

OPTICAL ILLUSIONS

Description

Optical illusions are images in which perception is challenged or deceived in a special way. They are, for example, "double images" that can be seen in different ways, deceptions in terms of form or colour due to the composition of the image or geometric figures that appear correct but are not possible in reality.

Time Needed



1 - 5 minutes per image;
depending on "success" and stamina

Learning Setting

Individual or group activity

Practical Tips

- Give yourself or the participants enough time to look at the pictures. It can take very different lengths of time for individual people to recognise the phenomena. Nobody should be deprived of their experience of "success".
- Is it possible for you to repeat the phenomenon or change the perspective again?
- Even if you already know the pictures and phenomena, it is always challenging or surprising to look at them again and thus train your perception.

Source

Wisamar

inspired by <https://www.illusionsindex.org/>

Learning Objectives



- To train perception
- To train change of perspective
- To promote concentration

Expected Results

- Sensitised perception
- Increased concentration
- Fun with optical phenomena

Materials Required



Handouts with the images
(printed out enlarged for group work if necessary)

Step By Step Guidance

- Read the question above each picture.
- Then look at the optical illusion. What do you see?
- Take your time. Try to change your focus and your mental perspective. Detach yourself from the image that immediately catches your eye and try to look at it again "with different eyes".
- The text below the picture will give you an idea of what you might see or an answer to the question. If possible, cover them at the beginning and allow yourself to get involved with the picture before using this text as a guide or control.
- You can look at the pictures one after the other or day by day - as you feel comfortable.

OPTICAL ILLUSIONS

Double picture 1

What do you see?



Charles Allan Gilbert (1873 - 1929), American Illustrator

A lady in front of the mirror?

A skull?

Both of them?



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Double picture 2

What do you see?



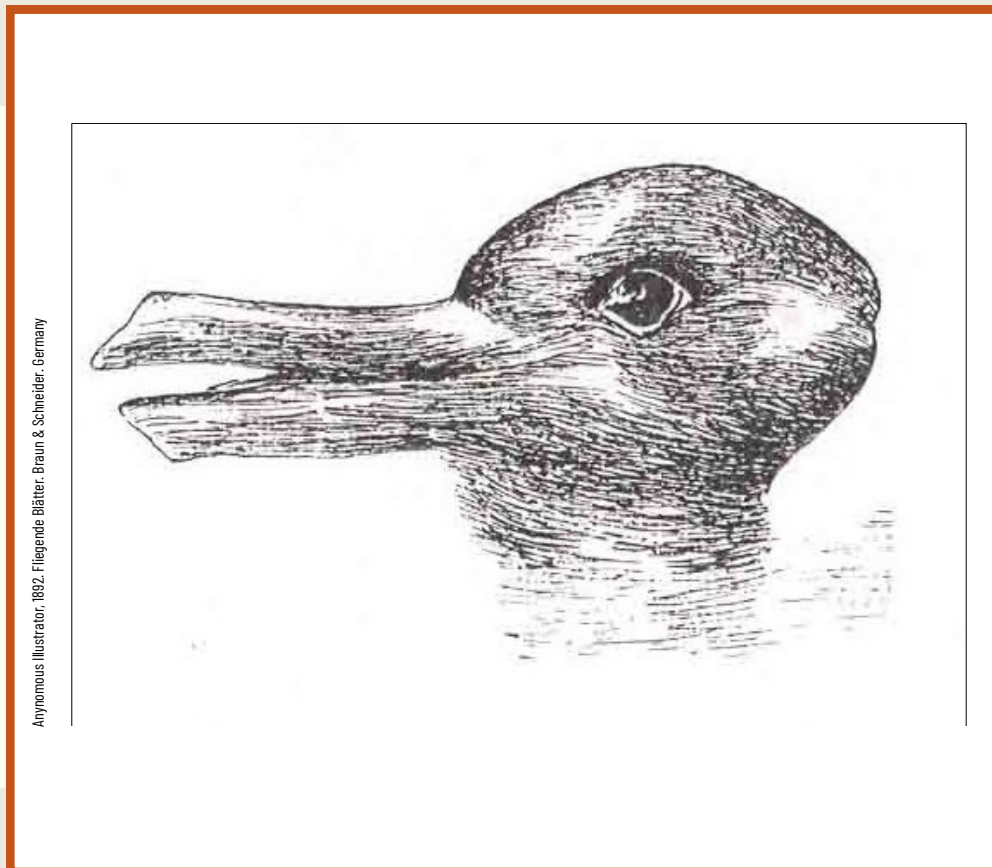
Elizabeth Douglass (formerly Winson) (1930-2014)

An Indian?
An Eskimo?
Both of them?

