Sample Conclusion

What is the Effect of Color on Temperature?

The purpose of this project was to determine if color has an effect on the temperature of water in a container that is exposed to sunlight. Six aluminum cans were used. Three cans were painted using the three colors: red, green and blue, one can was painted white and one can was painted black. The control was an aluminum can that was left unpainted. The cans were placed in direct sunlight and the temperature was measured and recorded over a two-hour period. This was repeated on several different days in differing weather conditions.

The hypothesis that if temperature was related to the color of a container of water, then the darkest color container will have the highest temperature was supported by the data collected. The data collected shows that the water in the black can got hotter faster than the water in the other cans, including the unpainted can. The results also showed that the temperature of the black can remained an average of 2.5 degrees Celsius higher than the unpainted can. The data indicated that in this experiment the major finding was that the black can absorbed more of the sun’s rays than the other cans.

Scientists have investigated the effect of color on temperature and found similar results. Darker colors absorb more of the sun’s rays and therefore, allow heat to pass through faster than other colors. This experiment was done during the latter part of December when the sun’s rays are slanted the most since the sun is over the Tropic of Capricorn. It would be interesting to do this experiment during the summer solstice when the sun’s rays are shining more directly on this part of the earth and use cans made of different materials. Some days during the experiment were cloudier than others and this affected the results. The thickness of the paint could have affected the results, also. Therefore, next time the unpainted can should be painted with paint as close in color as possible to the original can color. This would eliminate a variable that was overlooked and test only the effects of the color on the cans.

The information learned from this experiment could be helpful to home or commercial canners who want their products to remain cool as possible after the canning process is completed. This information could also be used by roofing manufacturers; allowing consumers to choose roof colors that would help save energy and reduce the cost of heating and cooling their homes.

Guide to Writing a Conclusion

1. Your first sentence should state the purpose of your experiment. Include the independent and dependent variables. Then briefly explain what you did.
2. In the second paragraph, tell whether or not your test results supported your data.

Example: The hypothesis that (insert hypothesis) was (supported, partially supported, or not supported) by the data collected.

Then state the results and write 2 or 3 sentences explaining the results and why

the results supported or did not support the hypothesis. “In this experiment (briefly describe what was done). The major findings were ….”

1. In the third paragraph discuss what happened that you did not expect. Explain any problems or errors that may have affected the results of the experiment and changes/improvements you can make.

Tell of additional experiments that can continue from the present one.

1. Write a fourth paragraph explaining the real-world applications of this research/data and who could use this information and how.
2. Conclusion should be typed- Font- Arial 12 pt , justified, double spaced between paragraphs; **past tense, 3rd person.**