

March of the Ants

A student wanted to know whether ants dig more tunnels in the light or in the dark. She thought if ants could not see daylight during the day, then the ants would not dig more tunnels. Ten ant colonies were set up in commercial ant farms with the same number and type of ants per ant farm. The same amount of food was given to each colony, and the colonies were kept at the same temperature. Five of the colonies were exposed to normal room light and five were covered with black construction paper so they did not receive light. Every other day for fifteen days the length of the tunnels were measured in millimeters using a string and a ruler. The data was recored in the table below.

Day	Normal Light (mm)	Dark / No light (mm)
1	5	7
3	5	9
5	11	10
7	6	7
9	7	15
11	17	16
13	11	21
15	15	13

1. What is the Purpose of this experiment?
2. What was the hypothesis?
3. What was the manipulated variable?
4. What was the responding variable?
5. What was the control group?
6. What are the average lengths of the tunnels for both the LIGHT and the DARK?
Normal Light _____ Dark (no light) _____
7. What conclusion can you draw from the data in this lab?



Mile Run

Tim Bimmins wanted to know if wearing shoes actually would help him run the mile at school faster. He thought that if he wore gym shoes then he would be able to run the mile in the least amount of time. Tim decided that to test his theory he would run the mile 4 times without any shoes, 4 times in gym shoes and 4 times in dress shoes. He would run the same mile loop at school's indoor track each day for 12 consecutive days. Tim wore the same gym clothes each time he ran and ate the same meals for breakfast, lunch, and dinner each day. The times of the miles were recorded in the data table below in minutes.

Trials	Barefoot	Gym Shoes	Dress Shoes
1	8:25	7:59	11:31
2	9:47	8:41	11:02
3	9:14	8:19	10:46
4	8:49	8:38	11:13

8. What is the Purpose of this experiment?
9. What was the hypothesis?
10. What was the manipulated variable?
11. What was the responding variable?
12. What was the control group?
13. What are the average mile times for barefoot, gym shoes and dress shoes?

Barefoot _____ Gym Shoes _____ Dress shoes _____

14. What conclusion can you and Tim draw from the data in this lab?