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Double picture 3

What do you see?



Anonymous Illustrator, 1892. Fliegende Blätter. Braun & Schneider. Germany

A duck?
A rabbit?
Both of them?

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Double picture 4

What do you see?



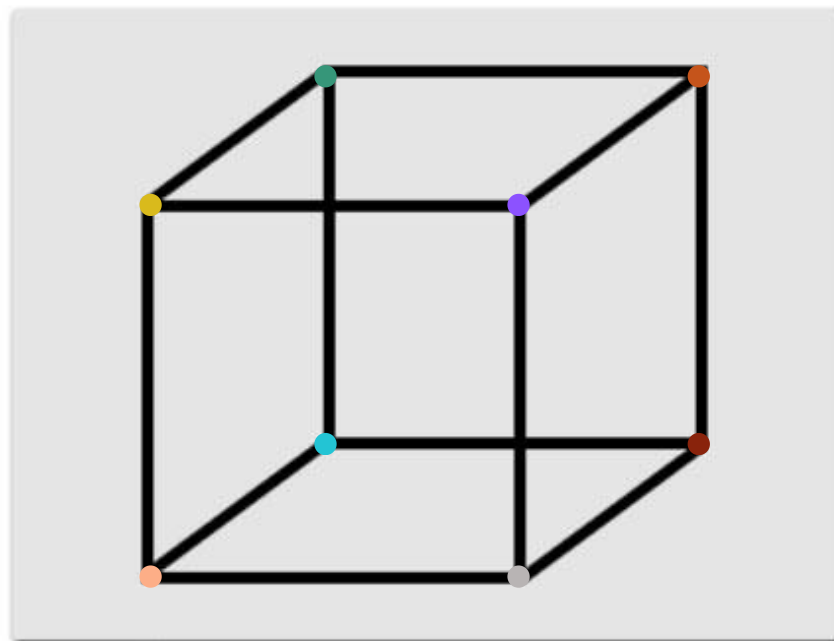
Anonymous illustrator in late 19th century Germany. William Ely Hill (1887 - 1962) produced a later, well-known version.

An old woman?
A young woman?
Both of them?

OPTICAL ILLUSIONS

Change of perspective 1

Which side of the cube is facing forwards?



Louis Albert Necker (1786-1861), a Swiss crystallographer and geographer

The side with these corner points:



The side with these corner points:

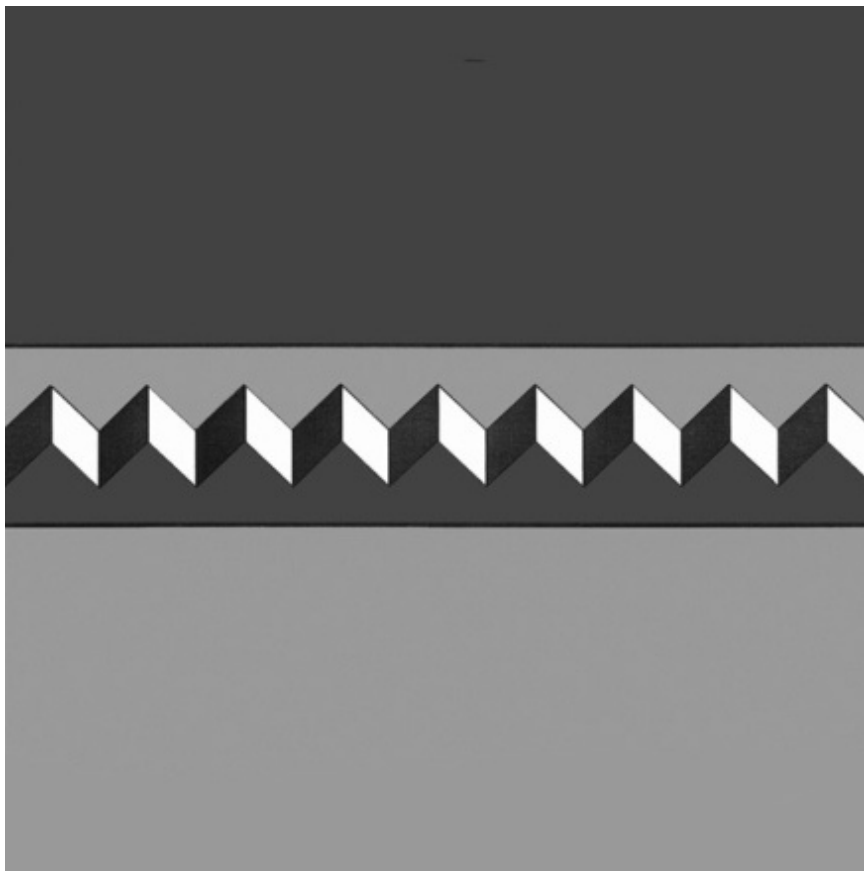


Can you "see" both perspectives?

