = FORCE SIZE

MOMENTUM	$\text{MOMENTUM} = \text{MASS} \times \text{VELOCITY}$ $\frac{\text{kg m}}{\text{SEC}} \quad \text{kg} \quad \frac{\text{m}}{\text{s}}$	$P = m \times v$ P ↖ LOWER CASE
WORK	$\text{WORK} = \text{FORCE} \times \text{DISPLACEMENT}$ $\text{J} \quad \text{N} \quad \text{m}$	$W = F \times d$
POWER	$\text{POWER} = \frac{\text{WORK (J)}}{\text{TIME (s)}}$ W	$P = \frac{W}{t}$ P ↖ CAPITAL

Now, finish the assignment from Friday and turn it in. After this, you may go to the shop and work on either your project or data collection.