**Unit 13: Experimental Design**

Define and state purpose of each of the following:

1. independent variable
2. dependent variable
3. control
4. sample size
5. isolating variable

Make up a brief example of an experiment where you demonstrate your understanding of the abovve terms.

show a graph of your “results” with the independent/dependent variable on correct axis

*here is what I mean:*

Experiment: Joey tests the amount of fertilizer with the growth of plants

* the independent variable is the amount of fertilizer—as this is what joey controls
* the height of the plant is the dependent variable as it “depends” on amount of fertilizer
* joey will have each sample contain five plants—because having a good sample size will give a good average in case of anomolies
* Joey will leave 1 sample of five plants with no fertilizer as a control used for comparison
* Joey will make sure all plants have same light and amount of water to make sure he is observing ONLY the effect of fertilizer

|  |  |  |
| --- | --- | --- |
| Sample 1: Control no fertilizer | Growth after 10 days  4 cm | Growth after 20 days  7 cm |
| Sample 1: 1 oz fertilizer | 5 cm | 8 cm |
| Sample 2: 2 oz fertilizer | 7 cm | 9 cm |
| Sample 3: 3 oz fertilizer | 10 cm | 14 cm |

