

8th CLASS

PHYSICAL SCIENCE

LESSON PLANS

[2023 - 2024]

As per the guidelines of

Department of School Education, AP

**Special
Edition**

I hope this
book will be one of
the ways to your
Success..

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SPSMHS, GUDIVADA.

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LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
FORCE AND PRESSURE (Chapter -1)	Force- A push or pull	2			
	Forces are due to an interaction	1			
	Exploring forces	2			
	A force can change the state of motion	1			
	Force can change the shape of an object	1			
	Contact forces Muscular force	2			
	Non-contact forces Magnetic force	2			
	Pressure	2			
	Pressure exerted by liquids and gases	2			
	Atmospheric pressure	1			

Prior Concept/Skills:

1. When do objects move from the rest position?
2. What type of action need to open your house door?
3. How do fielders stop a ball hit by a batsman?
4. Why does the shape of the toothpaste tube change when we squeeze it?

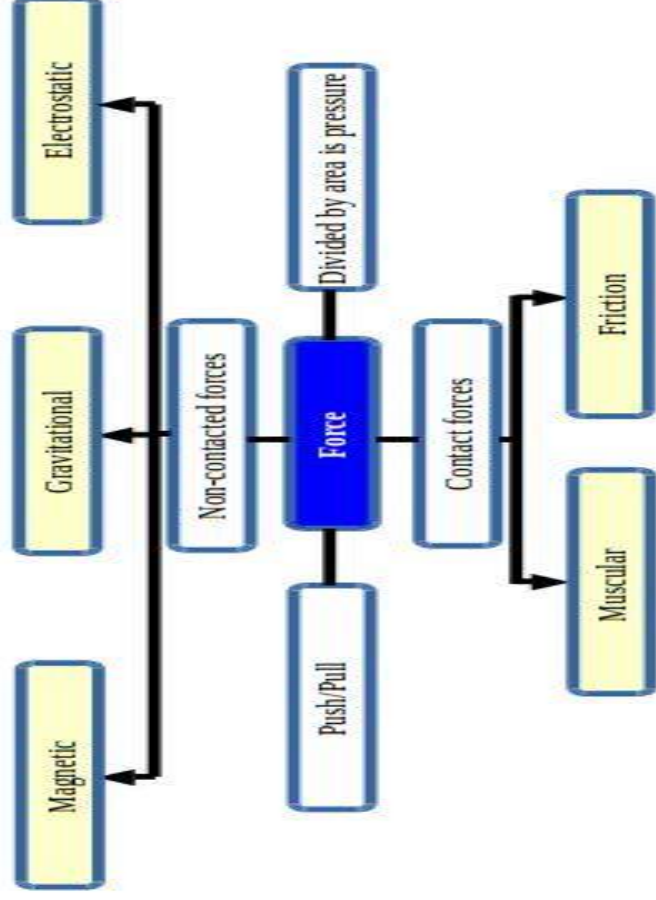
Learning Outcomes:

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Classifies situations based on applied force whether it is pushed or pulled. 2. Differentiate materials of contact and non-contact forces. 3. Flow chart of types of forces. 4. Measure the net force on the system/object 5. Conduct a simple investigation to seek answers to queries about when a body is dropped from a building, the speed of the falling body increases. 6. Writes word equation for pressure. 7. Relates process with causes of the area of contact depending on the pressure. 8. Relates processes and phenomenon with causes why is cutting edge of knife made sharper. 9. Measure the atmospheric pressure 10. Conduct a simple investigation to seek answers to queries about Do liquids exert equal pressure at the same depth? 11. Applies to learning of scientific concepts in the day-to-day life of pressure situations 12. Discusses and appreciates stories of scientific discoveries of Otto von Guericke. | No. of Periods
2
1
2
1
2
2

1
1
1
1
1
1 |
|--|---|

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students are to use the different types of forces in our daily life and identify the types of force with situations.
2. Students collect the information of atmospheric pressure
3. Observe the filling of air into the vehicle tyres and collect the data of how much air pressure is needed for the vehicles.
4. Students are able to understand the applications of pressure in our daily life and utilize it.

Explicit Teaching/Teacher Modelling (I Do)

1. Discussion and identify actions as push or pull.
2. Discussion and illustrations of forces are due to an interaction.

Group Work (We Do)

1. Students complete the puzzle on activities of push or pull
2. Students collect the information of forces are due to an interaction.

Independent Work (You Do)

1. Students identify the push and pull action
2. Viewing the content in Byju's Tab

Notes for:

1. Express when you apply push and pull in daily life

<p>3. Discussion and Explain of Exploring Forces</p> <p>4. Explain that a force can change the state of motion & a force can change the shape of an object.</p> <p>5. Explain and conduct activities of contact Forces.</p> <p>6. Explain and conduct activities of Non-contact Forces.</p> <p>7. Review of Byju's Tab content</p> <p>8. Conduct and observe an experiment of attraction and repulsion between two magnets.</p> <p>9. Conduct and observe an experiment of a straw rubbed with paper attracts another straw but repels it if it has also been rubbed with a sheet of paper.</p> <p>10. Discussion and explain the concept of pressure.</p> <p>11. Conduct an experiment of pressure exerted by liquids and gases.</p> <p>12. Explain atmospheric pressure.</p> <p>13. Discussion on applications of Pressure</p> <p>14. Review of Byju's Tab content</p>	<p>3. Solved the problems of net force in own way</p> <p>4. Conduct an oral quiz on types of forces</p> <p>5. Viewing the content in Byju's Tab</p> <p>6. Students collect the magnetic materials</p> <p>7. Students complete the task on electrostatic force</p> <p>8. Collect the information of pressure exerted by liquids and gases.</p> <p>9. Students collect the information of pressure and applications of pressure in our daily life</p> <p>10. Viewing the content in Byju's Tab</p>	<p>3. Write the definition of the net force</p> <p>4. Students complete the homework</p> <p>5. Viewing the content in Byju's Tab</p> <p>6. draw the flow chart of non-contact forces.</p> <p>7. Viewing the content in Byju's Tab</p> <p>8. Students give examples of magnet force. Viewing the content in Byju's Tab</p> <p>9. Express the procedure of the experiment in own way. Viewing the content in Byju's Tab</p> <p>10. Expressed units of pressure</p> <p>11. Viewing the content in Byju's Tab</p> <p>12. Viewing the content in Byju's Tab</p> <p>13. Solved the problems in own way</p> <p>14. Viewing the content in Byju's Tab</p>	<p>2. What is the unit of force?</p> <p>3. What can bring change in state of motion of an object?</p> <p>4. What does a non-contact force require?</p> <p>5. Can force act without an interaction between two objects?</p> <p>6. Write the formula of pressure?</p> <p>7. Write any two applications of atmospheric pressure.</p>
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<p style="text-align: center;">Check For Understanding Questions</p>	<p style="text-align: center;">TLM's (Digital+Print)</p>
<p>1. Factual:</p> <ol style="list-style-type: none"> 1. What happens to the spring fixed to the seat of a bicycle when we sit on it? 2. Why do balloons expand when filled with air? 3. Why the tip of a sewing needle is sharp? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. Is the gravity a property of earth only? 2. Why are we not crushed by atmospheric pressure? 3. If gravitational force exists then why does fire go in the upward direction? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. Give two examples of situations in which applied force causes a change in the shape of an object. 2. A blacksmith hammers a hot piece of iron while making a tool. How does the force due to hammering affect the piece of iron? 3. Name the forces acting on a plastic bucket containing water held above ground level in your hand. Discuss why the forces acting on the bucket do not bring a change in its state of motion. 4. Describe an activity on how pressure is exerted by the liquids. <p>Assessment:</p> <ol style="list-style-type: none"> 1. Do you think sometimes the application of force does not result in a change in the state of motion? - Discuss. 2. Porters place a round piece of cloth on their heads when they have to carry heavy loads. Why? 3. Calculate the pressure, if a force of 100 N acts on area of 10 m² ? 4. Collect the information between contact forces and non-contact forces. 	<ol style="list-style-type: none"> 1. Used prepared Quiz paper. 2. Utilized digital classroom. 3. Provide video links 4. QR codes, DIKSHA App 5. YouTube video links 6. Byju's Tab 6. IFF

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS

LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
FRICTION (Chapter-2)	Force of friction	2			
	Factors affecting friction	3			
	Byju's Content Review	1			
	Friction: A Necessary Evil	2			
	Increasing and Reducing Friction	2			
	Byju's Content Review	1			
	Wheels Reduce Friction	2			
	Fluid Friction	2			
	Byju's Content Review	1			

Prior Concept/Skills:

