Work
CH 13.1

Force is necessary to do work.

- Work is the use of force to move an object some distance.
- Work only occurs when a force is exerted AND an object MOVES
- Holding something in place not = work
- Force doing work is only the force in same direction as movement

Work

- Work= measure of how much force is applied over a certain distance.
- The product of the force on an object and the distance through which the object is moved
- Work = Force x Distance
- W = F x d

Unit measured in Joules (J) = 1N*m

What are some examples of work?

- What is a Joule of Work: 1 N on object to move 1 meter (apple from foot to waist)

Practice

- How much work is done if a person lifts a barbell weighing 450N to a height of 2m?
- If you push a cart with a force of 70N for 2m, how much work is done?
- IF you did 200J of work pushing a box with a force of 40N, how far did you push the box?

Examples Where Work Is Used to Our Advantage

- We use work to our advantage.
  - Examples: water wheels – use the force exert on the wheel by the falling water to turn the wheel. The turning wheel used to grind grain, etc.
  - Wind mills- force moving air exerts to turn wheel

Investigate Work

- With your table partner, complete the investigation on pg. 422.
- 1N = 3.6 oz. (convert to Newtows)
- Answer the questions in your notebook: label it “Investigate Work”
- * Do the challenge too! (Show your work!)