Year 10 Science

Practical Investigation: Falling Speed of a Squirrel

The aim of this task is to investigate the effect of one factor on the falling speed of a squirrel. 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.

Deconstruction and Design

- Your dependent variable (the result you're going to measure) is the falling speed of the 'squirrel'. Suggest at least two ways falling speed could be measured.
- Make a list of factors that could affect the falling speed of a squirrel. For each of them:
  - 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
- Choose an independent variable (the factor you're going to change)
- Write a hypothesis describing the effect changing the independent variable would have on the falling speed of a squirrel. Explain all reasoning, including any initial research.
- Describe at least two possible ways the experiment could be carried out, explaining possible difficulties.
- Write a list of the equipment needed to carry out the experiment.
- Write a method. It should be clear, numbered, and step-by-step, and include a diagram.
- Write or annotate reasons for decisions you made when planning each step in the method.
- Draw up a results table that could be filled in as the experiment is performed.
- Hand in the design for marking.