GREGORY GRAMBO

Mirror, Mirror, On The Wall

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ISLAND KIDS AND PARENTS

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By Gregory Grambo

Mirror, Mirror, On The Wall

Mirrors have been around for hundreds of years. Originally mirrors were made from highly polished metal plates. Then in Venice, Italy, sometime in the 1300s, craftsmen discovered a way of coating glass with mercury and tin to create a mirror that really gave a reflection. Glass-making was improved upon in the 1600s and the tin-mercury coating was replaced by a thin coating of silver. This new mirror reflected even more of the light's rays, but what does this reflection really mean?

Scientists have learned that light will travel away from its source until it is blocked or deflected by an object. Light travels in the form of rays and packets called *photons*, which have the ability to bend and bounce. When light hits an object that it cannot travel through, it will bounce off that object and change direction. You can see an object with it's color because some light is absorbed into that object, and some rays bounce off the object and enter your eyes. Shiny objects, like mirrors, tend to reflect (bounce off) all light that hits them.

When you are in a room with a mirror, you are seeing the light that has initially bounced off the object and secondly, bounced off the mirror. If you have your hair parted on the right, and look into a mirror, your hair only *appears* to be parted on the wrong side. If someone were behind you and put a ruler from your part to the mirror, the ruler would show that both real part and reflected part were in the same position in the room. If you are sitting in a chair with a ball in the hand to the right of you, the reflection in the mirror will have the ball on the same side of the room also. If you write your name with marker on clear plastic wrap, and look through the wrap into a mirror you will notice the true position of the letters as well as their reflections.

Mirrors make rooms look bigger by creating the illusion of added space that you can walk into. Mirrors give a backwards image of a real object. Place a mirror against the images printed here. How does the mirror affect the printed image? Why do some words look the same in the mirror as they do on this page? How can you make these strange images from the drawing of a butterfly using a mirror?

Mirrors are also the heart of a toy we know of as a kaleidoscope. Three mirrors are positioned inside a tube so that the image from one mirror enters into another. By doing this you create several images in the mirrors. When you look through the tube, you see real objects at the end of the tube and the multiple images of the objects repeated in the other mirrors. This reflective pattern creates very strange and unique designs.

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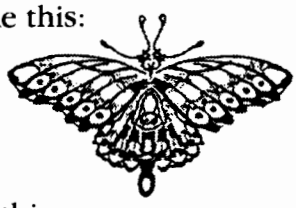
Color in this butterfly and with a mirror,

make this:



or make this:

What do you see when you place the mirror on the dotted line?

Using a mirror can you see...

OHIO

a square

a word
(hint: mother)

a circle

a football

a heart