Hello, sir/ma'am,

I am Anirudh Vempati, grade 8 of Unicent school.

I'd like to provide the following article for the NIE paper: -

**Title: "From White to Rainbow"**

Article:

In this article, we will learn about the dispersion of light and how it is responsible for the formation of the seven colours of the spectrum.

White light is not just one colour but is made up of seven different colours: Red, Orange, Yellow, Green, Blue, Indigo, and Violet. We can remember this order using the acronym VIBGYOR. When white light passes through a prism, it splits into its seven component colours, and the range of colours obtained when dispersion takes place is called a spectrum.

A real-life example of this phenomenon is the rainbow. After raining, there are water droplets in the sky which act as prisms. When sunlight passes through these droplets, the light disperses and forms a rainbow with the seven colours of the spectrum.

Another example of dispersion can be seen on a Compact Disk (CD). CDs are made up of a thin metal layer, usually made of aluminium, and a protective layer on top. When light hits the CD, it is reflected off the metal layer and scattered back to our eyes, creating a range of colours.

Sir Isaac Newton created an experiment called Newton’s Disk to demonstrate the dispersion of light. To make a Newton’s Disk, we need a motor with a battery, a circular piece of cardboard with VIBGYOR colours, and adhesive. First, fill the circular cardboard with the rainbow colours proportionately. Then, stick the piece to the shaft of the motor with adhesive and connect the motor to the battery. When you rotate the disk, you will see the disk appear white.

Understanding dispersion and the seven colours of the spectrum can help us know the science behind rainbows and CDs.

by Anirudh Vempati

