

The follow tables gives a few examples of contact and non-contact forces.

| Contact Forces                                                      | Non-contact forces                                                               |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>Frictional forces</b>                                            | <b>Gravitational force of attraction between the Sun and the Earth</b>           |
| <b>Tension in strings, ropes, wires, springs</b>                    | <b>Magnetic force of attraction and repulsion between magnetic materials</b>     |
| <b>Normal reaction forces between object in touching each other</b> | <b>Electrostatic force of attraction and repulsion between charged materials</b> |
| <b>Elastic forces</b>                                               | <b>Nuclear force of attraction between particles in the nucleus</b>              |
| <b>Expansion force of heated object</b>                             |                                                                                  |
| <b>Upthrust force on floating object</b>                            |                                                                                  |

### **\*MASS AND INERTIA**

The mass of an object is a measure of the matter in it and depends on the number of atoms or molecules it contains and the size of the particles.



The inertia of matter is the “laziness” of matter or the tendency of matter to resist changes to its motion. Inertia makes an object difficult to start or stop moving, difficult to change its direction of motion or difficult to accelerate. Inertia simply depends on the amount of matter in a substance; the more mass an object possesses the greater its inertia.