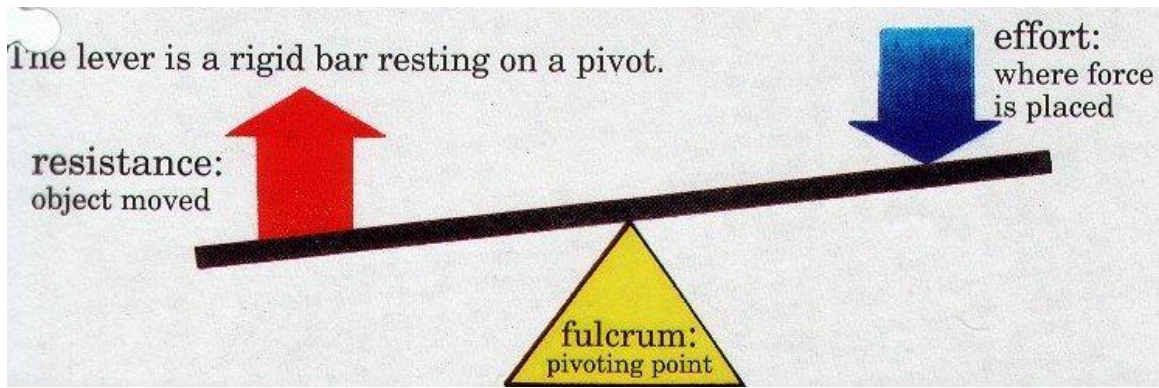


## First, Second, and Third Class Levers



### THE LEVER

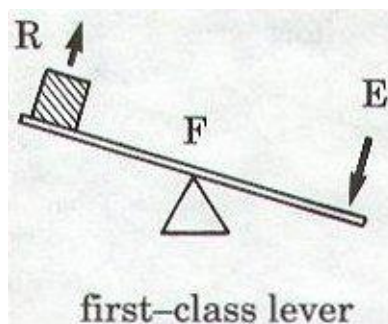
1. One of the earliest and simplest of machines, a large stick would work as a lever to move huge rocks.
2. The Lever is essentially a Rigid Bar that is free to turn about a Fixed Point called the Fulcrum.
3. Every Lever has three (3) parts:
  - A. Resistance Force or Load, What you are trying to move or lift.
  - B. Effort Force - The Work done on the Lever.
  - C. Fulcrum – A fixed pivot point.

Levers are divided into Three Classes depending on the position of the Effort, Resistance, and Fulcrum.

### FIRST CLASS LEVERS

1. The fulcrum (fixed pivot point ) is located between the Effort and the Resistance Forces.
2. The Effort and the resistance move in opposite directions. The Effort Down in order to Lift the Resistance or Load.

Samples of First Class Levers: seesaw, crowbar, scissors, claw hammers

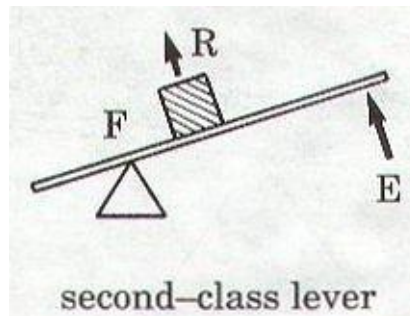


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### SECOND CLASS LEVERS

1. The Resistance is between the Effort and Fulcrum.
2. The Fulcrum is at one End of the Lever
3. The Fulcrum is usually closer to the Resistance (load).

Samples of Second Class Levers: Wheelbarrow, Bottle Openers, NutCrackers



### THIRD CLASS LEVERS

1. The Effort is Between the Resistance and the Fulcrum

Samples of Third Class Levers: Broom, Shovel, Fishing Pole, Baseball Bat, and Tongs.