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Change of perspective 2

In which direction do the spikes point?



Peter Ulrich Tse, neuroscientist

Upwards?
To the front?

Can you "see" both perspectives?



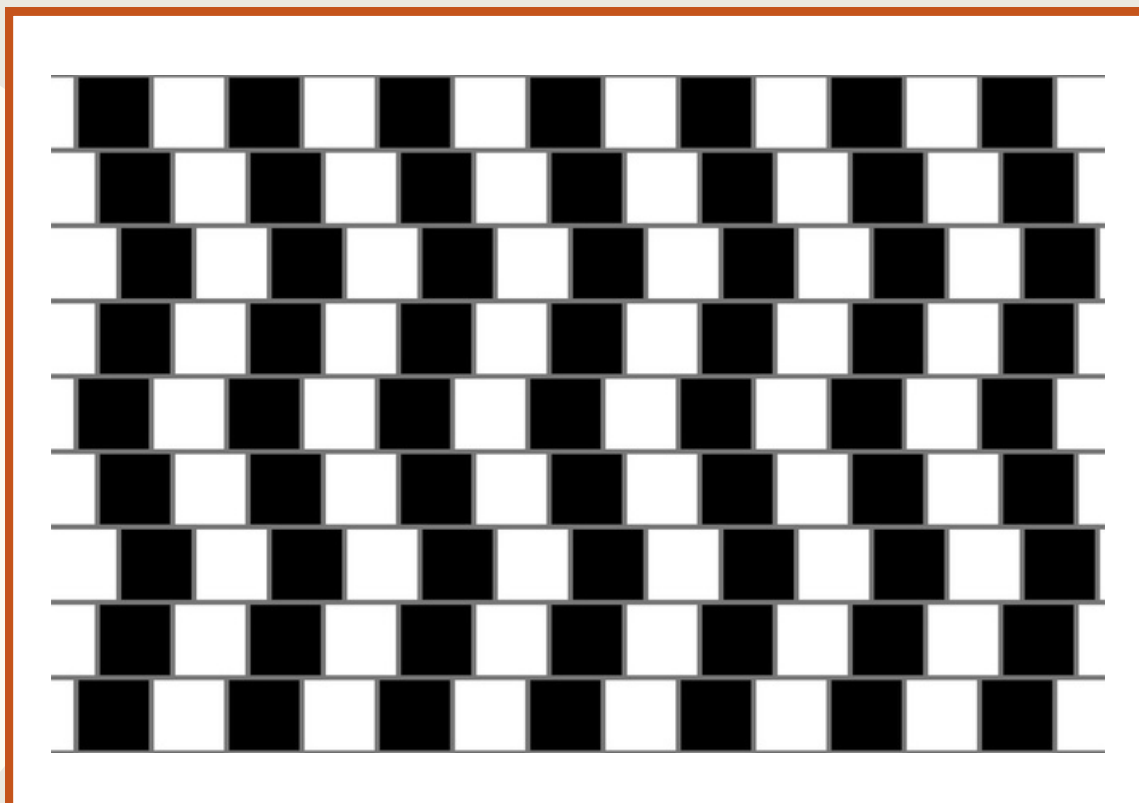
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Geometric confusion 1

How do the grey lines relate to each other?



Turn the page to read the correct answer.

The grey lines appear to be angled with respect to one another -
in fact they are all parallel.



