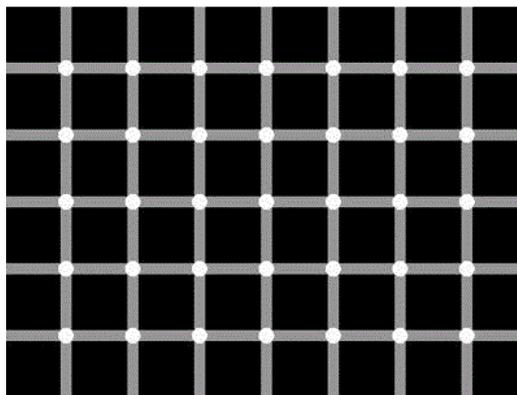
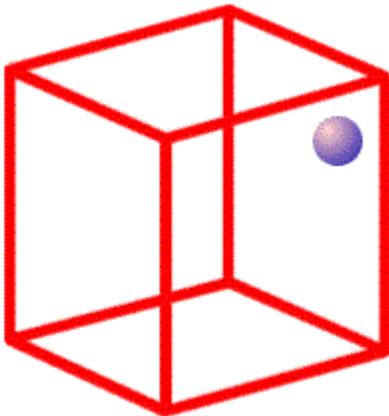
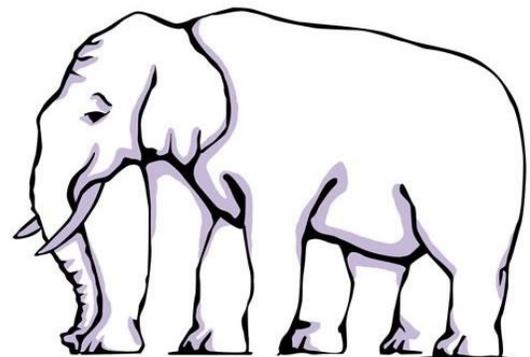
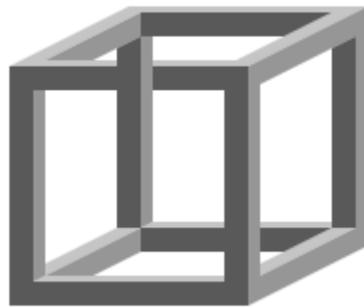
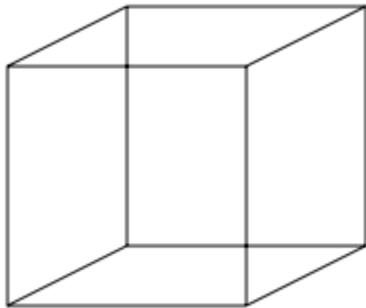


## Day 5 – Illusions

**Learning:** To demonstrate that things are not what they appear.

**Group Time:** Introduce the concept of illusion by showing the children a several pictures of illusions



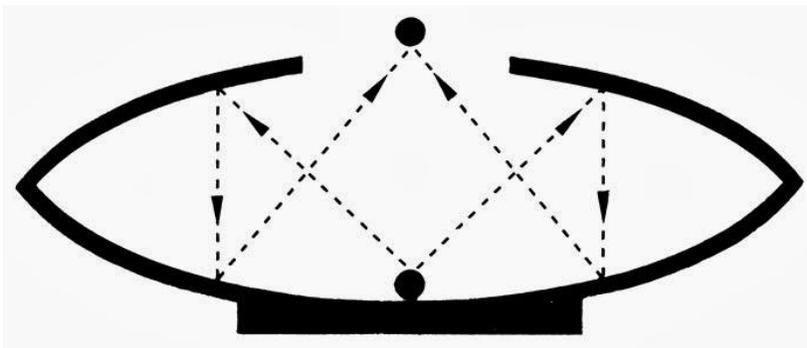
### Experiment Rotations

#### Table 1 – Mirror Illusions

A. **Mirascope** – 2 parabolic mirrors create a floating 3D optical illusion of any object placed inside

**What you need**

- Mirascope
- Pompom & Ladybug



B. **Infinity Mirror** - is a pair of mirrors, one fully reflective and the other a one-way mirror, set up so that the fully reflective mirror reflects an image back into the one-way mirror, in a recursive manner, creating a series of smaller and smaller reflections that appear to recede into an infinite distance.

