PHYSICS LABORATORY: Circular Motion

Background Information and Purpose

As you know, the inward (centripetal) force acting upon an object moving in a circle is given by the equation

$$F_c = \frac{mv^2}{r}$$

Note that this force can be increased by increasing the mass, increasing the velocity, or decreasing the radius of the circle.

In this laboratory, you will investigate a bung of mass 'm' swinging on a string of radius 'r' though a glass tube (see diagram to the right). Laboratory masses ('M') will be placed on the other end of the string. As the bung rotates, it will exert a force on these masses below through tension in the string.

The purpose of this lab is to find the mass of the bung experimentally by varying the mass 'M' below.

The process is completely up to you.

Bung ('m')

Radius ('r')

glass tube

string

Masses ('M')

Source: http://mrfizix.com
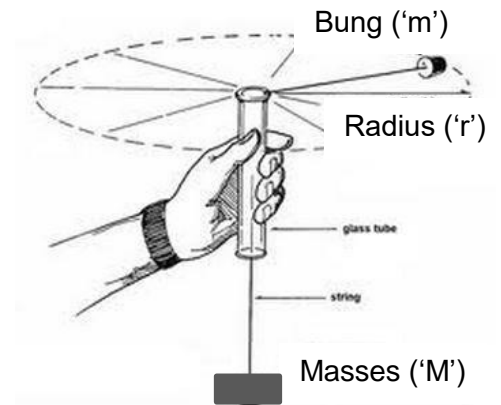
Remember:
1. **Refer to the 'Physics Lab Report Guide' before submitting your report.**
2. **Attach the 'Physics Lab Report Rubric' as a cover page to your paper copy.**

You will be marked on Data Collection and Processing (DCP) and Conclusion and Evaluation (CE) for this lab.