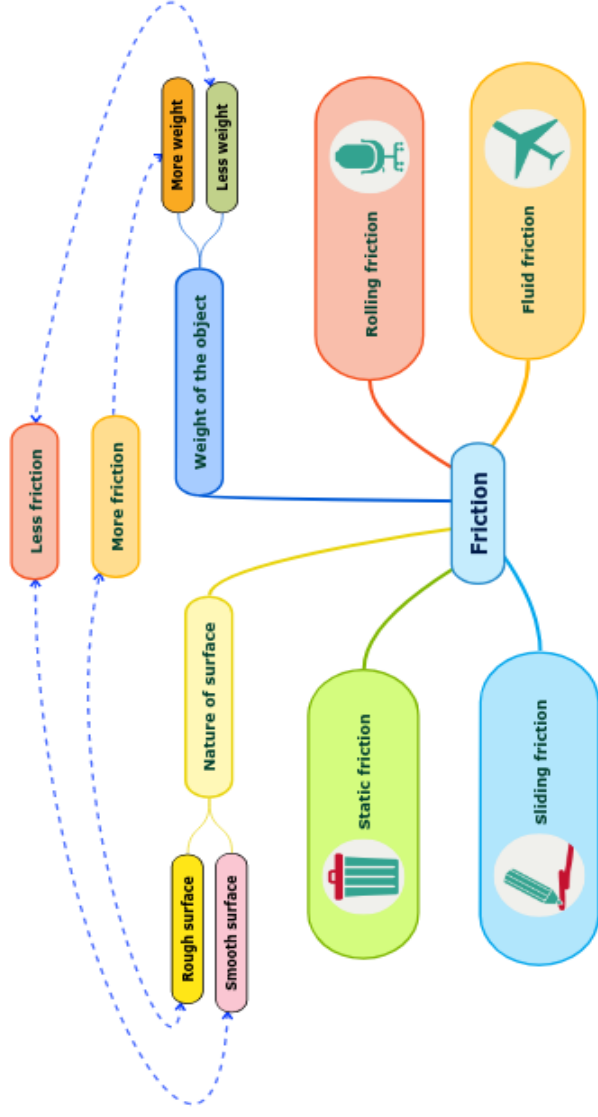
1. Why do we fall when we step on a banana peel?
2. Why do kabaddi players rub their hands with soil?
3. Give examples of contact forces.
4. Which force always acts on all the moving objects and its direction is always opposite to the direction of motion?

Learning Outcomes:

- | | No. of Periods |
|---|----------------|
| 1. Conducts simple investigation to seek answers to queries "Is the friction the same for all the surfaces?" | 1 |
| 2. Explains processes and phenomenon of factors affecting friction. | 2 |
| 3. Makes efforts to protect environment of using of lubricants. | 1 |
| 4. Applies learning of scientific concepts in day-to-day life of increasing or reducing friction. | 2 |
| 5. Conducts simple investigations to seek answers to queries of can we reduce friction to zero by polishing surfaces or using large amount of lubricants. | 1 |
| 6. Relates processes with causes of increasing and reducing friction. | 1 |
| 7. Differentiates frictions based on characteristics. | 1 |
| 8. Draws the flow charts of types of frictions. | 1 |
| 9. Exhibits creativity in designing, planning, making use of lubricants. | 1 |
| 10. Constructs models using materials from surroundings and explains their working of ball bearings in machines. | 1 |
| 11. Explains processes of making of special shape objects | 2 |
| 12. Applies learning of scientific concepts in the day-to-day life of streamlined objects. | 1 |
| 13. Relates process and phenomenon with causes fluids exert the force of friction on objects in motion through them. | 1 |

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students utilize the concept of friction in the driving of a vehicle on a surface, applying breaks to stop a moving vehicle.
2. Students are able to utilize the friction concept to face their daily life situations.
3. Students understand the working of machines based on ball bearings.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
<ol style="list-style-type: none"> 1. Discussion on 'Why is it difficult to walk on a smooth and wet floor'?' with suitable examples 2. Explain and conduct an activity of friction opposes relative motion between the surfaces of the book and 	<ol style="list-style-type: none"> 1. Collect the information of force of Friction. 2. Students conduct activities and find out friction opposes relative motion between the surfaces of the book and 	<ol style="list-style-type: none"> 1. Students express walking on different surfaces 2. What is the role of friction in daily life? 	<ol style="list-style-type: none"> 1. Define the force of friction? 2. Friction opposes the relative motion between two

<p>the table</p> <p>3. Discussion and explanation of factors affecting Friction.</p> <p>4. Explain and conduct an activity of friction depends on the nature of the surface.</p> <p>5. Explain and conduct an activity of friction depends on the nature of the surface.</p> <p>6. Review of Byju's Tab content</p> <p>7. Conduct an activity to prove that sliding friction is smaller than static friction.</p> <p>8. Discussion and give illustrations on "Friction is a necessary evil"</p> <p>9. Explain Increasing and Reducing Friction.</p> <p>10. Review of Byju's Tab content</p> <p>11. Conduct an activity in the rolling friction is smaller than the sliding friction.</p> <p>12. Discussion and explanation of ball bearings reduce friction.</p> <p>13. Explain fluids friction with examples.</p>	<p>the table.</p> <p>3. Students collect the spring balance, polythene and brick.</p> <p>4. Conduct activity and describe the procedure of the activity.</p> <p>5. Viewing the content in Byju's Tab</p> <p>6. Collect information of friction is both a friend and a foe.</p> <p>7. Students collect the sports shoes and observe the role of sole in decreasing the friction.</p> <p>8. Viewing the content in Byju's Tab</p> <p>9. Arrange the experimental setup activity.</p> <p>10. Imagine that friction suddenly vanishes. How would life be affected? List ten such situations.</p> <p>11. Students do an activity with water in a container and observe the drag in fluids.</p>	<p>3. The student gives examples of each case where friction is affecting.</p> <p>4. Students measure the reading on the spring balance.</p> <p>5. Students complete the homework</p> <p>6. Viewing the content in Byju's Tab</p> <p>7. Comparing sliding friction with static friction.</p> <p>8. Students give a few examples of friction being a necessary evil.</p> <p>9. Viewing the content in Byju's Tab</p> <p>10. Students give reason about why rolling friction produces the least friction.</p> <p>11. Students draw a rough diagram of the ball bearing.</p> <p>12. Students complete the homework.</p>	<p>surfaces in contact.</p> <p>3. Spring balance is a device used for measuring the force acting on an object.</p> <p>4. Differentiate between static friction and sliding friction.</p> <p>5. Explain increasing and reducing friction with examples.</p> <p>6. Write a few examples where sliding friction is replaced by rolling friction.</p> <p>7. On what factors does the fluid friction depends?</p>
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14. Review of Byju's Tab content	12. Viewing the content in Byju's Tab	13. Viewing the content in Byju's Tab	
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<p style="text-align: center;">Check For Understanding Questions</p> <p>1. Factual:</p> <ol style="list-style-type: none"> Why it is difficult to move on a wet marble surface? Can we eliminate friction completely? Why sliding friction is less than static friction. Why is the friction caused? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> Why our hands become warmer when we run them? Which is easier to hold in hand an earthen pot or glass tumbler. Why? Discuss If there was no friction, what would happen to a moving object? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> Explain why sliding friction is less than static friction. Give examples to show that friction is both a friend and a foe. Explain why objects moving in fluids must have special shapes. Why is 'friction: a necessary evil'? Explain. <p>Assessment:</p> <ol style="list-style-type: none"> How do lubricants help to reduce friction? Give some examples that friction is necessary for everyday activities. Explain why objects moving in fluids must have special shapes. Suggest some methods to increase friction. 	<p>TLM's (Digital + Print)</p> <ol style="list-style-type: none"> Used prepared Quiz paper. Utilized digital classroom. Provide video links QR codes, DIKSHA App YouTube video links Byju's Tab IFP
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LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Coal and Petroleum (Chapter-3)	Natural resources	2			
	Coal	2			
	Byju's Content Review	1			
	Coke - Coal Tar - Coal gas	2			
	Petroleum - Refining of Petroleum	3			
	Byju's Content Review	1			
	Natural Gas	3			
	Some Natural Resources are Limited	2			
	Byju's Content Review	1			

Prior Concept/Skills:

1. What fuel do you use to cook food?
2. Are these fuels man-made?
3. Do you know where the fuels used to run the vehicles come from?

