University of East Anglia

NORWICH SCIENCE FESTIVAL

At home

FACE FLIPPING FUN

Most of us are very good at reading faces when they are the right way up. We can quickly judge who someone is, how they are feeling and where they are looking. But when faces are upside down, things get a little trickier!

The following activity reveals how blind we can be to even-very-strange things in faces when they are shown upside down.

You will need:

– scissors

– glue stick

– a newspaper or magazine

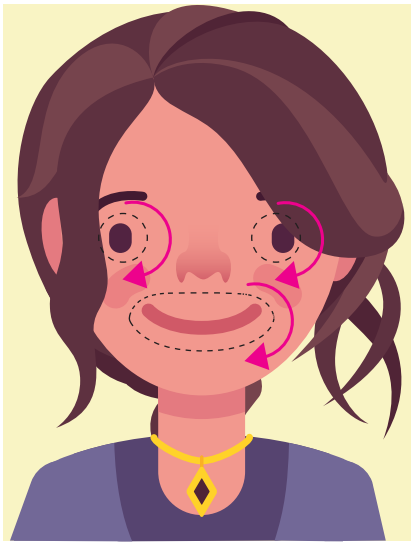
Activity:

1: Find a large photo of someone's face looking straight at you in your newspaper or magazine.

2: Cut out the eyes and mouth (leave the nose and eyebrows). Cut carefully – you'll need to leave the face as intact as possible.

3: Glue the face with the eyes and mouth cut out to a piece of paper.

4: Spin the eyes and mouth upside down and glue them back onto the face in the right place (but now the wrong way around). Don't worry if it looks a bit messy – your brain will still know it's a face!



The face you have glued together probably looks pretty strange now! Having the eyes and mouth upside down usually makes people look very odd but when you turn the face upside down, it should look much less strange. In fact, you might not see anything weird about it at all!

WHAT IS GOING ON HERE?

One of the reasons we are experts with upright faces is that we perceive them all at once, as 'whole faces', which we can compare with other stored examples in our memory. When faces are upside down, it is harder for us to use this approach because we have much less experience seeing them this way. Instead, we are more likely to see each part of the face individually.

That's one reason the face you made might not look strange when it is upside down: because the eyes and mouth are actually okay when it is viewed that way. But when the face is the right way up and we compare the whole thing to our stored face examples, we notice very quickly that something is not right! This is called the Thatcher Illusion – it was named after Margaret Thatcher (a former politician) whose picture was first used to demonstrate the effect.

This activity sheet was written by Louise Ewing, a lecturer in the School of Psychology at the University of East Anglia.

The Norwich Science Festival at Home activity sheets were brought to you by the University of East Anglia and the Norwich Research Park. For more information, visit norwichsciencefestival.co.uk.

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