

Simple Machines

Machines Can...

1. Multiply an applied force
2. Change the direction of an applied force
3. Multiply the distance of an effort (force)

Machines Can't...

1. Get more work out of it than is put in! (Remember efficiency!)

We use simple machines because of their....

Mechanical Advantage - the number of times the input force is multiplied (all about increasing what you put in... so you can increase what you get out!)

Lever:

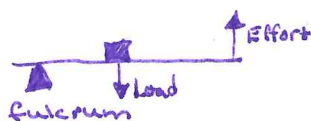
have a bar that is free to pivot about a fixed point (fulcrum)

1st Class:



Example: teeter-totter
scissors

2nd Class:



Example: wheel barrow
car door

3rd Class:

Example: bat (baseball)
fishing poll

Mechanical Advantage Calculation for Levers: length input (effort) / length output (resistance/load)

*lengths always from the fulcrum!

Practice Problems with Levers:

