



Srini Science Mind
Abdul Kalam Physical Science Group



NEW

10th class

PHYSICAL SCIENCE

MODEL LESSON PLAN



M.SRINIVASA RAO, SA(PS) AGKMHS GUDIVADA PH: 9848143855

MODEL LESSON PLAN

CLASS: 10

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: A.G.K.M.H.School,Gudivada

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Human Eye and Colourful World (Chapter – 5)	Least distance of distinct vision	1	xx/xx/xxxx	xx/xx/xxxx	
	Angle of vision	1	xx/xx/xxxx	xx/xx/xxxx	
	Structure of human eye	3	xx/xx/xxxx	xx/xx/xxxx	
	Defects of vision	4	xx/xx/xxxx	xx/xx/xxxx	
	Power of lens and problems	2	xx/xx/xxxx	xx/xx/xxxx	
	Prism	3	xx/xx/xxxx	xx/xx/xxxx	
	Dispersion of light	3	xx/xx/xxxx	xx/xx/xxxx	
	Scattering of light	3	xx/xx/xxxx	xx/xx/xxxx	

Prior Concept/Skills:

1. What is the most important part of the eye?
2. What are common defects of eye?
3. How many colours are there in a rainbow?

Learning Outcomes:

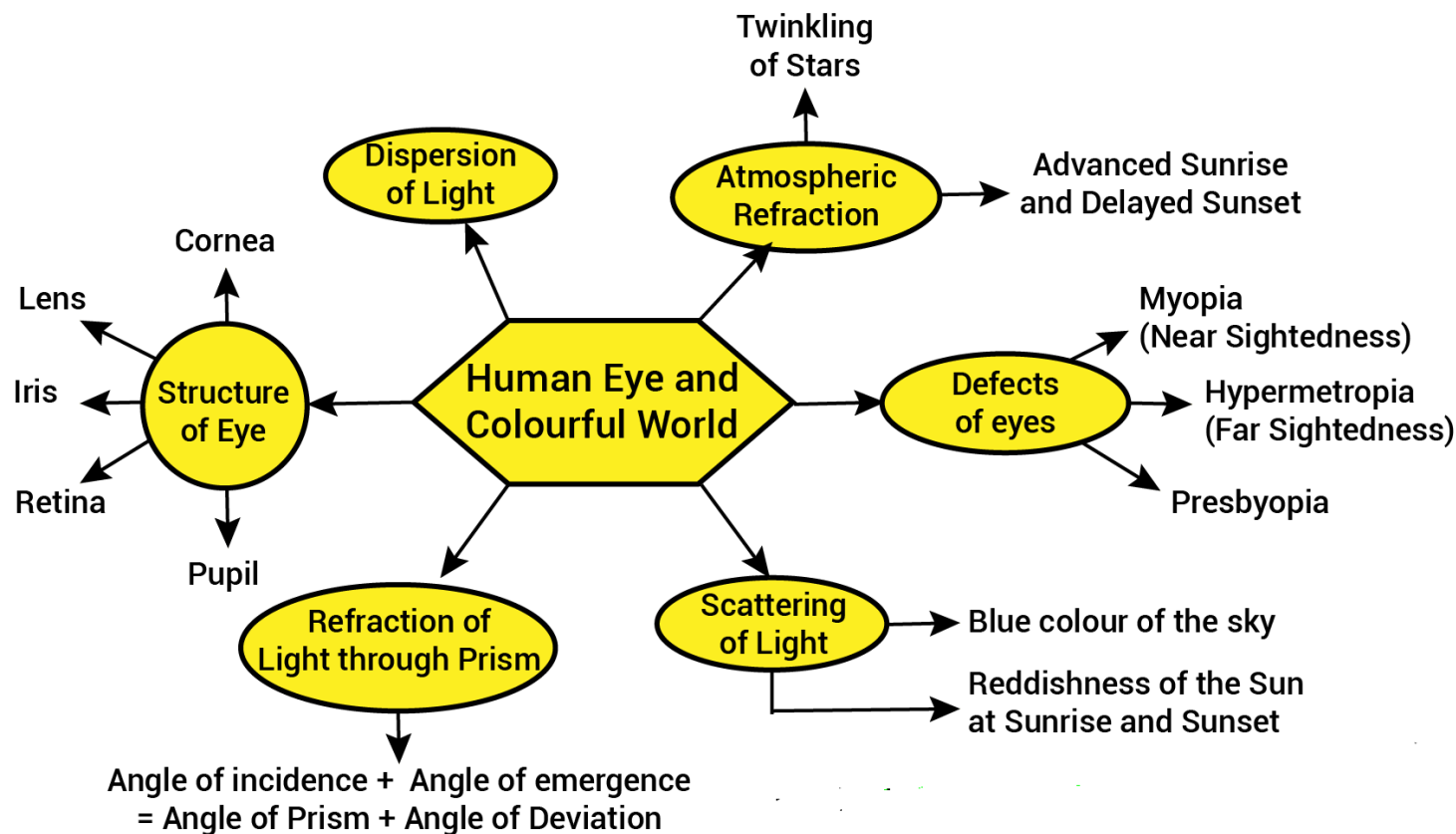
1. Draws labelled diagrams of Human eye
2. Draws the flow chart of defects of vision.
3. Draws conclusions of defects of vision.
4. Calculates using the data of power of a lens.
5. Handles tools and laboratory apparatus properly, measures physical quantities using appropriate apparatus, instruments and devices of finding the refractive index of a prism.
6. Plans and conducts investigations and experiments to arrive at the verifying the facts of refractive index of prism.
7. Calculates using the data given refractive index of prism.
8. Explains processes and phenomena of formation of rainbow.
9. Relates processes and phenomena with causes and effects of blue colour of sky with scattering of light
10. Explains processes and phenomena of sky appears white sometimes
11. Applies learning to hypothetical situations of dispersion of light and scattering of light.
12. Explains processes and phenomena of advance sunrise and delayed sunset.
13. Takes initiative to know about scientific discoveries and inventions of Sir C.V. Raman effect.

