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SUBJECT:- PHYSICS

CLASS:- XTH

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SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 4. (LIGHT- REFLECTION) (BASED ON NCERT PATTERN)

(REVISION)

**Scattering of Light :-**

When light hits very small gas particles or water droplets or even dust particles, it scatters the light. The amount of scattering of the light depends on the wavelength of light and the size of the particle. Light on the sky is filled with all the colours of the rainbow i.e. VIBGYOR. So, the question is 'Why is the Sky Blue?'

It is because light hits different particles in the atmosphere and it scatters in all directions. Since blue has a smaller wavelength than Red, it is scattered more than red. That is why the sky looks blue.

**Examples of Reflection of Light in daily life**

Some of the most interesting examples of reflection of light in daily life are:

The **Blue Sky** is because light hits different particles in the atmosphere and it scatters in all directions. Since blue has a smaller wavelength than Red, it is scattered more than red. That is why the sky looks blue.

- The **Sunset is Red** because when the sunset happens, the sky has already scattered most of the blue light as it has travelled around the atmosphere since the day. So, the red light dominates during a Sunset.
- **Clouds look White** because the cloud's water droplets are much larger than the wavelength of light. So, all the colours get scattered in different directions to create white colour.

**Light Reflection and Refraction**

- The reflection of light occurs whenever a ray of light falls on a smooth polished surface and bounces back.
- The refraction of light occurs when a ray of light moves from one medium to another and it changes its direction of travel.