



PLANT AND LIGHT INVESTIGATION

AIM:

INDEPENDENT
VARIABLE

DEPENDENT
VARIABLE

WHAT SAMPLES ARE WE TESTING?



ACCURATE MEASUREMENTS
OF VARIABLES (IV, DV)

VALIDITY: HOW TO CONTROL
OTHER VARIABLES

Variable	How you kept it the same

RELIABILITY:
CONSISTENT TRIALS

EQUIPMENT DIAGRAM/NOTES



METHOD

For this study, we used a mixed methods approach. We conducted a series of focus group discussions with 10 participants, 5 males and 5 females, aged between 18 and 30 years. The focus groups were conducted in a semi-structured format, allowing us to explore the participants' experiences and perceptions of the intervention. We also conducted a series of individual interviews with 5 participants, 3 males and 2 females, aged between 18 and 30 years. The interviews were conducted in a semi-structured format, allowing us to explore the participants' experiences and perceptions of the intervention in more detail. The data from the focus groups and interviews were analysed using thematic analysis.



DATA COLLECTION

Data collection was conducted over a period of 12 weeks. The data collection process involved the following steps: 1. Recruitment of participants: Participants were recruited through social media and community groups. 2. Focus group discussions: Focus groups were conducted in a semi-structured format, allowing us to explore the participants' experiences and perceptions of the intervention. 3. Individual interviews: Interviews were conducted in a semi-structured format, allowing us to explore the participants' experiences and perceptions of the intervention in more detail. 4. Data analysis: The data from the focus groups and interviews were analysed using thematic analysis.

CONCLUSION

The results of this study suggest that the intervention was effective in improving the participants' understanding of the importance of water consumption. The participants reported that they were more likely to drink water throughout the day, and that they were more aware of the benefits of staying hydrated. The results also suggest that the intervention was well-received by the participants, and that they found it to be a useful and engaging tool for learning about water consumption. The results of this study have important implications for public health, as they suggest that interventions like this one can be effective in promoting healthy water consumption habits.

Copy or cut out the following things and glue them into the right part of your investigation worksheet.

White
Blue
Green
Red
No light

Measured the amount of water with a measuring cylinder and weighed the soil to make sure all the plants got the same resources.

1. Collect 15 radish plants and water them with 10 mL of water.
2. Measure the starting height of all the plants.
3. Place 3 plants into their own separate closet, make sure all closets are at the same temperature.
4. For closet number 1, shine normal white light onto the 3 plants.
5. For closet number 2, shine blue light onto the 3 plants.
6. For closet number 3, shine green light onto the 3 plants.
7. For closet number 4, shine red light onto the 3 plants.
8. For the last closet, don't shine any light onto the 3 plants.
9. Every day for a week, water the plants again with 10 mL of water.
10. At the end of the week, measure all the final heights of the plants.
11. Subtract the starting height from the final height to see how much the plants grow over the week.

To Investigate how light colour affects plant height.

Repeated the experiment 3 times.

Colour of the light

Height of the plant

Variable	How you kept it the same
Same amount of water	Each plant got the same amount of water each day.
Same type of plant.	A radish plant was used in all three experiments.
Same temperature	All plants were grown at room temperature.



Colour of light	Change of Height (cm)			
	Trial 1	Trial 2	Trial 3	Average
White	23	19	27	23
Blue	14	15	13	14
Green	5	5	5	5
Red	18	20	16	18
No light	2	3	1	2

The plants that were under the white light grew the most, where as the plants that grew the list was the one that had no light.

When ranking the coloured lights, the heights to lowest was red, blue, and then green.