



Srini Science Mind
Abdul Kalam Physical Science Group

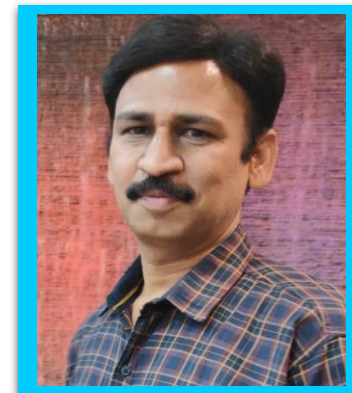


NEW

10th class

PHYSICAL SCIENCE

LESSON PLAN



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

MODEL LESSON PLAN

CLASS: 10

SUBJECT: PS

Name of the Teacher: M.SRINIVASA RAO

Name of the School: SPSH School,Gudivada

Name of the Lesson/Unit	Topic	No.of Periods Required	Timeline for teaching		Any specific information
			From	To	
HEAT (CHAPTER-1)	Thermal equilibrium-heat and temperature	2			
	Specific heat and Applications	3			
	Method of mixtures, Principle of method of mixture and Determination of specific heat of a solid	3			
	Evaporation and Condensation	2			
	Humidity, Dew and Fog	2			
	Boiling and Melting	2			
	Freezing and textual problems	2			

Prior Concept/Skills:

1. How is temperature measured?
2. What are units of temperature?
3. How is heat transferred?
4. How to work thermometer/ clinical thermometer?

Learning Outcomes:

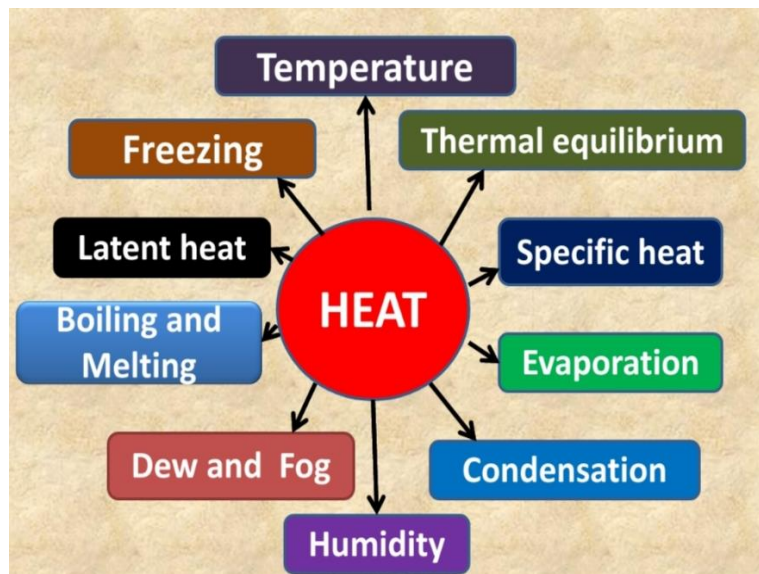
1. Explain process of transfer of heat energy
2. Uses scientific conventions to represent units of Kelvin scale to Celsius scale.
3. Appreciates and promotes usage of specific heat of substance
4. Handles tools and laboratory apparatus properly; measures specific heat of a solid.
5. Uses scientific convention to represent units of various quantities, symbols, formulae and equations of temperature, heat and specific heat
6. Applies learning to hypothetical situations utilization of specific heat substances
7. Communicates the findings and conclusions effectively of Specific heat of different substances.
8. Derives formulae, equation and laws of method of mixture, heat, principle of method of mixtures
8. Explains processes and phenomena of evaporation and condensation
10. Relates processes and phenomena with causes and effects of evaporation and condensation
11. Calculates using the data of heat, Latent heat
12. Analyses and interprets data, graphs of melting, boiling points, state of substances their temperature

No. of Periods

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

TEACHING LEARNING PROCESS

Induction/Introduction:



Experience and Reflection:

1. Students expressed feelings about hot water bathing and cold water bathing in our daily life situations.
2. Students apply the evaporation and condensation process based on situations.
3. Students explain the phenomena involved in water droplets formed on leaves, window pans, flowers, grass.

