**VARIABLES**

Independent Variable: What are you **changing** ….or the **cause**

Dependant Variable: What are you **measuring** ….or the **effect**

Controlled Variable**s**: What are you **keeping the same**

(usually expected to give 2 controlled variables)

**DRUG TRIALS IN HUMAN BIOLOGY**

**Double Blind:** Both the administrators and the participants (double) are unaware of who is given the active drug and the placebo (blind)

**Placebo:** Is an **inactive drug** that **looks/tastes/smells the same** as the active drug and is **administered in the same way** as the active drug

Can be used as a **control group** to compare the results of the active drug.

A placebo **eliminates the psychological effects** of taking the drug.

**RESULTS**

Results will be represented in a **table** and a **graph.**

You will usually need to calculate the **average** and use this value to draw a graph.

**METHOD**

**Numbered steps** are required.

Should be **detailed** yet **easy to follow**

Should make mention of variables you will **control**

Should include a **labelled diagram**

**HYPOTHESIS**

A hypothesis is a testable statement. Based on your aim and predictions.

You must identify how the **independent variable will change** and how the change will **impact the dependant variable**.

‘**If**……(change the IV)….. **then**….(impact on DV) ‘

Usually worth 2 marks: 1. Valid hypothesis

2. Links both variables

Examples:

INVESTIGATING

**CONCLUSION**

What was the **outcome** of the experiment? Was your **hypothesis correct**?

**DATA ANALYSIS**

Expressing the results of the experiment using words. Explain your graph.

1. What **relationship** can we see? What shape is the line (e.g. Positive linear relationship). What happens to the DV as the IV increases?
2. Are there any changes **within** the line? (e.g change in gradient)
3. State **data points** to support your statements.

**CONTINUOUS DATA**

Refers to the continuous recording of data. Usually over a period of time. You will draw a **line graph**.

|  |  |
| --- | --- |
| **Length of**  **Exercise (min)** | **Amount of water in an**  **average body (L)** |
| 0 | 50 |
| 15 | 49.5 |
| 30 | 49 |
| 45 | 48.5 |
| 60 | 48 |

Examples may include:

**DISCRETE DATA**

Refers to the ability to count the number of objects you are graphing. You will need to draw a **bar graph.**

|  |  |
| --- | --- |
| **Preferred sport** | **Number of players** |
| tennis | 15 |
| scuba diving | 20 |
| golf | 12 |
| sky diving | 4 |
| archery | 20 |
| soccer | 25 |

Examples may include:

**EVALUATION**

Was the experiment **valid** and **reliable**?

|  |  |
| --- | --- |
| **VALID** | **RELIABLE** |
| Are The results **true**? Was it **only the IV that had an effect on the DV**? | Will the results be the **same every time**? Can we expect **consistency**? |
| Examples: | Examples: |

**A GOOD GRAPH**

Draw and annotate the features of a good graph in the space below