**What you need**

- Infinity mirror

C. **Periscope Glasses** – Using mirrors you can see the floor without looking down

**What you need**

- Periscope Glasses

## Table 2 – Water Illusions

### A. Glass of Water – All illusions are a result of bending of light

#### What you need

- Glass of Water
- Chop stick
- Coin
- Piece of paper with arrow on it.

#### What to do:

- Put the chop stick into the water see what happens
- Put the coin in the water; look at it from different angels.
- Hold an arrow behind the glass



## Table 3 – 3D Illusions

### A. 3D Dog

#### What you need

- 3D Dog



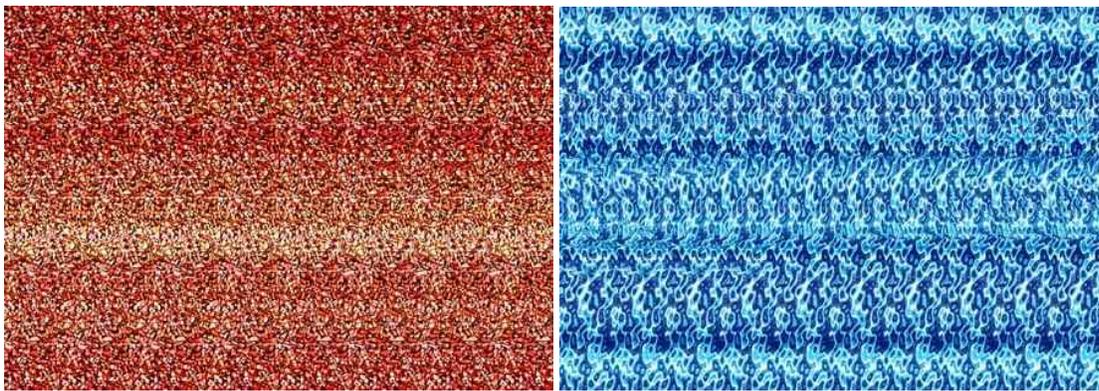
#### What to do:

- Stand about 2 meters away from dog, then move your head and see if the dog also moves his head.

### B. 3D Hidden Image

#### What you need

- 3D Hidden Image printed.



### A. 3D Street art

#### What you need

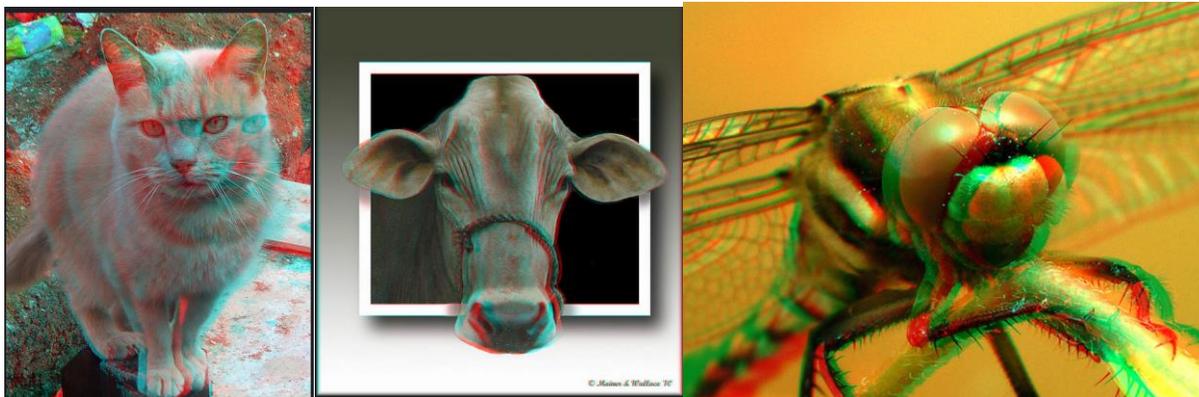
- 3D Street Art Image printed.



