Pretend you are a beam of light. What will happen to you at each step as you pass into the eye and land on the retina?

I initially travels through the cornea (the clear front layer of the eye). The cornea helps the eye focus by bending me into a dome shape.

A portion of this light enters the eye through the pupil. The colourful portion of the eye, the iris, regulates how much light the pupil lets in.

Then I travels through the lens (a clear inner part of the eye). To properly focus me on the retina, the lens and cornea work together.

A layer of tissue at the back of the eye called the retina contains unique cells called photoreceptors, which convert me into electrical signals when it strikes the retina.

What will happen if the eye is not perfectly shaped?

Step 1:

Perfect corneal curvature guarantees that light entering the eye is bent correctly onto the lens, but imperfect curvature causes a refractive mistake. The image that develops at the retina is likewise distorted by an uneven or unevenly shaped cornea. Astigmatism and keratoconus are two common corneal abnormalities.

Step 2:

When the cornea, the front surface of the eye, or the lens within the eye have uneven curves, astigmatism results. The surface is formed like an egg rather than having a single curve like a spherical ball. Vision becomes hazy as a result at all distances.

Their ability to focus or read may be impacted by astigmatism as well as short- or long-sightedness. Teenagers with astigmatism should also undergo routine eye exams to screen for keratoconus, an eye disease. The cornea changes form as a result of this.

How will the retina know you have arrived?

There is a layer of photoreceptor cells in the retina that process light. In essence, these are light-sensitive cells that can recognise characteristics like colour and light intensity. The information acquired by the photoreceptor cells is processed in the retina and transmitted to the brain via the optic nerve.

The area where light sensing cells are situated is the retina.

A layer of tissue at the back of the eye called the retina contains unique cells called photoreceptors, which convert light into electrical signals when it strikes the retina. The optic nerve carries these electrical signals from the retina to the brain. The visuals you see are then created by the brain from the signals.

How will it tell what color of light you are?

The retina, which is positioned on the back of the eye, receives light as it enters the eye. Millions of rods and cones, which are light-sensitive cells, cover the retina. These cells deliver signals to the brain when they recognise light. Cone cells support colour perception.

Cones provide the perception of colour despite having a lower sensitivity to light than the retina's rod cells, which assist vision in dim light. Due to their quicker response times to stimuli than rods, they are also able to sense finer detail and more rapid changes in images.

What will it tell the brain about you?

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A key link between the light that enters your eyes and the images you perceive is the retina. Your retina has specialised cells that respond to light and send information to your brain so you can see the world around you.