

## PSBB SENIOR SEC.SCHOOL,SIRUSERI

### SCIENCE CLUB

#### Tricks that Eyes Play

We come across many natural and man-made optical illusions in the real life outside. The third virtual meeting of the Science club on 28<sup>th</sup> Nov. began with discussions on the optical illusions in Nature.

#### NATURAL OPTICAL-ILLUSIONS

Have you ever wondered how the sky is blue, how rainbows are formed, etc?

#### Why is the sky blue?

The sky is blue because of the way sunlight interacts with the atmosphere. If you've ever played with a prism or seen a rainbow, then you know light is made up of different colours. . As sunlight reaches the atmosphere, molecules in the air scatter the bluer light but let the red light pass through.

#### Speaking Of Rainbows...How are Rainbows formed?

A rainbow is caused by sunlight and atmospheric conditions. Light enters a water droplet, slowing down and bending as it goes from air to denser water. The light reflects off the inside of the droplet, separating into its component wavelengths--or colours. When light exits the droplet (ROY G. BIV / VIBGYOR), it makes a rainbow.

#### How are the beautiful Northern Aurora Lights formed?

When charged particles from the sun strike the atoms in the Earth's atmosphere, they cause electrons in the atoms to move to a higher-energy state, causing a solar storm. When the electrons drop back to a lower energy state, they release light. This process creates the beautiful aurora, or northern lights.

#### What is a Blue moon and how is it formed?

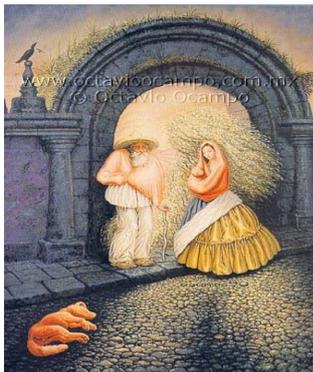
Dust in the air acts as a filter, causing sunsets and the moon to turn blue, an event that NASA said is thought to have spawned the phrase "blue moon." Other events such as forest fires and dust storms can cause the moon to turn blue.

#### MAN-MADE OPTICAL ILLUSIONS

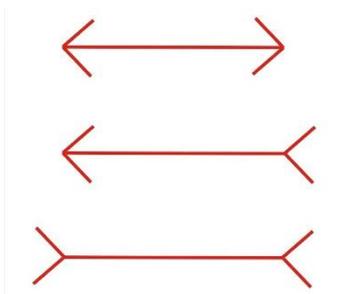
Seeing is believing but not always. The artificial illusions are quite often used in psychological tests as they challenge our perception of reality.. Some of them that were displayed in the session were **Shape based optical illusions, Colour based optical illusions**, and here are a few of them. ...



In this image some people may see 3 birds flying and some may see a girl's face.



In this image people may see a man's face, a man and a woman standing and some may even see a dog.

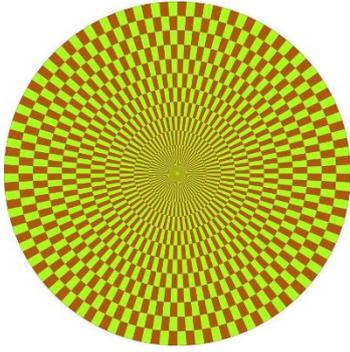


Which one of these lines is the longest? Can you figure it out?

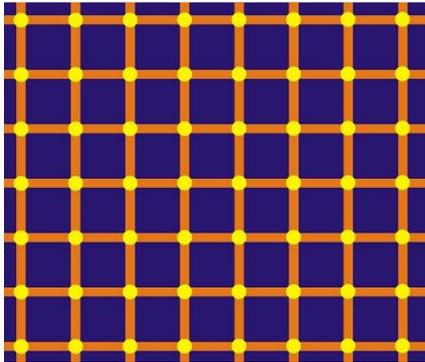
The answer is that all of these lines are absolutely equal in length! Though the last one does look a bit longer.



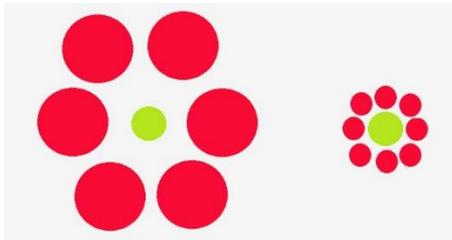
Can you see the 5 green dots in this picture?



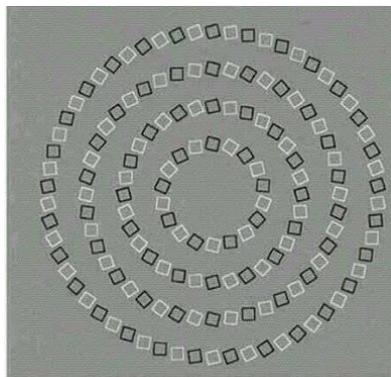
The design in the picture seems to be rotating...Wait it isn't, it is still. The eyes are playing tricks again.



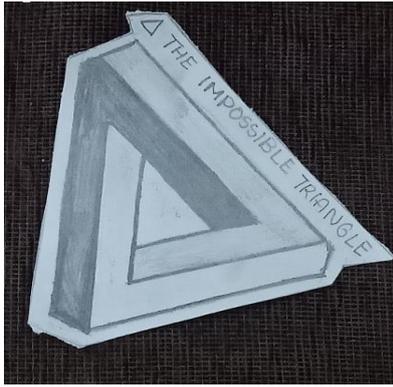
In this picture, the more you focus on one conjunction, the other conjunctions seem like they have black/dark green dots in them.



Can you tell which dot is bigger? Actually they both are of the same size, the 2nd one appears bigger since the other dots are smaller than it.



It's funny how it looks like all the circles are intersecting, try covering half of the picture and find out how many circles are there.



This is called the Impossible Triangle, because no one knows where it starts and where it ends.

“The true laboratory is the mind, where behind illusions we uncover the laws of truth” said the great Indian scientist Jagadish Chandra Bose.

True to his words the science club members have realised that while the eyes play tricks causing optical illusion the mind paves the way for uncovering the scientific truth behind these.

**Shutterbugs**

**Science Club –Junior**

**PSBB SRS**

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