

Infinity well



Location

First floor, Curiosity zone exhibition

In a nutshell

Why does the well look so deep? Could it be a trick to do with mirrors?

What to do

Press the yellow button and look into the well. Why does it look like the well goes on forever? You should be able to see that mirrors are involved; can you explain the mystery of the infinity well?

Time Required

KS3 & KS4 2-3 minutes per student.

What's happening?

When two mirrors are aligned parallel so that they are at 0° angles with each other an infinity mirror effect is created. Light rays are reflected repeatedly between the two mirrors which produces multiple images giving the impression of infinite depth. If an object was between the two mirrors you would see alternate front and back views of the object decreasing in size.

Curriculum links

KS3	<p>Science - Light waves</p> <ul style="list-style-type: none"> - the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface - use of ray model to explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing (qualitative); the human eye <p>English - Reading</p> <ul style="list-style-type: none"> - learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries
KS4	<p>Science - Frequency range of the spectrum</p> <ul style="list-style-type: none"> - recall that light is an electromagnetic wave <p>Science - Interactions of electromagnetic radiation with matter and their applications</p> <ul style="list-style-type: none"> - recall that different substances may absorb, transmit, refract, or reflect these waves in ways that vary with wavelength; explain how some effects are related to differences in the velocity of the waves in different substances <p>Psychology</p> <p>The Brain and Neuropsychology</p> <ul style="list-style-type: none"> - the basic actions of the brain and the nervous system, what neurons and synapses are, and how they interact <p>Perception</p> <ul style="list-style-type: none"> - explanations of sensation and perception, including the Direct Theory of Perception (Gibson) and the Constructivist Theory of Perception (Gregory) - monocular and binocular depth cues, visual cues, visual illusions, and visual constancies, and the reasons for these - perceptual set and the effects of the following factors on perception: motivation, expectation, emotion, and culture <p>English - Spoken</p> <ul style="list-style-type: none"> - listening to and building on the contributions of others, asking questions to clarify and inform, and challenging courteously when necessary

Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"> • Colourful Chemistry (KS3) • A Trick of the Light (KS3 & KS4) 	<ul style="list-style-type: none"> • Light Fantastic (KS3) 		<ul style="list-style-type: none"> • Topsy turvy mirror • Focusing light • Spectra • Vein viewer • Ghostly hand