Learning Outcomes:

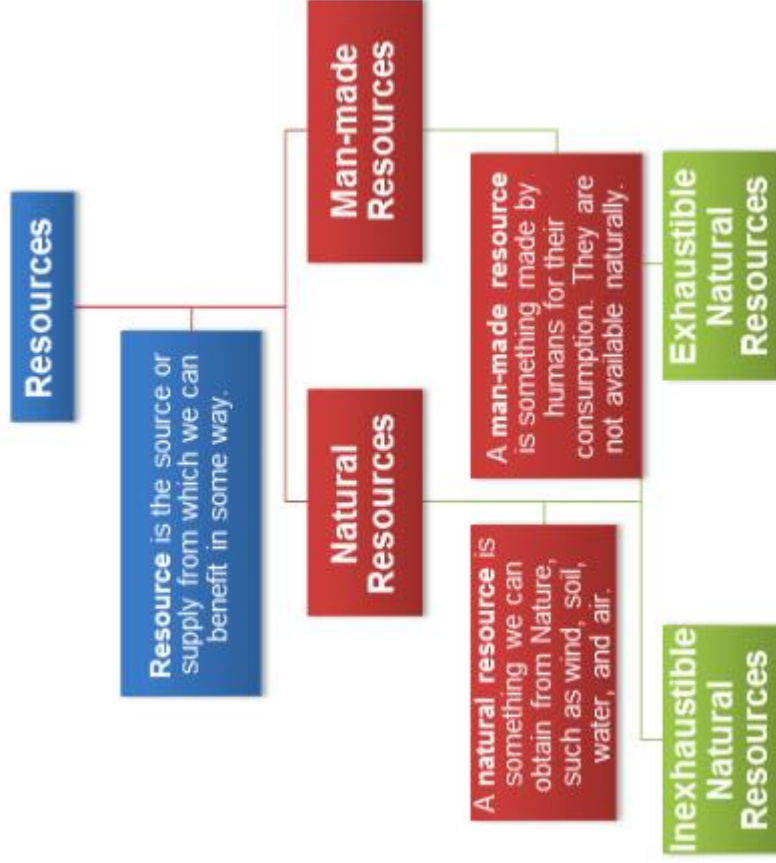
1. Classifies materials based on properties of exhaustible and inexhaustible natural resources.
2. Applies learning of scientific concepts in day-to-day life of using of natural resources.
3. Relates processes with causes of air pollutant by the utilization of exhaustible natural resources.
4. Explains processes of formation of petroleum.
5. Explains process and phenomenon of petroleum refining.
6. Draws labeled diagram of Petroleum and natural gas deposits.
7. Conducts simple investigations to seek answers to queries of petroleum refining.
8. Makes efforts to protect environment using of petroleum products judiciously.
9. Relates processes with causes of air pollutant by the utilization of exhaustible natural resources.
10. Applies learning of scientific concepts in day-to-day life of various constituents of petroleum and their uses.
11. Exhibits creativity in designing, planning, making use of various constituents of Petroleum.
12. Draws flow chart of uses of petroleum products.

No. of Periods

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

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students use resources properly for future needs.
2. Students will protect the environment by using petroleum products according to their needs.
3. Students understand how fuels are made and conserve fuels.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
<p>1. Discussion and Explain resources by natural and man-made.</p> <p>2. Discussion and Explain Natural resources and their types.</p> <p>3. Explain coal and the story of coal.</p> <p>4. Discussion and Explain the products of coal.</p> <p>5. Review of Byju's Tab content</p> <p>6. Explain the formation of petroleum.</p> <p>7. Discussion and Explain the refining of petroleum.</p> <p>8. Explain various constituents of petroleum and their uses.</p> <p>9. Review of Byju's Tab content</p> <p>10. Explain Natural gas.</p> <p>11. Discussion and Explain some natural resources are limited.</p>	<p>1. Students give examples of natural resources.</p> <p>2. Students make a survey on the energy consumption (coal, gas, electricity, petrol, kerosene etc.) and measures to conserve the energy of their neighborhood.</p> <p>3. Is coal fossil fuels? - Discuss</p> <p>4. Students prepare the uses of coal in table form</p> <p>5. Viewing the content in Byju's Tab</p> <p>6. Students collect some information about the coal and petroleum deposits in India and mark them in outline map of India and World map.</p> <p>7. Students explain the refining of petroleum in own way.</p> <p>8. Students collect the information on various constituents of petroleum and their uses.</p> <p>9. Viewing the content in Byju's Tab</p> <p>10. What would happen if fossil fuels were banned? ---- Discuss</p> <p>11. Collect the information on how to save petrol/diesel while driving.</p>	<p>1. Students identify the natural and man-made resources.</p> <p>2. Students give examples of inexhaustible and exhaustible resources.</p> <p>3. Students complete the homework.</p> <p>4. Students give the reason about Why is coal so black?</p> <p>5. Viewing the content in Byju's Tab</p> <p>6. Find out the location of major thermal power plants in India. What could be the reasons for their being located at those places?</p> <p>7. Students express the physical properties of petroleum.</p> <p>8. Students complete the homework.</p> <p>9. Viewing the content in Byju's Tab</p> <p>10. Students expand the terms of CNG and LPG.</p> <p>11. What are the effects on the environment of burning fuels?</p>	<p>1. What are natural resources?</p> <p>2. Can natural resources be replaced?</p> <p>3. Give any two uses of Coal</p> <p>4. What are the different types of coals?</p> <p>5. Where is the petroleum found in India?</p> <p>6. What is the main principle of petroleum refining?</p> <p>7. Why should we use petroleum substance in limits?</p> <p>8. How is natural gas stored?</p> <p>9. How does petroleum affect the environment?</p>

12. Review of Byju's Tab content	12. Viewing the content in Byju's Tab	12. Viewing the content in Byju's Tab	
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<p style="text-align: center;">Check For Understanding Questions</p> <p>1. Factual:</p> <ol style="list-style-type: none"> 1. Which coal is mostly found in India? 2. What are impurities in petroleum? 3. What are the most critical natural resources? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. Why is Petroleum called black gold? 2. What happen if natural resources disappear? 3. What problems do people face when using natural resources? 4. How long can petrol be stored? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. What are the advantages of using CNG and LPG as fuels? 2. Explain why fossil fuels are exhaustible natural resources. 3. Describe characteristics and uses of coke. 4. Explain the process of formation of petroleum. <p>Assessment:</p> <ol style="list-style-type: none"> 1. Suggest ways in which consumption of fuels can be reduced. 2. Name the different constituents of petroleum and write their uses. 3. What is refining? Why does petroleum require refining? 4. Differentiate between exhaustible and inexhaustible natural resources. 	<p>TLM's (Digital + Print)</p> <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 5. Byju's Tab 6. IFP
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LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Sound (Chapter-5)	Introduction of sound	2			
	Sound is Produced by a Vibrating Body	4			
	Byju's Content Review	1			
	Sound Produced by Humans	3			
	Sound Needs a Medium for Propagation	2			
	Byju's Content Review	1			
	We Hear Sound through Our Ears	2			
	Amplitude, Time Period and Frequency of a Vibration	3			
	Byju's Content Review	1			
	Audible and Inaudible Sounds	2			
	Noise and Music	2			
	Noise Pollution	1			
	Byju's Content Review	1			

Prior Concept/Skills:

1. If you go to a school assembly, what do you hear?
2. What are the sounds like when there is a traffic jam in the city?
3. Give examples of some forms of energy.

Learning Outcomes:

