**Lesson7. Biology Laboratory Report Terms**

The scientific method is a process commonly learns to help encourage experimentation. Whether you use the classic scientific method or a newer variation, these are the terms you’ll need to know.

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| **Section** | **Term** | **Definition / Description** |
| **Title Page** | Title | A brief and informative name of the experiment. |
| **Abstract (not include)** | Abstract | A short summary of the entire lab report (purpose, methods, results and conclusion). |
| **Introduction** | Hypothesis | A testable prediction. What you think will happen based on what you know |
| Background Information | Relevant scientific context or theory behind the experiment. |
| Objective | The purpose or goal of the experiment. |
| Research Question | A specific question the experiment seeks to answer. |
| **Materials & Methods** | Materials | A list of items and substances used. |
| Procedure | A step-by-step description of what was done in the lab. |
| Independent Variable  | The factor that is changed by the experimenter. |
| Dependent Variable  | The factor that is measured or observed. |
| Controlled Variables | Variables kept constant to ensure a fair test. |
| Control Group | Group that does not receive the experimental treatment. |
| Experimental Group | Group that receives the treatment or manipulation. |
| Uncertainties  | Errors obtained during measurements with an instrument. |
| Replicates | Repeated trials to ensure reliability of results. |
| Quantitative Data |  Numerical values obtained from the measuring instrument. |
| Qualitative Data | Non numerical data based on characteristics and description. |
| **Results** | Observation | Seeing something and making notes about it during the experiment. |
| Record  | to write down what you know or learned. |
|  Table | A table used to organize collected data. |
| Graph | A visual representation (e.g., bar, line, scatter) of data. |
| Raw data | Values obtained from the measuring instrument. |
| Process data | Involves combining and manipulating raw data(calculation) |
| Mean / Average | The sum of values divided by the number of values. |
| Standard Deviation | A measure of how spread out the data is. |
| Range | Difference between the highest and lowest values in a dataset. |
| Mode | The most frequently occurring value in a dataset. |
| Median | The middle value in a sorted list of numbers. |
| **Discussion / Conclusion** | Accuracy | How close a measurement is to the actual value? |
| Validity | The extent to which the results accurately reflect the concept being tested.(sample size) |
| Reliability | The consistency of a set of measurements or measuring instrument.( repeat, calculate mean, identify outliers) |
| Correlation | Describes the strength and direction of relationship between two variables ( Pearson’s **r,** ranges from -1 to +1) |
| Causation  | Is when change in one variable causes a change in another variable |
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| **References** | Citation | Acknowledgement of sources used (books, articles, etc.). |