Honors Biology

Energy and UV beads

Objective:

Light is a generic term that describes energy. However, not all light is made of the same intensity of energy. The presence of UV light is expressed in the UV beads.

Create an experiment with your UV beads testing one of the following:

1. Does the type of light change the color of the bead, ex: black light, light bulbs, florescent lights
2. Do polarized sunglasses really block out the UV light?
3. Does the bead fade faster with a particular type of light?
4. What type of sunscreen blocks out the most UV light?
5. Test a variety of glass and plastic containers to determine which materials block out UV light. Place different transparent filters between a UV light source and the beads. Try eyeglasses and UV absorbing window film. You will find that the front windshield of most automobiles absorbs UV radiation. Usually the side windows do not have this built-in protection.
6. Is your sunscreen waterproof?
7. Other-you think of something

Bring your supplies on Thursday. Talk to me about your experiment. I may have many of the things you need. IF YOU NEED TO FLATTEN YOUR BEADS FOR EASIER USE THEN DO THE FOLLOWING AT HOME WITH SUPERVISION.

1. Pre-heat the oven to 350 degrees.

Safety: Make sure your parents are present when you are doing this activity! The

oven gets very hot. Have oven mitts handy for taking your UV beads in and out of

the oven.

2. Take a cookie sheet and cover it with aluminum foil. Do not put the UV beads

directly onto the cookie sheet. Make sure to leave space (at least 1 inch) in-

between your UV beads so they do not stick together. UV beads are plastic and

could permanently damage the cookie sheet if aluminum foil is not used.

3. Place the UV beads on the oven for 10 minutes or until they flatten to the size of a

dime.

4. Remove the beads from the oven and allow them to cool for at least an hour.

BEFORE THURSDAY: Make a data table to collect your data.