No. of Periods

- 1
- 2
- 1
- 2
- 2
- 1
- 2
- 2
- 1
- 2
- 1
- 2
- 1

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students understand the structure of the human eye and take appropriate measures to prevent eye defects.
2. Students will be able to predict the situations in which a rainbow is formed.
3. Students learn the sequence of colour changes of the sky at different times with scientific knowledge.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
1. Discussion and explain the concept of least distance of distinct vision with help of text book.	1. Why least distance of distinct vision changes with age? – Group discuss	1. Students write the definition of least distance of distinct vision	1. How do you find least distance of distinct vision? 2. What is the value of

<p>2. Explain and conduct an activity on angle of vision with help of a retort stand and different lengths of wooden sticks.</p> <p>3. Explain the structure of human eye and the functioning of parts.</p> <p>4. Discussion and finding the maximum and minimum focal length of eye lens.</p> <p>5. Discussion and Explain common defects of vision(Myopia) and its correction.</p> <p>6. Discussion and Explain common defects of vision(Hypermetropia) and its correction.</p> <p>7. Discussion and Explain common defects of vision(Presbyopia) and its correction.</p> <p>8. Explain the concept “Power of lens” and Problems.</p> <p>9. Describe the Prism and Finding the refractive index of a prism..</p> <p>10. Explain and conduct an experiment to produce a rainbow in your classroom.</p> <p>11. Explain Dispersion of light and formation of rainbow in nature.</p> <p>12. Discussion and explain the scattering of light</p>	<p>2. Students explain the concept of angle of vision and their importance.</p> <p>3. Students draw the structure of human eye.</p> <p>4. Students finding the maximum and minimum focal length of eye lens.</p> <p>5. Students draw ray diagrams showing myopia and its correction.</p> <p>6. Students draw ray diagrams showing hypermetropia and its correction.</p> <p>7. Collect the information of defects of vision and give reason, how the defects of vision are formed by the students.</p> <p>8. Students will solve problems on the power of lens.</p> <p>9. Students arrange the apparatus systematically and measure the angles of the incidence, deviation, prism and emergence.</p> <p>10. Students conduct the experiment</p> <p>11. Students collect the information on the formation of rainbows in nature.</p> <p>12. “Scattering of light depend on size of the atoms or molecules” Are you agree this statement? Why? Discuss</p>	<p>2. Students conduct an activity.</p> <p>3. Students explain the functioning of parts of the human eye.</p> <p>4. Students complete the homework.</p> <p>5. Students draw the flow chart of common defects of vision.</p> <p>6. Students give reasons about why do we need to use the biconvex lens for hypermetropia.</p> <p>7. Students write the differences between myopia and hypermetropia.</p> <p>8. Students complete the homework.</p> <p>9. Students describe the procedure of the present experiment.</p> <p>10. Students observe the colours in the rainbow.</p> <p>11. Why are there sometimes two rainbows? – Give reason.</p> <p>12. What is the role of atoms/ molecules in the scattering of light?</p>	<p>angle of vision for healthy human being?</p> <p>3. What is the role of rods and cones in the human eye?</p> <p>4. What are the limits to change the focal length of eye lens?</p> <p>5. A person is suffering from myopia, his far distance is 5 m. what is the focal length of his eye lens?</p> <p>6. Bi-focal lenses are advisable for a person suffers from both myopia and hypermetropia. Justify?</p> <p>7. Define the power of lens and write its units.</p> <p>8. Write the formula of Refractive index of the prism. Explain terms in it?</p> <p>9. Define Dispersion of light?</p> <p>10. How could the white light of the sun gives us various colours of the rainbow?</p>
---	---	--	--

13. Discussion and explain blue of the sky, White of the sky, red colour of sun during sunrise and at sunset.	13. Students read the scientific history of Sir C.V. Raman	13. Students collect the information of Sir C.V.Raman	11. Why sun does not appears red during noon hours?
---	--	---	---

Check For Understanding Questions	TLM's (Digital+Print)
<p>1. Factual:</p> <ol style="list-style-type: none"> 1. Is the speed of light of each colour different? 2. Why does least distance of distinct vision increase with age? 3. Does refractive index depend on angle of prism? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. What is the Colour of sky if there is no atmosphere? Give reason 2. How does eye lens changes its focal length? 3. Why does dispersion occur only in prism but not in glass slab? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. How do you correct the eye defect Myopia? 2. Explain the formation of rainbow.(3. How do you appreciate the role of molecules in the atmosphere for the blue colour of the sky? 4. How do you appreciate the working of Ciliary muscles in the eye? 	<ol style="list-style-type: none"> 1. Used prepared Quiz paper. 2. Utilized digital classroom. 3. Provide video links QR codes, DIKSHA App 4. YouTube video links
<p>Assessment:</p> <ol style="list-style-type: none"> 1. How do you find experimentally the refractive index of material of a prism. 2. Ramana cannot see the objects clearly after 2m. Then answer the following. <ol style="list-style-type: none"> a) What is his eye defect? b) Which lens do you suggest to correct his eye defect? c) What is the focal length of that lens? d) Find the power of lens? 3. The focal length of a lens suggested to a person with Hypermetropia is 100cm.Find the distance of near point and power of the lens. 4. When Raju, a ten years old boy, saw rainbow and so many doubts are raised in his mind. Guess those doubts and ask some questions. 	

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS