



In this activity you will calculate the density of a submarine in different scenarios.

## Question:

Using a film canister can three submarine scenarios be simulated and the density of the submarine in each respective scenario be calculated?

## Instructions:

In each square calculate the density of your submarine. Include all measurements and calculations. **Remember the units.**

## Remember:

The density of water at @ 4°C is 1 g/mL = 1 g/cm<sup>3</sup>

Less Dense -> Floats

More Dense -> Sinks

## Materials:


- Film canister
- Scale
- Beaker
- Mass

## Density:

$$\text{Density} = \frac{\text{mass}}{\text{Volume}}$$

**Scenario 1:** Your submarine must be half submerged below the surface of water and half exposed.

**Scenario 2:** Your submarine must sit on the bottom of the sink.



**Scenario 3:** Your submarine must float below the surface of water and above the bottom of the sink.

