# Density Worksheet

**Student Activity #1:**

All of these objects are the same size and shape, so we can assume they have the same volume.

What do you observe when you drop the balls into water? Draw what you observe and write a sentence or two that might explain what you are seeing.

**Student Activity #2:**

Measure the objects and calculate volume (V= L*W*H)

| Object | Length (cm) | Width (cm) | Height (cm) | Volume ($cm^3$) |
|---|---|---|---|---|
| Bar | | | | |
| Cube 1 | | | | |
| Cube 2 | | | | |

Weigh the objects:

| Object | Mass (in grams) |
|---|---|
| Bar | |
| Cube 1 | |
| Cube 2 | |

Calculate the density (d=m/v):

| Object | Mass (in grams) | Volume ($cm^3$) | Density ($g/cm^3$) |
|---|---|---|---|
| Bar | | | |
| Cube 1 | | | |
| Cube 2 | | | |

*****Keep track of units! It is very helpful when solving problems and checking your work.

**Student Activity #3:**

Volume of cubes:

Mass of cubes:

| Cube (material) | Mass (grams) | Density ($g/cm^3$) |
|---|---|---|
| Acrylic | | |
| Aluminum | | |
| Brass | | |
| Copper | | |
| Nylon | | |
| Pine (wood) | | |
| PVC | | |
| Steel | | |

Number the objects showing the most to least dense.

**Student Activity #4:**

| Object description (column 1) | Mass dry (grams) (column 2) | Volume of object (column 3) | Density of object (column 4) | Object Material |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Object density (column 4) = (column 2/column 3)