Name: _____ Section: _____

Peter's Experiment

Directions: Read the passage below and complete the questions to show your understanding of Peter's experiment.

Since Peter learned that Venus Flytraps typically grow best in warmer/milder climates, he wondered if cooler temperatures would impact how quickly they closed. Therefore, he designed and conducted an experiment. For his experiment, he purchased sixteen Venus Flytraps from a local florist that sold exotic plants. He then placed eight Venus Flytraps outside during the early part of winter (Temperature = 6.9 °C) and eight Venus Flytraps inside his house (Temperature = 22.2 °C). After allowing the Venus Flytraps to adjust to their environment for a day, Peter began his experiment. Peter used a small dowel (wooden stick) to activate the Venus Flytraps by touching their "trigger hairs." Once he did this he used a stopwatch to determine how many seconds it would take to completely close. He repeated this process for all Venus Flytraps (both inside and outside) and the data he recorded are in tables below.

Table 1 – Closing Time of Outdoor Plants – (Temperature = 6.9 °C)

Venus Fly Trap Number	Closing Time (sec.)
1	19.42
2	4.73
3	7.2
4	6.44
5	5.91
6	9.97
7	8.28
8	6.76
Mean (Average) Closing Time	8.6

Table 2 – Closing Time of Indoor Plants – (Temperature = 22.2 °C)

Venus Fly Trap Number	Closing Time (sec.)
1	2.28
2	4.43
3	1.20
4	6.85
5	2.77
6	10.13
7	1.18
8	2.07
Mean (Average) Closing Time	3.7

1. What do you think Peter's hypothesis is?

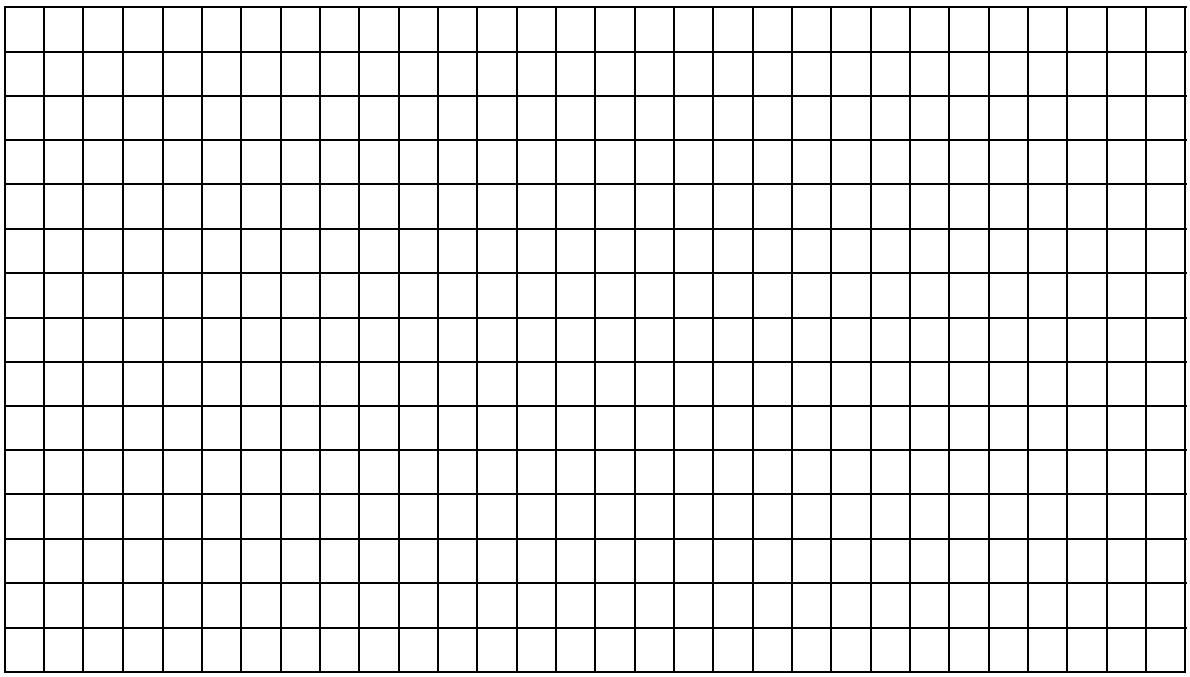
2. What is the experiment's independent variable? Explain your reasoning.

3. What is the experiment's dependent variable? Explain your reasoning.

4. Identify **two** constants from the experiment.

5. What do you think the experiment's control is? Explain your reasoning.

6. Use the grid below to construct a bar graph illustrating the **<u>average closing time</u>** of both the outdoor and indoor Venus Flytraps. Make sure that your graph has a title, a labeled x and y axis, and the appropriate number scale.



7. According to the data as illustrated in the graph, do you think the data/results support Peter's hypothesis? Why or why not?