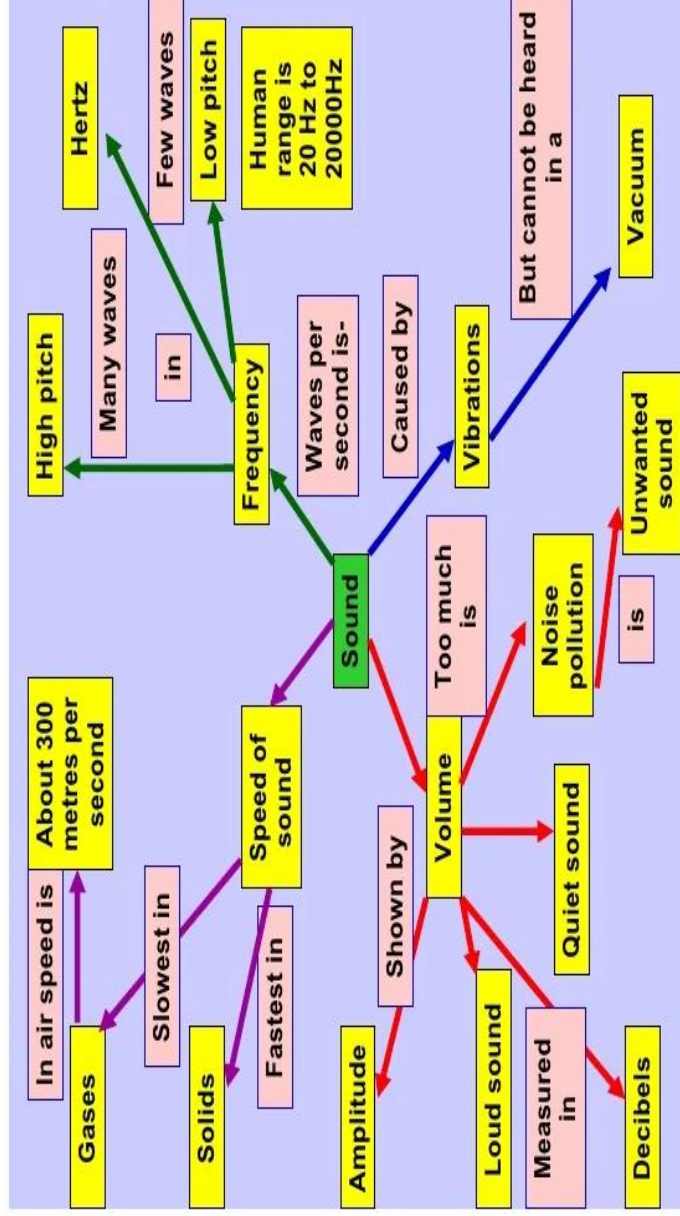
- | Learning Outcomes: | No. of Periods |
|---|----------------|
| 1. Classifies materials based on characteristics of musical instruments. | 1 |
| 2. Explains processes of production and propagation of sound. | 2 |
| 3. Relates processes and phenomenon with causes of sound needs a medium for propagation. | 2 |
| 4. Conduct simple investigations to seek answers to queries of "Why sound waves cannot travel in a vacuum?" | 1 |
| 5. Discusses and appreciates stories of scientific discoveries of music instruments and famous musicians. | 2 |
| 6. Applies learning of scientific concepts in day-to-day life of making musical instruments. | 1 |
| 7. Exhibits creativity in designing, planning, making use of musical instruments. | 2 |
| 8. Constructs models using materials from surroundings and explains their working of ektara. | 1 |
| 9. Explains processes and phenomenon of working of the human ear. | 2 |
| 10. Draws labelled diagram of structure of the human ear. | 2 |
| 11. Differentiate hearing sounds as music and noise. | 1 |

- 12. Differentiate hearing sounds as Audible and Inaudible Sounds.
- 13. Relates processes and phenomenon with causes of the harms of noise pollution.
- 14. Makes efforts to protect environment by the reducing of sounds.

2
1
1

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

- 1. Students will learn about the damage caused by noise pollution in daily life.
- 2. Students estimate the power of the sound and protect the eardrum.
- 3. Students can hear the sounds of vehicles without seeing them and tell which vehicles they are coming from.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
<ul style="list-style-type: none"> 1. Discussion and make a list of sounds you hear in your surroundings. 2. Conduct an activity on sound is produced by a vibrating body with a 	<ul style="list-style-type: none"> 1. Students will make a list of sounds heard in their surroundings. 2. Students conduct an activity. 	<ul style="list-style-type: none"> 1. Students hear the vibrations. 	<ul style="list-style-type: none"> 1. What are sources of sound? 2. Can we see vibrations all the time?

<p>metal plate/pan and stick.</p> <p>3. Conduct an activity on sound is produced by a vibrating body with the rubber band and pencil box.</p> <p>4. Conduct an activity on sound is produced by a vibrating body with the metal dish, water and spoon.</p> <p>5. Explain and making of Ektara</p> <p>6. Explain and conduct Jaltarag activity.</p> <p>7. Review of Byju's Tab content</p> <p>8. Explain the sound produced by humans.</p> <p>9. Conduct activity on working of vocal cords.</p> <p>10. Discussion and conduct an activity on sound needs a medium for propagation.</p> <p>11. Explain and conduct an activity on sound travelling through a liquid.</p> <p>12. Explain and conduct an activity on sound travelling through a solid.</p> <p>13. Discussion and Making, Working of a toy telephone.</p> <p>14. Review of Byju's Tab content</p> <p>15. Explain and conduct an activity on</p>	<p>3. Students describe the activity.</p> <p>4. Students observe the vibrations of Water.</p> <p>5. Students collect the hollow coconut shell and make an Ektara</p> <p>6. Students conduct an activity with available materials.</p> <p>7. Viewing the content in Byju's Tab</p> <p>8. Collect the information on the voice box.</p> <p>9. Students observe the working of vocal cords by doing an activity using rubber strips.</p> <p>10. Sound and Light are energies. But without medium, sound can't travel? – Discuss</p> <p>11. Group discussion on sound travelling through a liquid.</p> <p>12. Students describe the activity in own way.</p> <p>13. Viewing the content in Byju's Tab</p> <p>14. Students draw the structure of</p>	<p>2. Students observe the vibrations of rubble band.</p> <p>3. Students give the reason about Why do vibrations produce sound?</p> <p>4. Students complete the homework.</p> <p>5. Viewing the content in Byju's Tab</p> <p>6. Students prepare a list of famous Indian musicians and the instruments they play.</p> <p>7. Students express the working of vocal cords.</p> <p>8. Students conduct an activity.</p> <p>9. Students complete the homework.</p> <p>10. In which medium sound propagates the maximum?</p> <p>11. Why is sound a wave?</p> <p>12. Viewing the content in Byju's Tab</p> <p>13. Students express the</p>	<p>3. Why do vibrations create sound?</p> <p>4. Do all bodies produce sound.</p> <p>5. Name two musical instruments which produce sound by vibrating strings.</p> <p>6. Where do humans produce sound?</p> <p>7. Why do humans have different voices?</p> <p>8. What is necessary for propagation of sound?</p> <p>9. Can sound travel through liquids?</p> <p>10. In which the speed of sound is maximum?</p> <p>11. What are 3 main parts of the ear?</p> <p>12. Write the relation between time period</p>
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the function of an eardrum.	human ear.	functioning of a human ear.	and frequency?
16. Explain the concepts of Amplitude, Time period and Frequency of a vibration.	15. Students collect information about the loudness of sound and its effect on human beings.	14. Define Amplitude, Time period and Frequency?	13. What is the range of ultrasonic sounds?
17. Review of Byju's Tab content	16. Viewing the content in Byju's Tab	15. Viewing the content in Byju's Tab	14. How can we distinguish between music and noise?
18. Discussion on Audible and Inaudible sounds.	17. Students give examples of noise and music	16. Students give a range of inaudible and audible sounds	15. Give two examples of noise pollution.
19. Explain Noise and music	18. Group discussion on noise pollution and its effects on human beings.	17. Can noise pollution be stopped?	
20. Discussion and explain noise pollution, its effects.	19. Reading the scientific stories of sound related.	18. Viewing the content in Byju's Tab	
21. Review of Byju's Tab content			

Check For Understanding Questions	TLM's (Digital + Print)
<p>1. Factual:</p> <ol style="list-style-type: none"> 1. Is there sound in space? 2. Does temperature affect sound? 3. Why the sound of the baby is feeble? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. Why does sound carry more at night? 2. What will happen if sound does not exist? 3. What is the quietest sound in the world? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. What is the difference between noise and music? Can music become noise sometimes? 2. Explain in what way noise pollution is harmful to human. 3. A pendulum oscillates 40 times in 4 seconds. Find its time period and frequency. 4. Sketch larynx and explain its function in your own words. 	<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 5. Byju's Tab 6. IFP

Assessment:

1. How can you show that sound cannot travel through a vacuum?
2. Explain with an activity that sound travels in liquids.
3. How can we control Noise pollution?
4. Briefly describe the loudness of sound.

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS

LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
<p style="text-align: center;">Light (Chapter-7)</p>	What makes things visible – Laws of Reflection	2			
	Regular and Diffused Reflection	2			
	Byju’s Content Review	1			
	Reflected light can be reflected again – Multiple Images	3			
	Keleidoscope	1			
	Sunlight: White or Coloured - What is inside our eyes?	2			
	Byju’s Content Review	1			
	Care of the eyes	1			
	Visually Impaired Persons Can Read and Write	2			
	What is the Braille System	2			
	Byju’s Content Review	1			

Prior Concept/Skills:

1. What are the sources of light?
2. Does light travel in all directions?
3. What are the properties of light?

Learning Outcomes:

1. Draw the experimental setups verification of laws of reflection.
2. Applies learning of scientific concepts in day-to-day life of laws of reflections in multiplex halls/theatres.
3. Measures angles of incidence and reflection.
4. Differentiate reflection as regular and diffused reflection.
5. Applies learning of scientific concepts in day-to-day life of regular and diffused reflections.
6. Explains processes and phenomena of formation of multiple images
7. Exhibits creativity in designing, planning, making use of Kaleidoscope.
8. Constructs models using materials from surroundings and explains their working of kaleidoscope.
9. Relates processes and phenomenon with causes of working of human eye.
10. Draws labelled diagram of structure of the human eye
11. Draws the flow charts of how you can take care of eyes.
12. Classifies materials based on characteristics of real and virtual images.
13. Discusses and appreciates stories of scientific discoveries of Louis Braille and Helen A. Keller