### Table 4 – 3D Glasses

#### What you need

- 3D glasses from previous days craft.
- 3D Pictures

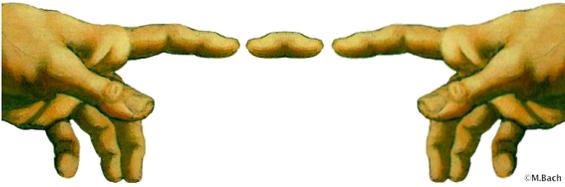


### Table 5 – Eye Illusions

#### A. Frankfurter Illusion

- Hold your hands in front of you, at 20–30 cm distance from you, at eye level.
- Point your index fingers against each other, leaving about 1 cm distance between them.
- Now look “through” your fingers, into the distance behind them.

- The sausage should appear now, and you can change its length by varying the distance between the finger tips.
- If you try to look at the sausage, it will disappear; it is only present if you look at something more distant than your fingers.
- It helps if the background is rather homogenous and has a colour very different from your fingers.



## B. Tube & Hand

### What you need

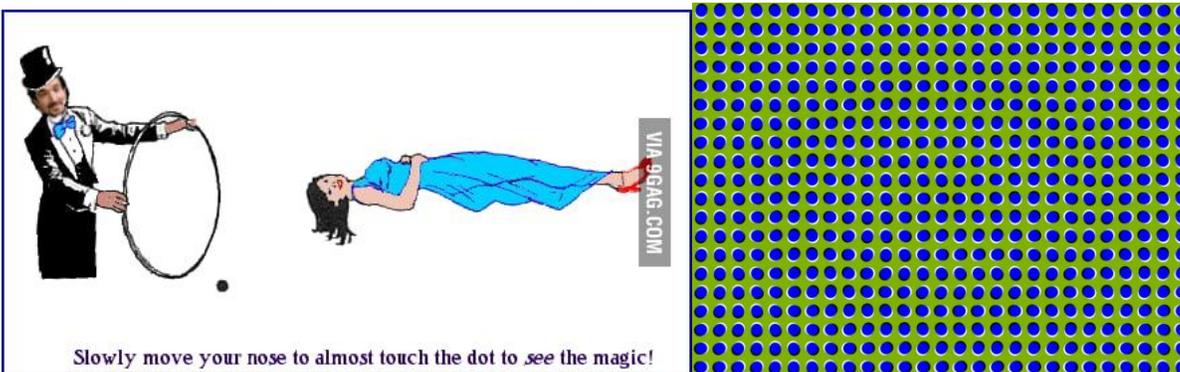
- Paper towel tube



### What to do:

- First, you want to hold the tube in front of one eye and with both eyes look at something in the distance (approximately 10 to 15 feet away). Next, hold your free hand (the one not holding the tube) up in front of the eye that is not looking through the tube. Your hands and eyes should now be positioned similar to the illustration above. **What You'll See:** You should see a round hole in the palm of your hand. The object that you were looking at in the distance should be perfectly visible through this hole.

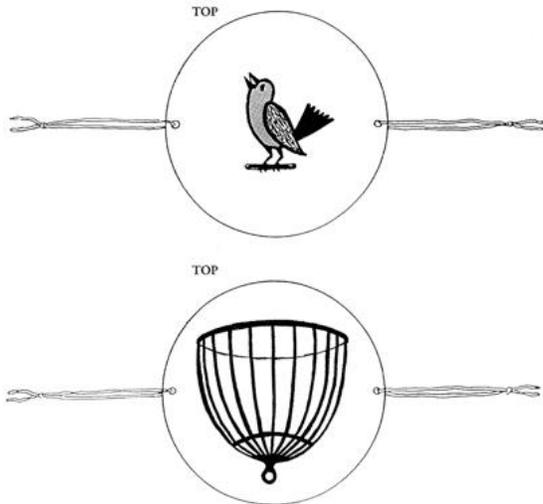
## C. Images that are optical Illusions



## Table 6 – Animations Illusions

### What you need

- Examples of thaumatropes



- Animation Book Flip Book
- Amazing Animated Optical Illusions - <https://www.youtube.com/watch?v=UW5bcsax78I>

## Craft

### Optical Illusion Spinning Tops

#### What you need

- CDS
- Marbles
- Hot Glue Gun
- Felt Tip Pens
- Spinning Tops Templates



#### Instruction video:

<https://www.heidisongs.com/blogs/heidi-songs/diy-optical-illusion-spinning-top-free-download>