Worksheet 2 | Lower Secondary Stage (6-8)

1st Semester | 2023-2024

Name:

Subject: Physics

Class: 6 CS

Objectives:

- Write a proper hypothesis for different investigations.

- Identify the dependent, independent and controlled variables.

Question one:

Identify the dependent and the independent variables in each of the following situations**:**

1- The higher the temperature of the air in the oven, the faster the cake will bake.

Independent variable: _____.

Dependent variable: _____.

2- The time it takes to run one kilometer depends on your speed.

Independent variable: _____.

Dependent variable: _____.

3- Students measured the temperature of the water at different depths in a lake and found that the temperature varied.

Independent variable: _____.

Dependent variable: _____.

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4- The amount of pollution produced by cars was measured for cars using gasoline containing different amounts of lead.

Independent variable: _____.

Dependent variable: _____.

5- How blood sugar levels are affected by drinking diet soda and regular soda.

 Independent variable: _____.

Dependent variable: _____.

6- Lemon trees receiving the most amount of water produced the most lemons.

Independent variable: _____.

Dependent variable: _____.

Remember that:

A hypothesis is an uncertain statement about the relationship between two or more variables. It is a specific, testable prediction about what you expect to happen in a study. A hypothesis does not have to be correct.

Example:

- Students who eat breakfast will perform better on a math exam than students who do not eat breakfast.

- **Question Two:**

State a proper **hypothesis** for the following investigations and identify the dependent and the independent variables:

1- **What effect does temperature have on plants' growth?**

Hypothesis: _____.

Independent variable: _____.

Dependent variable: _____.

2- **How does the color of food affect the amount of food that fish eat?**

Hypothesis: _____

_____.

Independent variable: _____.

Dependent variable: _____.

3: **How does the amount of electrical energy supplied to an electric motor affect the speed it turns?**

Hypothesis: _____

_____.

Independent variable: _____.

Dependent variable: _____.