Experimental Method-Data Tables/Graphing (Kagan One-Stray)

Experiment #1

A sample of gas is collected in a collapsible container at 100 degrees Celcius. The gas was then cooled, and the volume measured as the gas cooled.

Here is the data they collected:

At 100 degrees C. - gas volume was 317 ml.

At 60 degrees C. – gas volume 288 ml.

At 30 degrees C. – gas volume 252 ml.

At 0 degrees C. – gas volume 233 ml.

**RECORD ON YOUR POSTER:**

 1. Independent Variable:

2. Dependent Variable:

3. Data Table:

4. Graph: Bar, line, or pie graph?(Be sure to use your notebook rubric so it is CORRECT!)

5. Analysis: What is the relationship between the TEMPERATURE of a gas and its VOLUME?

Experiment #2

The thickness of tree rings indicate what the conditions were when that ring was added to the tree (temperature/rainfall/etc.). Scientists examined the average thickness of tree rings in a Forest A and Forest B, for trees that were 20, 30, and 40 years old.

Here is the data they collected:

Forest A Tree Rings: Forest B Tree Rings:

20 years - 2.2 cm 20 years- 2.5 cm

40 years - 4.0 cm 40 years-4.5 cm

60 years- 4.2 cm 60 years-4.8 cm

**RECORD ON YOUR POSTER:**

1. Independent Variable
2. Dependent Variable
3. Data Table (Hint: You will need THREE columns, one for the independent variable, and one for each forest A and B.)
4. Graph: Bar, Pie, or line Graph? (Be sure to use your notebook rubric to be sure it is CORRECT-You will need to graph a line for both forest A and B.)
5. Analysis: Which forest evidently had better conditions for tree growth? Support your answer with data.

Experiment #3

A clam farmer has been studying the number of baby clams developing at different water temperatures in the bay.

Here is the data he collected:

Water temp. 15 degrees C - 75 clams

Water temp. 20 degrees C - 90 clams

Water temp 25 degrees C -120 clams

Water temp 30 degrees C -140 clams

Water temp 35 degrees C -75 clams

Water temp 40 degrees C -40 clams

**RECORD ON YOUR POSTER:**

1. Independent Variable:
2. Dependent Variable:
3. Data Table:
4. Graph: Bar, Pie, or Line Graph? (Be sure to use your rubric to create your perfect graph.)
5. Analysis: What is the optimum (best) temperature for growing clams? Support your answer with data.

Experiment #4

Hookworms can live in a human intestine. They live by sucking blood from the intestine wall. Data was collected on the number of hookworms in each intestine, and the amount of blood lost per day.

Here is the data they collected:

Number of hookworms 12 Amt of blood loss 6 cm3

Number of hookworms 24 Amt of blood loss 12 cm3

Number of hookworms 63 Amt of blood loss 31 cm3

Number of hookworms 80 Amt of blood loss 40 cm3

Number of hookworms 88 Amt of blood loss 44 cm3

**RECORD ON YOUR POSTER:**

1. Independent Variable:
2. Dependent Variable
3. Data Table
4. Graph: Pie, Bars, or Line graph? (Be sure to use your rubric to make sure it is perfect.)
5. Analysis: How many cm3 of blood will be lost in a WEEK for a person with 88 hookworms? Show your calculation.