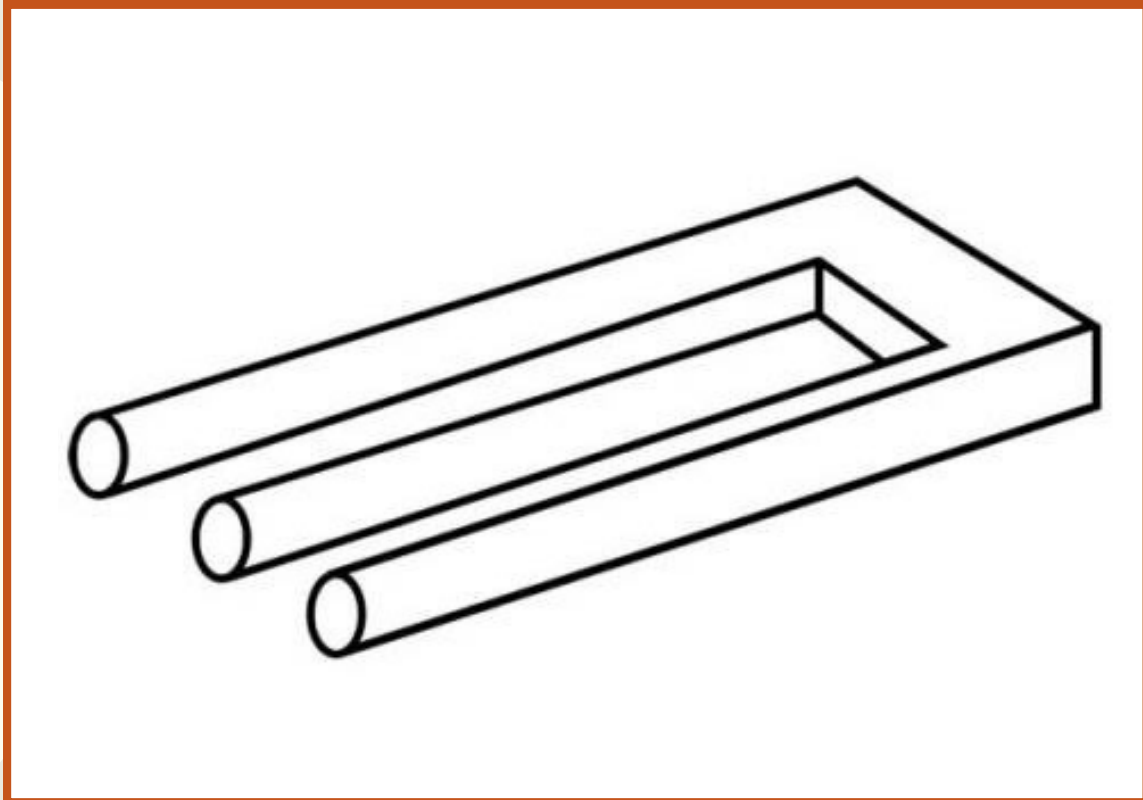
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Geometric confusion 2

How many tines does this "fork" have?



There is no "right" answer:

On the left-hand side we see three ends.

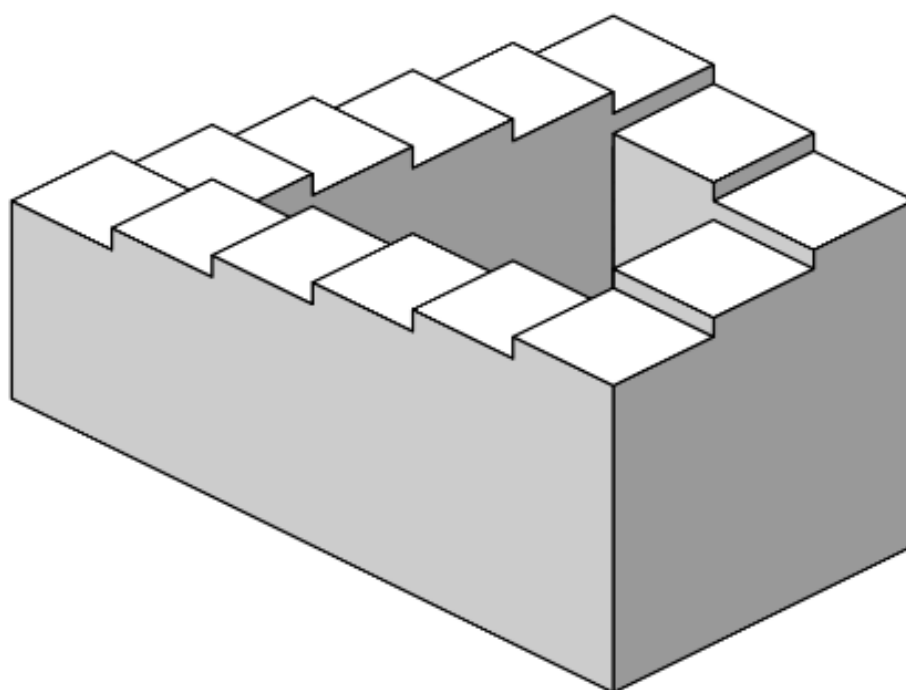
On the right-hand side, we see a figure that has two ends.

The optical illusion lies in the seemingly right and yet wrong combination of these two perspectives.

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Geometric confusion 3

Where is the highest point of this staircase?



There is no "right" answer.

This figure is called the "Impossible Staircase", and there are many more such impossible figures. Through the perspective drawing, we perceive a three-dimensional body (the staircase) that cannot exist in reality. We "see" the staircase anyway because we are used to interpreting drawings in this way.



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