# Eyes and rainbows

Resene
the paint the professionals use

## Notes

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# Eyes and rainbows

**Sometimes when it rains the sun shines. This is when you may see a rainbow.**



## Notes

Rainbows are made up of seven colours, from red on the outside, then orange, yellow, green, blue, indigo and violet on the outside. The colours are always in that order. Rainbows are caused by the sunshine shining onto droplets of rain and being separated into the colour spectrum.



## Notes

White light is not white, but is actually made up of lots of other colours.

You can break white light into the individual colours. Get yourself a torch, a prism and a white piece of paper. Put the piece of white paper onto a flat surface and put the prism on top. Shine the torch into the side of the prism and you will see the white light broken into the colour spectrum.

Isaac Newtown discovered in the late 1600's that you could split light. This was a major step forward in understanding how colour works. When light hits a glass surface it is bent. This is called refraction. When light hits a prism, which is triangular, the light is refracted (bent) twice and gets split into the spectrum of colours.

## Notes

# Create your own rainbow...

If you don't have a prism you can create your own rainbow using a clear bowl of water, a flat mirror and a white piece of cardboard. You will need to try this experiment on a sunny day for it to work.

Fill a bowl of water and place it in front of a window where the sun is coming in. Place a mirror on an angle inside the bowl of water so it is facing towards the window. Hold the white card in front of the mirror and move it around until you see a rainbow.

The mirror and water act like a prism splitting the white light from the sun.



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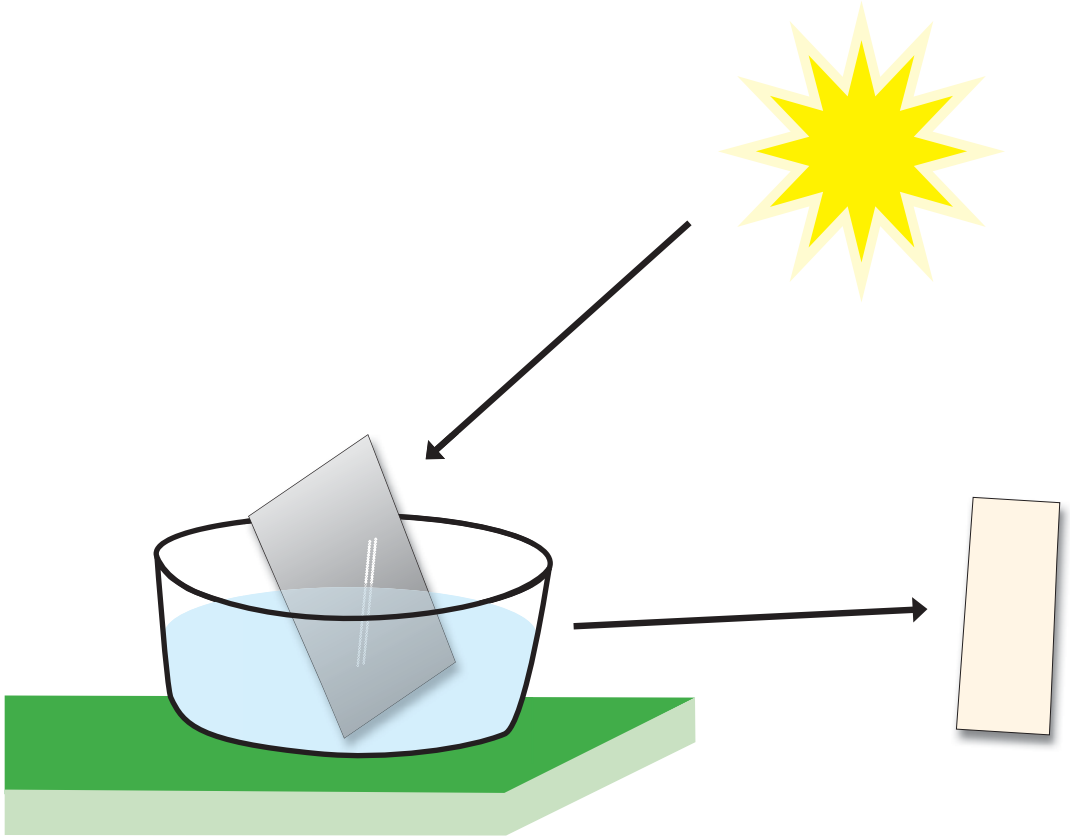



## Notes

You can also see the colours of the rainbow when you blow bubbles. If you have a light shining onto the bubbles after they have been blown you can see the spectrum of colours curving around the edge of the bubble.

If you are doing the dishes with sunlight coming through the window or the kitchen light on you can often see rainbow colours in oil that rests on top of the surface.

It is said that there is a pot of gold at the end of every rainbow. It is impossible to get to the end of a rainbow as you can only ever see the effect of a rainbow in the distance.



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Colours printed as close as printing process allows.

## Notes