

### THEORY

When a body is placed in a liquid, it experiences an upward force called upthrust or buoyant force. This force is equal to the weight of the liquid displaced by the body. This is known as Archimedes' principle. The upthrust depends on the volume of the liquid displaced and the density of the liquid. If the weight of the body is greater than the upthrust, the body will sink. If the weight is equal to the upthrust, the body will float. If the weight is less than the upthrust, the body will rise.

Material	Density (kg/m <sup>3</sup> )	Volume (m <sup>3</sup> )	Weight (N)	Upthrust (N)	Result
Iron	7800	0.001	7.8	9.8	Sinks
Wood	800	0.01	0.8	9.8	Floats
Aluminum	2700	0.001	2.7	9.8	Sinks
Steel	7850	0.001	7.85	9.8	Sinks
Plastic	1200	0.005	1.2	4.9	Floats

### EXPERIMENT



Weight (W)	Upthrust (U)	Result
100g	100g	Sinks
50g	100g	Floats
20g	100g	Floats
10g	100g	Floats