

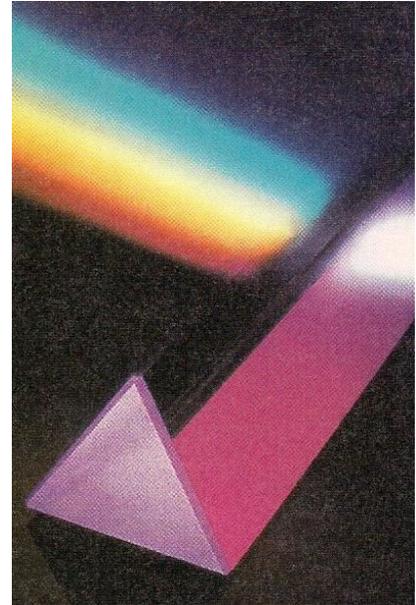
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# PRISMS

When light passes from air to water, and from water to air, it does something amazing – it bends. Light also bends when it passes through a prism. A prism is a block of glass or clear plastic. Prisms usually have rectangular sides and triangular ends. We call this shape a triangular prism. Crystal sun catchers and diamonds are both made up of triangular prisms.

Sunlight is made up of many colours of light that mix together to make white light. When light passes through a prism, it bends and we can see all the colours separately because each colour of light bends by a different amount.



When we see a rainbow, we are seeing natural prisms at work. A raindrop is a tiny natural prism. Rainbows happen when the air is full of moisture, after a rain shower. As the sky clears and the sun comes out, a rainbow appears. This is because the drops of water are acting like tiny prisms to bend the light of the sun.



When you see a rainbow, you see the colours in separate bands. This happens because each colour of light bends a different amount when it passes through a raindrop just as it does when it passes through a glass prism.

But, you do not always see a rainbow after it rains. You can only see a rainbow when the sun is behind you, and falling water is in front of you. The water doesn't have to be rain, either. You can see a rainbow in the mist above a waterfall or in the drops from a lawn sprinkler.

Now, what about that pot of gold at the end of a rainbow? Well, luckily for the leprechauns, you will never find the end of a rainbow; this is because rainbows are actually circles. They look like arches to us because we only see the top part of the rainbow. To see the whole rainbow you would have to be in an airplane, high above and looking down.



Try making your own rainbow at home. When the weather is nice, and the sun is really shining, go outside with your hose. Turn the nozzle so that it produces a wide, but very fine, mist. Stand with your back to the sun and aim the water away from you. If you do it right, you will see a rainbow in front of you.

Colour the rainbow below with the proper colours.

