

Pendulum Factors Lab



Your goal is to discover the factors that influence how many cycles a pendulum (swinging mass) makes in a second (frequency). A grandfather clock uses a swinging arm to keep time accurately. Before you try it, predict what you will be able to change in the setup to make it right on 1 cycle per second. As pairs, experiment with things that can be changed to get the mass to swing back to a certain spot once each second. Does it matter how far you pull the pendulum back before you let go? (Try small values, like for a string 1m long, pull it back 10cm from straight down and then 15cm) Does the mass affect the cycle time (period)? Does the string length affect the period? Collect data to support your claims.

Write up your conclusions, procedures, and data in word. Attach to an e-mail.

Elements to include in your write-up

This write-up should have 5 paragraphs

1. Conclusion -- What are the key points of this lab?
2. Prediction
3. Clear procedures
 - a. So someone else could repeat your experiment even if they did not have these instructions
4. Success
5. Discussion of differences between thoughts before and after measurements.