No. of Periods

- 1
1
1
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1
2
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1

14. Conducts simple investigations to seek answers to queries of How does the braille system work?

1

TEACHING LEARNING PROCESS			
<p>Induction/Introduction:</p>			
<p>Experience and Reflection:</p> <ol style="list-style-type: none"> 1. Students will use the law of reflection of light when installing mirrors in building constructions. 2. Students will learn how to prevent eye problems in daily life and take appropriate precautions. 3. Students will learn how Braille system is used by visually impaired students. 			
Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
1. Discussion and explain on Can you see	1. Group discussion on properties of	1. Students will give reasons why	1. Do all objects reflect

<p>an object in the dark?</p> <ol style="list-style-type: none"> 2. Explain and conduct an activity on showing reflection of light 3. Conduct an activity on the first law of reflection with help of a mirror, drawing board, white sheet, scale and pencil. 4. Conduct an activity on the second law of reflection with help of a mirror, drawing board, white sheet, scale, protector and pencil. 5. Explain and conduct an activity on image formation in a plane mirror. 6. Review of Byju's Tab content 7. Explain regular and diffused reflections. 8. Discussion on reflected light can be reflected again. 9. Explain and conduct an activity on multiple images formed by a plane mirror. 10. Explain making and working of kaleidoscope. 11. Conduct an activity on dispersion of Light. 12. Explain structure and function of human eye. 13. Review of Byju's Tab content 	<p>Light.</p> <ol style="list-style-type: none"> 2. Students draw the incident ray, reflected ray and normal. 3. Students describe the entire procedure. 4. Students measure angle of incidents and angle of reflections. 5. Why lateral inversion takes place in a plane mirror- Group discussion. 6. Viewing the content in Byju's Tab 7. Students give examples of regular and diffused reflections. 8. Students visit nearest shopping mall and express their thoughts. 9. Collect information of multiple images formed by a plane mirror. 10. Students describe the making of kaleidoscope. 11. Students will conduct an activity of dispersion of light. 12. Viewing the content in Byju's Tab 	<p>they cannot see the object in the dark?</p> <ol style="list-style-type: none"> 2. Students express the first law of reflection 3. Students collect the materials for the verification of the first law of reflection. 4. Solved the problems in own way. 5. Students write the characteristics of the plane mirror. 6. Viewing the content in Byju's Tab 7. Define Regular and Diffused reflections. 8. Students complete the homework. 9. Students will make the kaleidoscope. 10. What is the dispersion of light. 11. Students draw the structure of the human eye. 12. Viewing the content in Byju's 	<p>light?</p> <ol style="list-style-type: none"> 2. What causes light reflection? 3. What are the effects of reflection of light? (Byju's tab usage) 4. What is the formula of second law of reflection? 5. What type of image is formed in a plane mirror? 6. Can image be formed in diffused reflection? (Byju's tab usage) 7. Which image is brightest in multiple reflection? 8. How many images will be formed if two plane mirrors will be placed at 45°? 9. On what principle kaleidoscope is based? 10. How many colours in white light? What are they? 11. What are the main parts of the Human eye? 12. What is the main
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<p>14. Demonstration on blind spot and perception of eye.</p> <p>15. Discussion and explain on eye defects and their suitable corrections.</p> <p>16. Explain how you can take care of your eyes.</p>	<p>13. Discussion on the eye perceives object as moving.</p> <p>14. Students collect the information of eye defects and corrections.</p> <p>15. Debate on care of the eyes.</p>	<p>Tab</p> <p>13. Students conduct an activity on a bird in case.</p> <p>14. Meet an eye specialist. Get your eye sight checked and discuss how to take care of your eyes</p>	<p>function of blind spot in eye?</p> <p>13. What are the main eye defects? (Byju's tab usage)</p>
<p>17. Discussion and explain how visually impaired persons can read and write.</p> <p>18. Explain Braille system.</p> <p>19. Review of Byju's Tab content</p>	<p>16. Students read the history of Louis Braille.</p> <p>17. Collect the information of Braille system.</p> <p>18. Viewing the content in Byju's Tab</p>	<p>15. Students complete the homework</p> <p>16. What is the Braille system?</p> <p>17. Viewing the content in Byju's Tab</p>	<p>14. What is the function of the retina?</p> <p>15. How can visually impaired person to read and write? (Byju's tab usage)</p>

<p style="text-align: center;">Check For Understanding Questions</p> <p>1. Factual:</p> <ol style="list-style-type: none"> 1. Where do you find reflection of light in your daily life? 2. Which principle is used in a kaleidoscope? 3. How many dots are used in Braille system? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. What happens to the size of the pupil of our eye in bright light? 2. What happens when a ray of light falls perpendicularly on the surface of a plane mirror? 3. How can you detect an eye problem? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. Describe an activity to show that the incident ray, the reflected ray and the normal at the point of incidence lie in the same plane. 2. Explain how you can take care of your eyes 3. Describe the construction of a kaleidoscope. 4. Draw a labelled sketch of the human eye. 5. What is the angle of incidence of a ray if the reflected ray is at an angle of 90° to the incident ray? 	<p>TLM's (Digital + Print)</p> <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 5. Byju's Tab 6. IFP
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Assessment:

1. How does the braille system work?
2. Describe an activity to show that the angle of incidence is always equal to the angle of reflection.
3. Differentiate between regular and diffused reflection. Does diffused reflection mean the failure of the laws of reflection?
4. What are the characteristics of image formed by plane mirror?

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS

LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Chemical Effects of Electric Current (Chapter-8)	Conductors and Poor conductors	1			
	Do Liquids Conduct Electricity?	4			
	Byju's Content Review	1			
	Good/Poor Conducting Liquids	2			
	Chemical Effects of Electric Current	3			
	Electroplating	2			
	Byju's Content Review	1			

Prior Concept/Skills:

1. What should be applied to household iron tools to prevent them from getting damaged by moisture or water?
2. What is the bulb used in testers?
3. What is the difference between conductors and insulators of electricity?

Learning Outcomes:

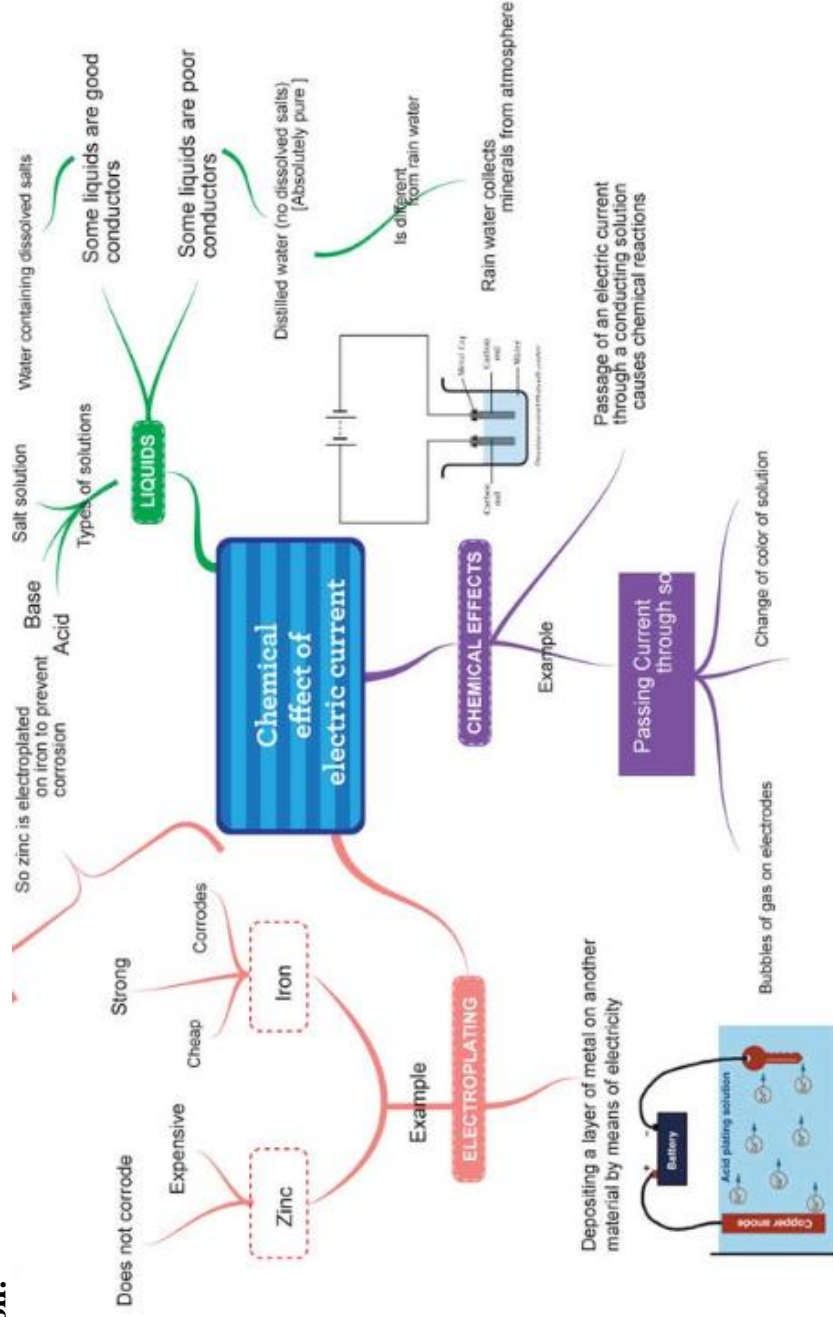
1. Classifies solids based on properties as conductors and poor conductors.
2. Differentiates materials of liquids as electrical conductors and insulators.
3. Relates processes with causes of acids conduct electricity.
4. Conducts simple investigations to seek answers to queries about Does pure water conduct electricity?
5. Draws labelled diagram of passing current through water
6. Explains processes of chemical effects of electric current.
7. Discusses and appreciates stories of scientific discoveries of British chemist William Nicholson.
8. Explains processes of electroplating
9. Applies learning of scientific concepts in day-to-day life in uses of electroplating
10. Makes efforts to protect the environment of conduct electroplating.
11. Conducts simple investigations to seek answers to queries of Why coating of zinc is deposited on iron to protect it from corrosion and formation of rust.
12. Makes efforts to protect the environment of conduct electroplating.
13. Draws flow chart of applications of electroplating

