

Things to make and do

Mind-bending 116 S

Seeing isn't always believing – create some awesome illusions that will fool your friends and family... and your own eyes.

ptical illusions are trick images that fool people into seeing something that isn't there. This type of illusion takes the internet by storm, baffling and delighting millions of people every day.

Illusions are nothing new – they date back to the times of the ancient Greeks. A famous Greek philosopher called Aristotle noticed that if you look at a waterfall for a long time, the rocks on either side appear to being moving upwards. Try this for yourself the next time you are beside running water.

The so-called motion aftereffect is created by your brain reducing the constant stimulation from the eyes that moving things cause. As your brain gets used to the movement, it starts to see stationary rocks

moving in the opposite direction.

Small or far away?

Our own eyes sometimes deceive our minds. Our brains are used to judging how close or far away an object is, by comparing it with other nearby objects. Some optical illusions have fun playing with this sense of perspective.

Have a look at the image below. Are the orange dots the same size? The orange dot surrounded by smaller blue dots appears to be bigger than the one surrounded by large blue dots. Use a ruler to check and you'll find that they are exactly the same size. The larger circles confuse the brain, making the orange dot appear smaller than it really is.





ANCIENT ADVICE

In 350BC, a famous Greek philosopher called Aristotle said, "Our senses can be trusted but they can be easily fooled."

Handy 3D art

Draw an image of your hand that seems to pop out from the page.

What you need

- Your hand
- A pencil
- Paper
- A rulerColoured pens

How does it work?

The contrast between the straight and curved lines tricks your brain into thinking that the hand is 3D. This is because your brain is used to seeing curved lines around solid objects and assumes the image must also be solid.



Draw around your hand on a piece of white paper.



Use a ruler to draw a straight line across the page with a coloured pen. Inside the hand outline draw upward-curving arches.



Repeat over and over again until you have a colourful 3D hand. Go around the hand outline again with a pencil to improve the 3D effect.