UV Bracelets

Supplies

UV beads (available online http://store.estreet.com/Spanglerscience/StoreFront.bok)
cording - lacing
scraps of cloth from shear to heavy
masking tape
scissors

Objective: To increase awareness of ultraviolet radiation and how we can protect ourselves from it.

1. Bracelet pattern - use one from a braiding or friendship bracelet book or let the girls make up their own. The cording or lacing could be (but is not limited to): embroidery floss, plastic lacing, leather lacing, yarn, heavy crochet thread, macramé cord, jute.

Ultraviolet radiation is a invisible to the human eye. UV is a natural product of our sun. The ozone layer in the earth's atmosphere helps to block out UV radiation but is not 100% effective. Our skin is sensitive to UV radiation. It is what causes us to tan and burn. Too much exposure to UV radiation over many years can lead to skin cancer. So it is important for us to protect our skin from UV radiation. Some of our alien visitors from that far away planet too are sensitive to UV radiation. These UV sensitive aliens wear a UV detector that tells them when they are exposed to UV radiation. Today we will be making our own UV detector, a bracelet with UV beads in it. UV beads are special beads that change color when exposed to UV radiation. The brighter the color the more UV radiation you are being exposed to.

2. Use scissors to cut the cording into the length needed for the bracelet pattern. Give each girl 6-10 UV beads to work into their bracelet. Use the masking tape to hold down one end of the bracelet for braiding.

3. If you are working in a room with no natural light the beads will remain white. Once the girls have finished their bracelets have them put them on and cover them with them with scraps of cloth. Make sure that a variety of types of scraps are used.

*Lead them to an area with some natural light.
*Ask the girls if they think there is UV radiation in the room.
*Have the girls uncover part of the bracelet and see the color change.
*Lead the girls outside with part of the bracelet still covered.
*Look at the color change outside.
*Carefully peek under the cloth covering to see if there is any change. You will have to do this quick since the beads react to UV fast. Then uncover the rest of the bracelet and watch the beads change.
*Have the girls share what they saw under their cloth.
*What type of cloth worked better at protecting the beads from UV radiation?
*Do you think there would be more UV radiation in sunny or cloudy weather?