

Path of light - lab report example



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Path of Light

LAB REPORT ON THE EXPERIMENT OF PATH OF LIGHT at Affiliation LAB

REPORT ON THE EXPERIMENT OF PATH OF LIGHT In the experiment on the movement of light as a result of the streaming of sunlight outline the concept and the travel of light where there are no obstruction and where there are objects that prevent the movement of light (Minnaert, 2013). The report outlines the scientific reason behinds the movement of light and the relevant experimental prove that shows how light travel in straight and narrow paths.

The second experiment is largely based on the emission of light by objects. It is shown by an experiment where the source of light is placed in an open area, and the light is emitted through the pinhole.

The topic is developed from the experiments undertaken to attest the path followed by light in an open area and when it is destructed by objects and materials.

Introduction

Light travels in a straight path at 300, 000km per second or at proximately 186, 000miles per second; however the velocity of light is considered slower in glass and water (Katz, Small and Silberberg, 2012). Objects and devices prevent the travel of light in a straight line causing refraction commonly referred as the bending of light (Minnaert, 2013).

The second experiment outlines the emission of light through a hole. The experiment tries to show that how lights travel through objects.

Materials and Methods

In the first experiment a source of light, and an opening, for instance, a

window is needed. In addition, the source of light should be placed at a higher place.

In the second experiment, materials such as cardboard tubes, tape, aluminum foil, pin, pinhole viewer and a bright source of light are needed to complete the experiment.

Results

In the first experiment testing the movement of light in a straight line without any obstruction or not encountering any interface, the light path is considered extremely straight. Thus, it is deduced that whether light travel in water, air, glass, and diamond or any other object it moves in the straight line until it meets an object or a different medium. It is believed that it travels a constant speed c referred to as the speed of light. This c is calculated to be 300, 000 kilometers per second (Katz, Small and Silberberg, 2012).

It is realized that light is emitted or reflected by visible objects. It is also noted that when objects reflect light, it moves in all directions. It is believed that the reflected light forms the image in our eyes (Fleming, Jäkel, and Maloney, 2011).

Discussion

The path of light is regarded straight, and it is believed to travel at a constant speed in a uniform material until it encounters an object or another material. In the first experiment, it is shown that light travel straight until it meets another object where it becomes refracted making it bend (Katz, Small and Silberberg, 2012).

In the second experiment, we make a pinhole viewer that is used to allow light from the source through small holes made in the aluminum foil. When

viewed through it is realized that there is a bright light on the tape that creates an image (Minnaert, 2013).

Conclusion

In conclusion, the experiment shows how light travels through objects. Besides, it shows how light travels in a straight line unless destructed by objects where it is emitted (Katz, Small and Silberberg, 2012).

In the analysis of the path followed by light, it is considered reversible. It means that it is easy to reverse the path followed by light in objects and materials such glass, water, and air. It is this reversibility characteristic of light that attest the concept of the light path (Popa, Zigoneanu and Cummer, 2011).

Works Cited

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