

Pre- Content/Content / Post –content	Learning Outcome/Objectives	
	<u>General</u>	<u>Specific</u>
Pre Content: Teacher will motivate the students to introduce the lesson. Light rays emitting from the sun enable us to see surroundings. Do you know light rays travel from one place to another? It is light which helps us to see objects. Content: • Properties of light • Reflection of light • Spherical mirrors – Concave and Convex • Lenses – Concave and Convex • Dispersion Post-content: The student at the end of the chapter should be able to comprehend the following concepts. • The importance of light in daily life and the various uses of concave and convex mirror, concave and convex lens and the various ways by which images are formed • White light is composed of seven colors i.e. VIBGYOR	Students will be able to: • discuss rectilinear propagation of light • explain reflection of light • explain formation of images in spherical mirror • discuss lenses and the image formed • appraise the process of dispersion • application of the concept in our daily	Students will be able to: • infer that light travels in a straight light. • develop the definition of the term reflection • distinguish between smooth and rough surface. • define the term spherical mirrors • identify and classify the types the type of spherical mirror. • determine and distinguish the image formed by a concave and convex mirror • correlate the mirrors to a spoon • differentiate between convex and concave mirror, real and virtual image. • develop the definition of the term lens • classify the types of lenses • determine and distinguish the image formed by concave and convex lens. • appraise the uses of lenses in daily life. • discuss the term dispersion. • discover that white light is a composed of seven colours. • list the colours in rainbow in correct order • correlate and apply in daily life situations like why a dentist use a concave mirror and convex mirror

Home Work / Assignments

- Worksheets and assignments.
- Question answers from text-book.

Teacher's Activity	Student's Activity	Teacher's Observation and Remedial action taken
Teacher will: take up the brainstorming session and previous knowledge of the students will be tested. <u>Annexure 15 (A):</u> explain an activity to show that light travels in a straight line. explain the concept and show a concave mirror and convex mirror and a concave and convex lens so that they can identify them <u>Annexure 15 (B):</u> explain the concept that light is a combination of seven colors (dispersion) with the help of an activity provide questions from worksheet booklet and guide students to answer them.	Students will: participate in the interactive session and will be able to understand a plane mirror and its characteristics. <u>Annexure 15 (a):</u> perform the experiment and record their observation. follow the instructions and on that basis they will be able to identify a concave mirror, convex mirror, concave and convex lens by looking at them. <u>Annexure 15 (b):</u> follow the instructions and make a Newton's color disc apply their knowledge and understanding to solve the worksheets.	

Teaching Aids – Active Inspire boards, ICR, Materials required for activities, worksheets and textbook, Activity Kits

Methodology / Innovative Methods: Activity based teaching, Know to Unknown, Discussions, Activity method, brainstorming sessions.

Interdisciplinary Links –

- **English-** Improves expression and vocabulary
- Linked with real –life

HOD

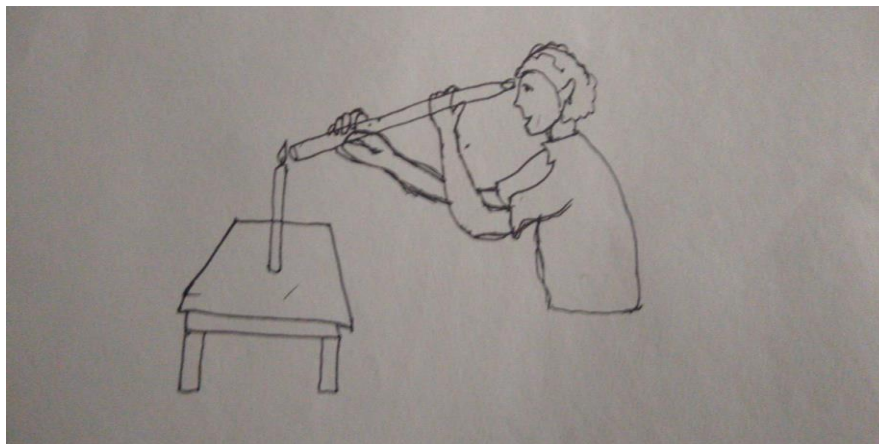
Coordinator

Vice-Principal

Principal

ANNEXURE 15(A) & (a)

TO SHOW LIGHT TRAVELS IN A STRAIGHT LINE



Take a long rubber tube or a piece of a pipe. Light a candle and fix it on a table at one end of a room. Look at the candle through the pipe while standing at the other end of the pipe.

Can you see the candle?

Now bend the pipe a little while you are looking at the candle. Can you see the candle now? No. It clearly suggests that light travels along straight line. This is known as rectilinear propagation of light.

ANNEXURE -15(B) & (b) - COLOURS OF A RAINBOW

Subject	Science
Class	VII
Chapter/Unit	Light
Topic	The spectrum
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning Outcome)?

To infer that white light is made up of seven constituent colors.

Skills: Understanding, Analysing and Applying

What I have to do?

To make a Newton's disc.

What do I require?

Thick white card paper, color pens, pencil

What do I need to know?

The splitting of white light into separate colors after passing through a prism is called dispersion. The band of colors obtained because of the dispersion of light is called a spectrum.

➤ Teacher's Activity

Teacher will

1. explain the concept of dispersion and the formation of a spectrum.
2. arrange the materials for the individual
3. give instructions regarding the activity.

How will I proceed?

➤ Student's Activity

1. Cut a circle out of thick white card paper.
2. Draw seven equal sectors on it.
3. Color them violet, indigo, blue, green, yellow, orange and red.
4. Pierce a small hole at the centre of the disc and pass the pointed end of a pencil through it.
5. Rotate the card using the pencil.
6. Note the color of the disc.

What have I observed?

Tick the correct option	The seven colors are visible	White color is visible
When the disc is rotated		

What have I learnt?

When the disc is rotated, the colors _____ and the disc appears to be _____.

What am I curious to learn?

- Let us see the dispersion of sunlight by placing a triangular glass prism in sunlight and obtain a band of seven colors on a white sheet of paper (or on a white wall).

Let me evaluate myself

Q1. Name the device which is used to split white light into seven colors.

Ans. _____

Q2. Name the process which is involved in the formation of a rainbow.

Ans. _____

Q3. How can you say that white light (say, sunlight) consists of seven colors?

Ans. _____

Q4. What is a spectrum?

Ans. _____

Q5. White light consists of seven colors. Can we mix these seven colors to get white light? Justify your answer.

Ans. _____