No. of Periods

- 1
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TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students will learn the applications of electroplating in daily life and take care of the tools at home to longer time.
2. Students will play their part in protecting the environment from pollution caused by electroplating in daily life.
3. Students will be able to identify which of the liquids they use are electrical conductors and which are poor conductors.

Explicit Teaching/Teacher Modelling (I Do)

1. Discussion and conduct an activity on the good conductor and poor conductor as a tester.

Group Work (We Do)

1. Students will give examples of conductors and poor conductors of solids.

Independent Work (You Do)

1. Students give definitions of good conductor and poor conductor.

Notes for:

1. What is the significance of conductors in your daily lives?

<p>2. Explain and Conduct an activity on “Does lemon juice or vinegar conduct electricity?”.</p> <p>3. Demonstration and Explain LED</p> <p>4. Discussion and conduct an activity on Whether the compass needle shows deflections near the electric circuit.</p> <p>5. Review of Byju’s Tab content</p> <p>6. Explain liquids are good and poor conductors of electricity.</p> <p>7. Explain and conduct an activity on distilled water is free of salts, it is a poor conductor.</p> <p>8. Explain and conduct an activity on chemical effects of electric current with passing current through water.</p> <p>9. Conduct an activity to test whether some fruits and vegetables conduct electricity.</p> <p>10. Explain the process of electroplating.</p> <p>11. Discussion and conduct an activity on electroplating with a simple electric circuit.</p>	<p>2. Students conduct the activity.</p> <p>3. Why LED glow even when a weak electric current flows through it. – Discuss</p> <p>4. Students represent the information of good/poor conducting liquids in tabular form.</p> <p>5. Viewing the content in Byju’s Tab</p> <p>6. Why pure water does not conduct electricity? – discuss</p> <p>7. Students draw the diagram of passing current through water.</p> <p>8. Students conduct an experiment on the conduction of electricity through various fruits and vegetables. Display results in tabular form.</p> <p>9. Students describe the electroplating method</p>	<p>2. Students draw the diagram of testing conduction of electricity in lemon juice or vinegar.</p> <p>3. Students complete the homework.</p> <p>4. Comparing the deflections of needle in the compass.</p> <p>5. Viewing the content in Byju’s Tab</p> <p>6. Students give examples of liquids being good and poor conductors of electricity.</p> <p>7. Students will give reasons, What are the other substances which, when dissolved in distilled water, make it conduct?</p> <p>8. Students explain “How do fruits and vegetables conduct electricity?”</p> <p>9. Students read the history of British chemist, William Nicholson.</p> <p>10. Students arrange the materials in the correct manner.</p>	<p>2. When an electric current is passed through vinegar or lemon juice then the bulb glows very dimly. Why?</p> <p>3. How many terminals in LED?</p> <p>4. Why does compass needle get deflected?</p> <p>5. Why do liquids conduct electricity?</p> <p>6. Why is distilled water a poor conductor?</p> <p>7. What happens when electric current pass through water?</p> <p>8. Which fruit or vegetable is the best conductor of electricity?</p> <p>9. What is main principle of electroplating?</p> <p>10. Why are metals electroplated?</p>
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12. Discussion and explain the applications of electroplating in daily life. 13. Review of Byju's Tab content	10. Students collect the information of applications of electroplating. 11. Viewing the content in Byju's Tab	11. What are the applications of electroplating in daily life 12. Viewing the content in Byju's Tab	11. Is electroplating permanent?
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<p style="text-align: center;">Check For Understanding Questions</p> <p>1. Factual:</p> <ol style="list-style-type: none"> Why does the concentration of the electrolyte remain constant during electroplating? Is electroplating a displacement reaction? Does electroplating occur only on anode? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> Why direct current is used in electroplating? Why does potato turn green on passing current? Why is electroplating hazardous to the environment? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> When the free ends of a tester are dipped into a solution, the magnetic needle shows deflection. Can you explain the reason? Is it safe for the electrician to carry out electrical repairs outdoors during heavy downpour? Explain. Does pure water conduct electricity? If not, what can we do to make it conducting? In case of a fire, before the firemen use the water hoses, they shut off the main electrical supply for the area. Explain why they do this. 			<p>TLM's (Digital + Print)</p> <ol style="list-style-type: none"> Used prepared Quiz paper. Utilized digital classroom. Provide video links QR codes, DIKSHA App YouTube video links Byju's Tab IFP
<p>Assessment:</p> <ol style="list-style-type: none"> Prepare a list of objects around you that are electroplated. What are the applications of the chemical effect of electricity in our daily life? Give examples. Why is chromium used for electroplating? Why the objects which have chromium plating are not made of chromium itself? 			

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS

LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Some Natural Phenomena (Chapter-9)	Lightning	1			
	Charging by Rubbing	2			
	Types of Charges and Their Interaction	3			
	Transfer of Charge	2			
	Byju's Content Review	1			
	The Story of Lightning	1			
	Lightning Safety	2			
	Earthquakes - What is an Earthquake?	2			
	What Causes an Earthquake?	3			
	Protection against Earthquakes	2			
	Byju's Content Review	1			

Prior Concept/Skills:

1. What are examples of natural phenomena?
2. What type of charges are transferred on rubbing?
3. Which country faces the most earthquakes?

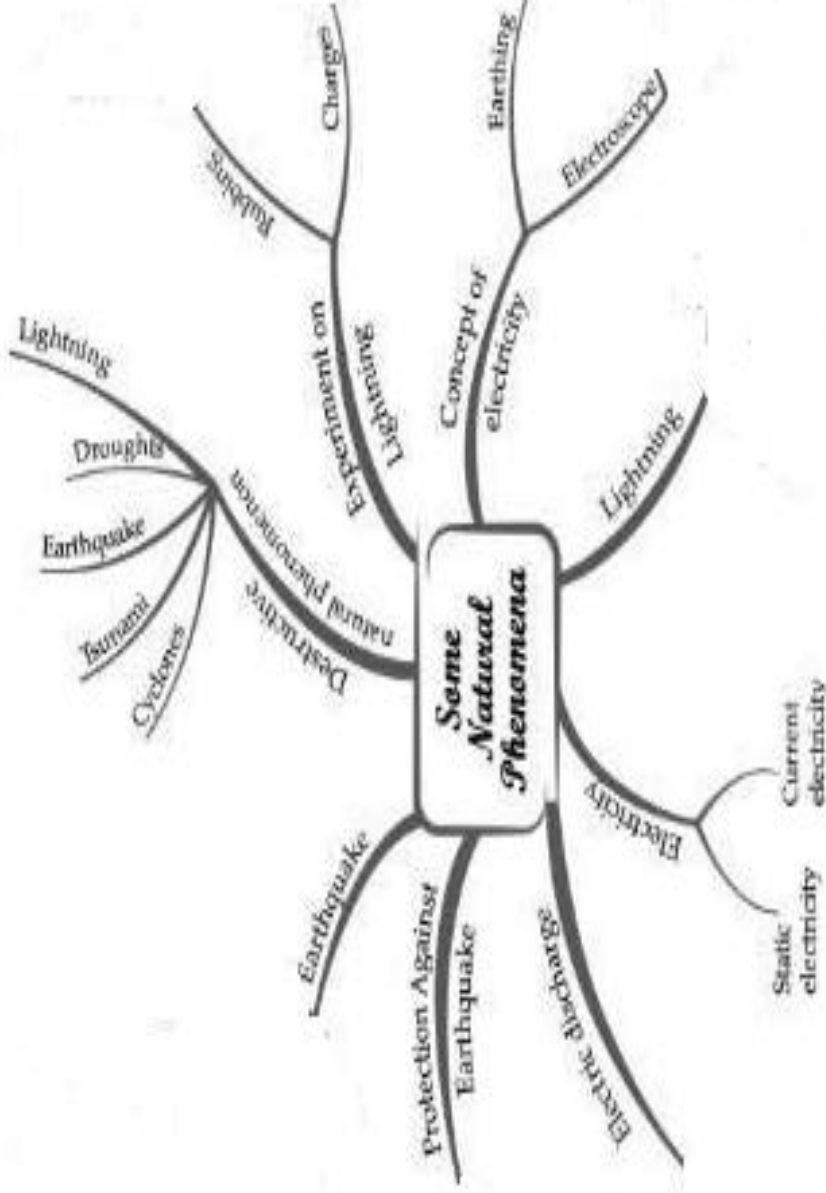
Learning Outcomes:

