7.3 Buoyancy

Buoyancy is the upward force exerted by a fluid on an object placed in it.
The buoyant force is equal to the weight of the fluid displaced by the submerged object.

- If the weight of the object is less than the buoyant force, the object will float, if the weight of the object is greater, the object will sink.
- If an object has a greater density than the density of the fluid, the object will sink. If the object's density is lesser than the density of the fluid, the object will float.

For example: Hot air balloons utilize the principle of buoyancy to rise. The air inside the balloon is heated, making it less dense than the surrounding air, causing the balloon to float.

- Even if two objects have the same mass, the one with greater volume will generally be more buoyant.