

Making Rainbows

Use simple equipment to create your own rainbow of coloured light

All

Vibrations & Waves



Background information:

Rainbows are made when there is both sunlight and rain at the same time. As the white light that we usually see passes through the water droplets, it bends (refracts) and separates into the seven colours of the rainbow. White light is really made up of red, orange, yellow, green, blue, indigo and violet. You can only see the rainbow if the light is behind you and the water is in front of you.

By doing this science experiment with different pieces of equipment, you can try different ways to make your very own colourful rainbow.

Equipment

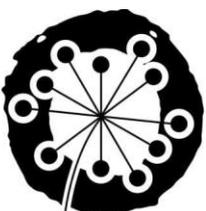
- Water
- Glass container
- Light coloured surface/paper/sheet
- CD/Mirror
- A sunny day or a torch
- Water hose/watering can

Activity

Here are a few ways to make a light rainbow:

- 1) Stand with the sun behind you and spray a hose of water or pour a watering can to make a fountain. Look for a rainbow of light within the water.
- 2) Hold up a container/glass of water so the sunlight goes through it. Place a white sheet/paper onto the ground the other side and spot your rainbow.
- 3) Place a mirror/old CD partially submerged in to a container of water. Make sure the mirror/CD is angled to face the sun and place your paper/sheet in between the water and the sunlight.
- 4) Hold a glass of water in front of a window where sunlight is passing through. Hold your paper underneath and watch the rainbow appear.

How can you make the biggest/brightest rainbow? Does changing the angle of your mirror or height of the water make a difference? Can you think of any other ways to make your own rainbow? Have a play!



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