

# NEATH PORT TALBOT COLLEGE COLEG CASTELL NEDD PORT TALBOT

## School of Maths & Science Science Practical

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### **To determine the densities of different materials.**

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#### ◆ Aim

To determine the density of different materials.

#### ◆ Introduction

By taking appropriate measurements of the dimensions of an object, its volume can be determined. If the mass is then measured we can determine the density using  $\text{density} = \text{mass}/\text{volume}$ .

#### ◆ Safety

##### **Control Measures**

- You are reminded of the need of good laboratory practice in order to maintain a safe working environment.

##### **Hazards**



##### **General Danger**

Take care in using Vernier callipers as the ends can be sharp.

Take care to avoid water spillages.

### ◆ Apparatus Required

Various materials (including metal blocks, steel spheres, stones and paper).  
Micrometer, Vernier calliper, metre rule, balance, measuring cylinder.

### Procedure

1. You will firstly be instructed on how to use the micrometer screw gauge and the Vernier callipers.
2. You will then use these items amongst other things to determine the density of different materials.
3. Plan and carry out an experiment to determine the density of different materials including paper, stones, a steel ball bearing and blocks of different material.
4. Your must include:
  - a. description of the most accurate way to obtain the relevant measurements;
  - b. a neatly presented table of results;
  - c. calculations of density.

Remember to include the units for measured quantities in the heading of the table.

Material	Mass	Dimensions	Volume	Density

5. Justify the number of significant figures used in your final answers of density.

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