**Physics 1.1 AS 90935 Investigation leading to linear relationship**



Identifying Independent and dependent variables

**Success Criteria:** We know we have achieved this when we can:

* Identify the main steps of a Scientific Investigation
* Define the terms 'Independent variable, dependent variable and control'
* Be able to write an Aim / focus question to a given investigation

**1.** Put the following **terms into the correct order** for a typical Scientific Investigation (Number 1 – 5)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Number** |  | **Number** |
| method |  | conclusion |  |
| discussion |  | results |  |
| aim |  |  |  |

|  |  |
| --- | --- |
| **Definitions** | **What is that variable?** |
| **a.** You should only change one variable at a time which is called the: |  |
| **b.** You should be able to measure a variable changing which is called the: |  |
| **c.** The variables / factors you keep the same in your fair test are called**:** |  |

**2.** A 'fair test' is one in which you only change one thing (variable). **Complete the following definitions**

**3.** Your Aim or focus question **must include both variables**. For example: If I change (independent variable) how will it affect (dependant variable). Write down the **independent and dependent variables** then the **Aim** for the following investigations

a. A student wondered if the variegated (green and white) patches on a leaf made a difference to whether the leaf was able to make starch through the process of photosynthesis

|  |  |  |
| --- | --- | --- |
| **Independent variable** | **Dependent variable** | **Aim** |
|  |  |  |

b. Students observed a rubber ball bouncing back to different heights after it was dropped at different heights.

|  |  |  |
| --- | --- | --- |
| **Independent variable** | **Dependent variable** | **Aim** |
|  |  |  |

c. Cars appeared to take longer to brake on the same stretch of road in the wet weather compared to when the road was dry.

|  |  |  |
| --- | --- | --- |
| **Independent variable** | **Dependent variable** | **Aim** |
|  |  |  |