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Discusses and appreciates stories of Benjamin Franklin. 2. Relates processes and phenomenon of transfer of charge. 3. Construct model using materials from the surroundings and explains the working of the electroscope. 4. Applies learning of scientific concepts in day to-day life, protection from lightning 5. Draws flow charts of do's and don'ts during a thunderstorm. 6. Applies learning of scientific concepts in day to-day life of lightning conductors used to protect buildings from the effect of lightning 7. Explains processes of earth quake 8. Conducts simple investigations to seek answers to queries of TSUNAMI 9. Draws labelled diagram of seismograph 10. Applies learning of scientific concepts in day to-day life, protection from earthquake. 11. Prepare slides about earth quake incidents. 12. Exhibits creativity in designing, planning in construction of buildings to protect from natural phenomena | No. of Periods
1
2
1
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2

2
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1 |
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TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students will learn about property and life loss caused by some natural phenomena that occur in daily life and beware of future occurrences.
2. Students take proper precautions in building construction to withstand future earthquakes.
3. Students will know the uses of earthing and must take appropriate measures to ensure earthing in house construction.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
<ol style="list-style-type: none"> 1. Discussion on Lightning and introduction of Greeks history about sparks. 2. Conduct activities on charging by 	<ol style="list-style-type: none"> 1. "Cyclones can cause a lot of damage to human life and property" – Group discussion 2. Students conduct an activity 	<ol style="list-style-type: none"> 1. Students give examples of some natural phenomena. 2. Students give examples of 	<ol style="list-style-type: none"> 1. Is flood a natural phenomenon? 2. What happens when

<p>rubbing.</p> <p>3. Explain the process of charging by rubbing.</p> <p>4. Explain and conduct an activity on types of charges and their interaction with help of inflating two balloons, woolen and pen refills, polythene.</p> <p>5. Explain the concept of unlike charges attract each other and like charges repel each other.</p> <p>6. Explain the transfer of charge through a simple electroscope by using a bottle, Aluminium foil, cardboard and a paper clip.</p> <p>7. Review of Byju's Tab content</p> <p>8. Discussion and explain the story of lightning.</p> <p>9. Discussion and explain do's and don'ts during a thunderstorm.</p> <p>10. Explain the lightning conductors.</p> <p>11. Discussion on earthquakes.</p> <p>12. Explain the causes of earthquakes.</p> <p>13. Discussion and explain the working of seismograph.</p>	<p>3. Students collect the information about charging by rubbing.</p> <p>4. Students conduct an experiment on the interaction of charges.</p> <p>5. Students describe the attraction and repulsion of two charges.</p> <p>6. Students make a simple electroscope and explain how to charge transfer.</p> <p>7. Viewing the content in Byju's Tab</p> <p>8. Students collect the information about recent cyclones, earthquakes and thunderstorms which caused major damage.</p> <p>9. A discussion on the role we should play when it comes to lightning</p> <p>10. Students draw the structure of the earth and its parts</p> <p>11. Students identify which places are in the danger zone on the India map.</p> <p>12. Students explain the working of a seismograph</p>	<p>charged objects.</p> <p>3. Students give reasons about why rubbing formed a charge on the objects.</p> <p>4. Students collect the balloons, woolen cloth, pen refills and polythene articles.</p> <p>5. Students complete the homework.</p> <p>6. Students draw the simple electroscope.</p> <p>7. Viewing the content in Byju's Tab</p> <p>8. Students will read the story of Lightning.</p> <p>9. Students write precautions to be taken in case of thunderstorms.</p> <p>10. Students will give a reason, Why are lightning rods tall?</p> <p>11. Students frame any two questions on the causes of an earthquake.</p> <p>12. Draw a neat diagram of a Seismograph</p>	<p>two objects are rubbed against each other?</p> <p>3. How many types of charges are gained by rubbing objects?</p> <p>4. What happens when a straw is rubbed with a sheet of paper?</p> <p>5. How does rubbing two objects cause equal and opposite charges?</p> <p>6. What are the uses of an electroscope?</p> <p>7. What causes lightning?</p> <p>8. What are 3 tips for lightning safety?</p> <p>9. What is the best conductor for lightning?</p> <p>10. What are the main causes of earthquakes?</p> <p>11. What is the working principle of</p>
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14. Discussion and explain of protection against earthquakes	13. Students watch a world wide documentary of effect of earthquakes	13. Students will collect information on earthquakes	seismograph?
15. Review of Byju's Tab content	14. Viewing the content in Byju's Tab	14. Viewing the content in Byju's Tab	12. Which is the most earthquake-resistant structure?

Check For Understanding Questions			
<p>1. Factual:</p> <ol style="list-style-type: none"> 1. Can thunderstorms occur without lightning? 2. Is cyclone is not a natural phenomenon? 3. What type of force is lightning? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. Can earthquakes be prevented? 2. Why do thunderstorms happen at night? 3. What are the important considerations in making a house more earthquake resistant? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. Suggest three measures to protect ourselves from lightning. 2. Sometimes, a crackling sound is heard while taking off a sweater during winters. Explain. 3. Suppose you are outside your home and an earthquake strikes. What precaution would you take to protect yourself 4. Name the scale on which the destructive energy of an earthquake is measured. An earthquake measures 3 on this scale. Would it be recorded by a seismograph? Is it likely to cause much damage? 			
<p>Assessment:</p> <ol style="list-style-type: none"> 1. Describe with the help of a diagram an instrument which can be used to detect a charged body 2. What causes an earthquake? 3. Explain the precautions to be taken during lightning or thunderstorm. 			
<p>TLM's (Digital + Print)</p> <ol style="list-style-type: none"> 1. Used prepared Quiz paper. 2. Utilized digital classroom. 3. Provide video links 4. YouTube video links 5. Byju's Tab 6. IFP 			

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS

LESSON PLAN

CLASS: 08

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSMHS,GUDIVADA

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
Combustion and Flame (Chapter-10)	What is combustion?	4			
	How do we control fire?	1			
	Types of combustion?	1			
	Flame	1			
	Structure of a flame	3			
	What is a fuel – Fuel efficiency and calorific values.	2			
	Burning of fuels leads to harmful products.	2			

Prior Concept/Skills:

1. What fuels are used for cooking in your home?
2. What is needed to burn fuels?
3. Currently, what kind of fuels are used in vehicles for environmental protection?

