

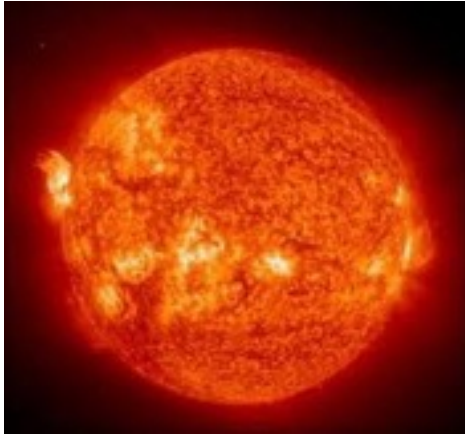
Adventures in Light

By

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Introduction

Welcome to your new adventure! We will explore light and learn many fun things about it in order for you to save yourself!



We will explore various ways to experiment with light and prepare a plan to present an experiment to the class. We do not want you to be in the dark about light so we will learn all that we can and show everyone how cool light can be!

Task



You have been shipwrecked on a deserted island and need to be rescued quickly! There is just the two of you and you will have to figure out how light can help in your rescue!

In order to be rescued you will have to follow a message in a bottle that just washed up on shore. This is the key to your rescue! Follow the directions on the message carefully or you may not be rescued!

Process



Here is your message in a bottle!

Dear Friend,

I am a scientist stuck in a space shuttle and cannot return to earth until I have completed my studies on light. I have lost any way to do research so can you research these questions for me? If you can answer these questions and send me a signal I will be allowed reenter to Earth! I will follow your signal and rescue you if you need rescuing. You will need to use the INTERNET web sites I have provided in order to answer the required questions. Record your answers and drawings on the worksheet in the bottle. Please do your best....I want to come home! Send me the signal as soon as you're done! Good luck and remember I'm counting on YOU!

Sincerely,

Dr. Alberta Einstein II

Light Research Questions

Open up Google Docs and start a new document for your answers. Answer these questions with complete sentences. Number your answers.

1. What is light?
2. How does light travel?
3. How fast does light travel? Which is faster light or sound?
4. How does light reflect?
5. How does light refract?
6. What are the colors in the full spectrum of light?
7. How can the color of the spectrum of light be split?
8. What does transparent mean?
9. What does translucent mean?
10. What does opaque mean?
11. Can a person see all forms of light?
12. What is white light?
13. What are the THREE basic ways to control light?
14. Which one of my relatives invented light bulb and how did he do it?
15. How might you signal someone to rescue you using light?

Websites to use:

<http://www.opticalres.com/kidoptx.html#WhiteVsLaser>

<http://www.opticalres.com/kidoptx.html#LightBasics>

<http://www.geom.uiuc.edu/education/calc-init/rainbow/light.html>

http://www.thetech.org/exhibits_events/online/color/light/limited.html

http://www.opticalres.com/kidoptx_f.html

<http://www.factmonster.com/dk/science/encyclopedia/light.html#ESCI111LIGSOU>

Now that you know so much about light you will pick an experiment to do for the class! It can be on any of the topics you have learned about.

You can consult our classroom books to find an experiment or search the site below to help you find one.

You will be presenting this experiment so write down all the steps, supplies needed, the outcome, and what it proves. These things are on the Experiment paper also found in the bottle.

Have fun and remember I am counting on you!

<http://www.exploratorium.edu/snacks/index.html>