Stage 1 Physics

Practical Investigation: Time of Travel

The aim of this task is to investigate the effect of one factor on time of travel of an object. Both the independent and dependent variables need to be quantifiable (numerical) so that the results are appropriate for plotting on a scatter graph with a line of best fit.

1. Choose a object and motion type that will be easy to set up, safe, and measurable.

2. For at least four factors that could affect the time of travel:
   - Explain the effect the factor would have, including relevant Physics
   - Describe how, if at all, the factor could be measured
   - Describe the extent to which the factor could be controlled
   - Hence evaluate whether the factor would be a good choice for independent variable

3. Choose an independent variable (the factor you're going to change)

4. Write a hypothesis describing the effect changing the independent variable will have on the time of travel. Explain all reasoning, including any initial research.

5. Write a list of the equipment needed to carry out the experiment.

6. Write a method. It should be clear, numbered, and step-by-step, and include a diagram.

7. Draw up a results table. This will be filled in as the experiment is performed.

8. Perform the investigation, recording results and any observations.

9. Present the results on a graph. Include a line of best fit.

10. Write a conclusion, including reasons and limitations.

11. Hand in your work by 11:59pm Tuesday 8 Feb.