Learning Outcomes:

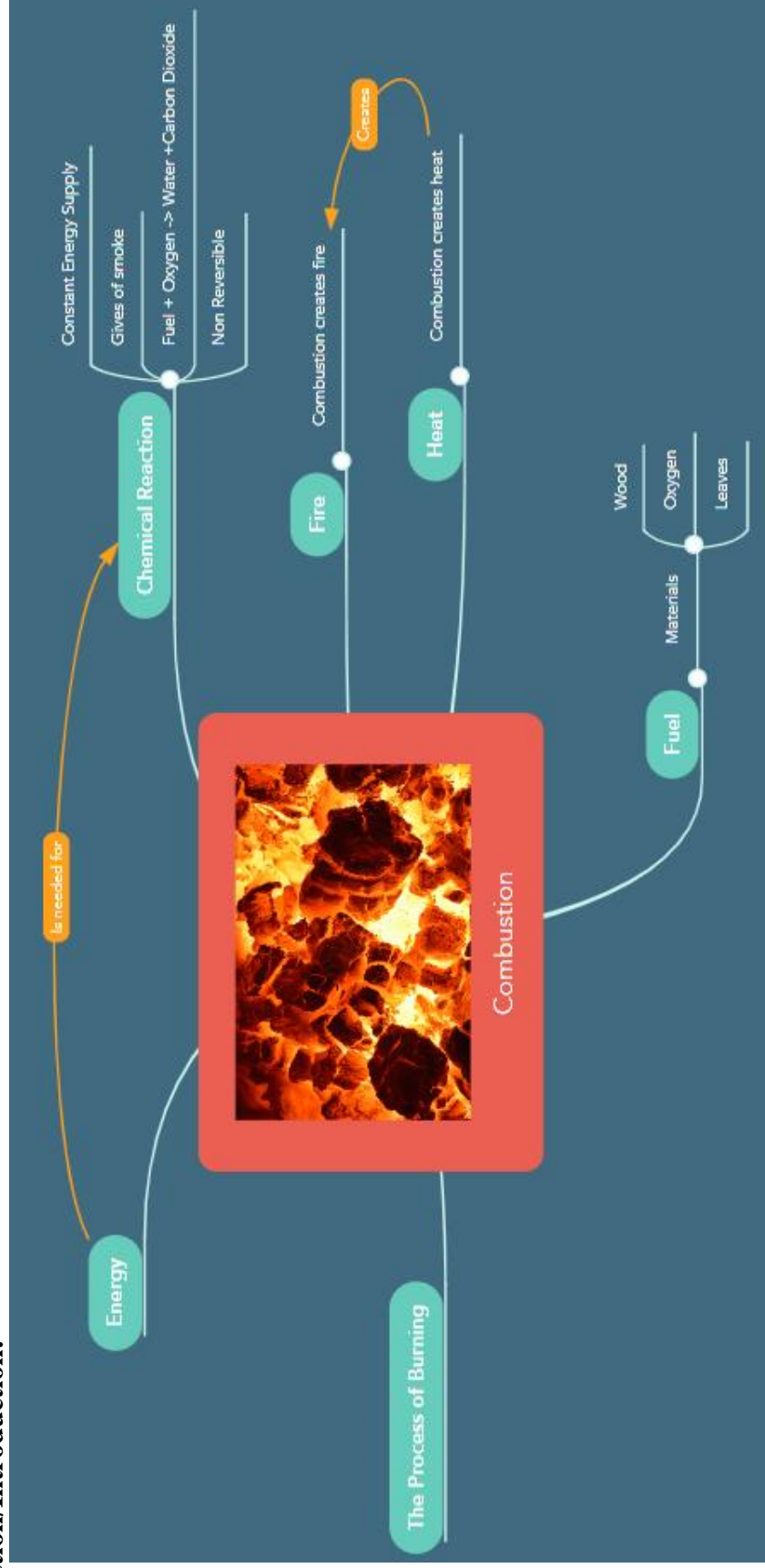
1. Differentiates materials as combustible and non-combustible substances based on chemical properties.
2. Differentiates materials as fuels based on their chemical properties.
3. Conducts simple investigations to seek answers to queries on the colours of a candle flame.
4. Conducts simple investigations to seek answers to queries, "What are the conditions required for combustion"?
5. Relates processes and phenomena with causes of formation of smoke when burning of fuels.
6. Constructs models using materials from surroundings and explains their working of fire extinguisher.
7. Applies learning of scientific concepts in day-to-day life of taking precautions when catching fire.
8. Explains processes of the structure of flame
9. Draws labelled diagram of different zones of candle flame
10. Draws a flow chart of calorific values of different fuels.
11. Makes efforts to protect environment about the burning of fuels leads to harmful products.
12. Classifies materials as forms flame and does not form flame based on the properties.

No. of Periods

- 1
- 1
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TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students know the dangers of burning fossil fuels and play their part in saving the environment.
2. Students will perform the precautions and duties to be taken in case of fire.
3. Students choose the best fuel for their daily life without polluting the environment.

Explicit Teaching/Teacher Modelling (I Do)	Group Work (We Do)	Independent Work (You Do)	Notes for:
<ol style="list-style-type: none"> 1. Discussion and explain the concepts of combustion and fuel. 2. Conduct an activity on combustible and non-combustible substance like straw, matchsticks, kerosene oil, 	<ol style="list-style-type: none"> 1. Students conduct an activity of burning of magnesium. 2. Collect information on combustible and non-combustible substances. 	<ol style="list-style-type: none"> 1. Students will give examples of fuels. 2. Students investigate conditions under which combustion takes place 	<ol style="list-style-type: none"> 1. How does combustion take place? 2. Why some substances are non-combustible in nature?

<p>paper, iron nails, stone pieces, glass etc.</p> <p>3. Explain and conduct an experiment about air is essential for burning with help of candle, chimney and wooden blocks.</p> <p>4. Discussion and explain the forest fire and precautions to be taken when a person is exposed to fire.</p> <p>5. Explain the concepts of Ignition Temperature and inflammable substances.</p> <p>6. Review of Byju's Tab content</p> <p>7. Discussion and explain How do we control fire</p> <p>8. Explain the working and importance of fire extinguishers.</p> <p>9. Explain types of combustion.</p> <p>10. Conduct experiment on Candle, Magnesium, Camphor, Kerosene stove and Charcoal materials forming flame on burning.</p> <p>11. Explain and conduct an activity on the Structure of a flame with help of light a candle.</p> <p>12. Explain the concepts of fuel and ideal fuel.</p> <p>13. Discussion and explain fuel efficiency.</p>	<p>3. Students conduct experiments in presence of the teacher.</p> <p>4. Group discussion on "forest fire and prevention steps".</p> <p>5. Students will read the history of the matchstick.</p> <p>6. Viewing the content in Byju's Tab</p> <p>7. Students collect the phone numbers of the nearest fire services.</p> <p>8. Students visit to nearest fire services.</p> <p>9. Students will draw the flow charts of combustible and non-combustible substances.</p> <p>10. Students observe the different zones of flame by lighting a candle.</p> <p>11. "Difference between fuel and ideal fuel" – Group discussion.</p> <p>12. Students draw a flow chart of calorific values of different fuels.</p>	<p>3. Students will give reasons, why air or oxygen is essential for burning.</p> <p>4. Students complete the homework.</p> <p>5. Students will give examples of inflammable substances.</p> <p>6. Viewing the content in Byju's Tab</p> <p>7. Students will give reasons, Why water is used by firemen</p> <p>8. Students explain the working of fire extinguisher.</p> <p>9. Students write the definitions of types of combustion.</p> <p>10. Students complete the homework.</p> <p>11. Students draw the structure of flame.</p> <p>12. List out the ideal fuel characteristics.</p> <p>13. What is the calorific value of fuel?</p>	<p>3. How the air is important for burning?</p> <p>4. Which type of combustion is forest a fire?</p> <p>5. Define ignition temperature.</p> <p>6. How can you control fire?</p> <p>7. What gas is inside fire extinguisher?</p> <p>8. What are the 3 types of combustion?</p> <p>9. Why is the innermost zone of flame not hot?</p> <p>10. Which fuel is known as ideal fuel?</p> <p>11. Write the S.I unit of the calorific value of a</p>
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14. Discussion and explain global warming and acid rain among the results of burning fuels.	13. Discuss on “Global warming “	14. Students will expand CNG.	fuel. 12. What is acid rain?
15. Review of Byju’s Tab content	14. Viewing the content in Byju’s Tab	15. Viewing the content in Byju’s Tab	

<p>Check For Understanding Questions</p> <p>1. Factual:</p> <ol style="list-style-type: none"> 1. What are the properties of an ideal fuel? 2. Do all the fuels burn with flame? 3. What is the significance of calorific value of fuel? <p>2. Open Ended/Critical Thinking:</p> <ol style="list-style-type: none"> 1. Why coal does not produce flame on burning? 2. Why do flames change color? 3. Why are fire extinguishers red? <p>3. Student Practice Questions & Activities:</p> <ol style="list-style-type: none"> 1. Give reasons. <ul style="list-style-type: none"> (a) Water is not used to control fires involving electrical equipment. (b) LPG is a better domestic fuel than wood. (c) Paper by itself catches fire easily whereas a piece of paper wrapped around an Aluminium pipe does not 2. Explain how CO₂ is able to control fires. 3. Which zone of a flame does a goldsmith use for melting gold and silver and why? 4. List conditions under which combustion can take place. <p>Assessment:</p> <ol style="list-style-type: none"> 1. Make a labelled diagram of a candle flame 2. Explain the term “global warming” 3. Give two examples each for a solid, liquid and gaseous fuel along with some important uses. 4. Why is the wood used as a fuel in villages? What are the disadvantages of using wood as a fuel? 	<p>TLM’s (Digital + Print)</p> <ol style="list-style-type: none"> 1. Used prepared Quiz paper. 2. Utilized digital classroom. 3. Provide video links 4. YouTube video links 5. Byju’s Tab 6. IFP
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