

## Design

### Introduction

This experiment was conducted to determine food preference of planaria. Planaria are freshwater creatures. They live in lakes, streams, and other freshwater bodies.

Planaria are non-parasitic and eat decaying meat.

In the following experiment, planaria will be placed in five different choice chambers, each with a different type of food. After fifteen minutes, the planaria's distance from the food will be measured in centimeters and recorded.

### Variables

Independent Variable

Type of food

Dependent Variable

Distance from food after fifteen minutes

Controls

Distance of planaria from chamber in which they were not placed

### Constants

Amount of water in each choice chamber

Temperature of water

Environment

## Materials

Five choice chambers  
500 mL of room temperature, distilled water  
200 mL beaker  
Pipet  
20 planaria  
Apple  
Liver  
Aquatic plant  
Potato  
Ruler  
Timer

## Procedure

1. Gather materials.
2. Label the choice chambers A, B, C, D, and E
3. Fill all of the choice chambers with 100mL of water
4. Place on type of food in each of the choice chambers, completely in one of the chambers (excluding the last choice chamber, which will have no food)
5. Add five planaria to each chamber that does not have food in it
6. Allow the planaria to move as they please for fifteen minutes
7. After fifteen minutes have passed, measure the distance each planarium is from the food

## Safety

In this experiment, it is important to ensure the safety of the planaria. The planaria must remain unharmed and alive.

## Data Collection and Processing

The data was mostly quantitative. The distance from the food was measured in centimeters.

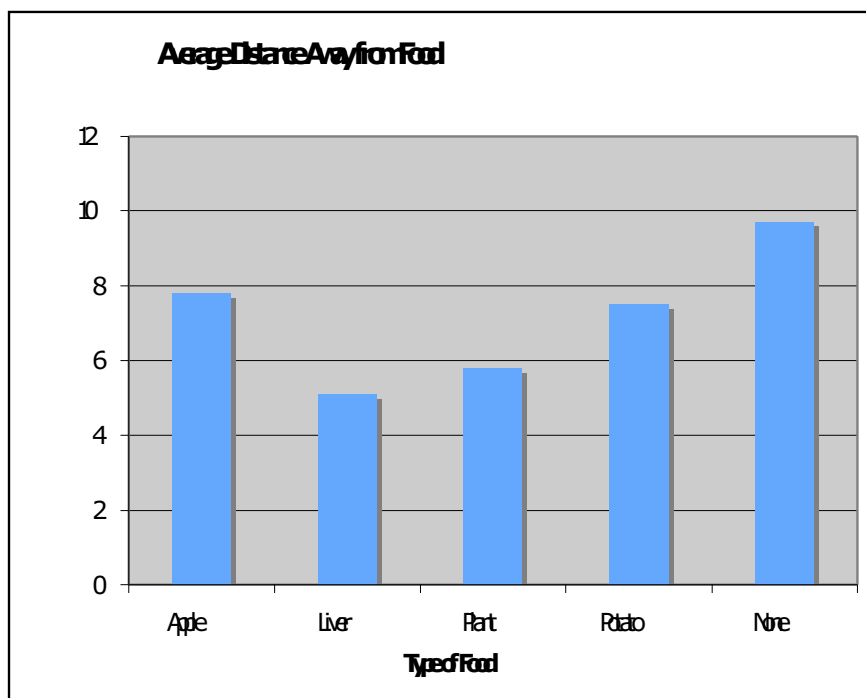
### Distances of Planaria from Food

	Apple	Liver	Potato	Plant	None
Trial 1	6.7	1	5	3	10
Trial 2	9.8	0.5	7.1	4.3	10
Trial 3	0	4.6	9.8	7	9.7
Trial 4	11	8.9	9.1	7	9.6
Trial 5	12	11	6.7	7.8	9.2

### Average Distance of Planaria from Food

Apple	Liver	Plant	Potato	None
7.8	5.1	5.8	7.5	9.7

Distances are accurate to 1 mm



## **Conclusion**

The results show that the preferred food of planaria is liver. This proves that planaria eat decaying meat. The liver was the only meat in the group. Therefore, it makes sense that they chose that over all others. There was only one creature that went all the way to the food, and that food was the apple. However, the apple was not even the second most preferred food.

## **Evaluation**

The results showed the predicted preferred food, the liver. This is caused by the planaria's natural preference of food. Obviously, anything that is not their preferred food would be chosen less often.

## **Errors**

While the results were expected, there is still a possibility of errors. One mistake was that the blood of the liver spread through the water into the other chamber. This may have given the planaria a taste for the liver and led them toward it.

Measurements are always subject to errors, because there are many things that can go wrong. There is the uncertainty that is always calculated in when considering measurement and data. In addition to this, because all of the trials were done at the same time, there is a possibility that the planaria moved before the experimenter had time to move farther than if they had been measured immediately after the fifteen minutes. This was a major error, and should have been controlled for. This error could have caused the results to be swayed extremely.