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 demonstration of hotness and coldness concept activity. 2. Discussion and demonstration of thermal equilibrium concept activity. 3. Explain Heat, Temperature with examples 	<ol style="list-style-type: none"> 1. Students show the activity of transfer of heat in daily life 2. Discuss the examples of thermal equilibrium situation in daily life 3. Group discussion on difference between heat and temperature. 	<ol style="list-style-type: none"> 1. Give examples of hot bodies and cold bodies 2. Students frame a questions on thermal equilibrium 	<ol style="list-style-type: none"> 1. How heat is transferred? 2. Define “Temperature” 2. Convert 20⁰C into Kelvin scale?

<p>4. Discussion and conduct of transfer of heat energy.</p> <p>5. Discussion and conduct of rate of rise in temperature depends on the nature of the substance.</p> <p>6. Discussion and conduct of method of mixtures concept activity</p> <p>7. Explain and discussion on the specific heat and their applications.</p> <p>8. Conduct and discuss an experiment of finding specific heat of solids.</p> <p>9. Explain evaporation and condensation process with suitable examples.</p> <p>10. Explain the concepts of Humidity, Dew and Fog with reasons, examples</p> <p>11. Discussion and explain about state of substance (ice- water-Vapour)</p> <p>12. Graphical representation of Boiling, Melting, latent heat</p> <p>13. Explain freezing and textual problems</p>	<p>4. Students conduct an activity on the relation between temperature and kinetic energy.</p> <p>5. Solve the problems with the final temperature of a mixture.</p> <p>6. Collect the information on the specific heat of substance with numerical data</p> <p>7. Collet the information between evaporation and boiling.</p> <p>8. Students complete the task on dew and fog</p> <p>9. Students explain the melting, boiling points</p> <p>10. Students solve the problems on heat energy and temperature conversion.</p>	<p>3. Write the definitions of heat and temperature.</p> <p>4. Student complete the homework</p> <p>5. Students write the formula of final temperature of a mixture.</p> <p>6. Expressed units of physical quantities of heat, temperature and latent heat,</p> <p>7. Solve the problems in own way</p> <p>8. Students write the definitions of humidity, Dew and Fog.</p> <p>9. Analysis of numerical data and graphical pictures in own way</p>	<p>3. Write the units of heat?</p> <p>4. The oceans behave like heat store houses for the earth” – Discuss</p> <p>5. Ice floats on water. Why?</p> <p>6. Why evaporation is cooling process?</p> <p>7. Why does it becomes pleasantly warm in winters when freezing starts?</p>
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Check For Understanding Questions

1. Factual:

- a) Does transfer of heat take place in all situations?
- b) Heat is energy that flows from a hotter body to a colder body, but heat is a scalar quantity. Why?
- c) Why condensation is the reverse process of evaporation?

2. Open Ended/Critical Thinking:

- a) What would happen if liquids never evaporated?
- b) Why does it become pleasantly warm in winters when freezing starts?
- c) You bring water in a paper cup to a boil by placing it over a hot flame. Why doesn't the paper cup burn?

Student Practice Questions & Activities:

- a) Write the difference between evaporation and boiling?
- b) Explain the procedure of finding specific heat of solid experimentally?
- c) Write the applications of specific heat in our daily life?
- d) Give one period to the students for the practice session.

TLM's (Digital+Print)

1. Used prepared Quiz paper.
2. Utilized digital classroom.
3. Provide video links QR codes, DIKSHA App
4. YouTube video links
5. IFP

Assessment:

1. Explain why dogs pant during hot summer days using the concept of evaporation?
2. Suggest an experiment to prove that the rate of evaporation of a liquid depends on its surface area and vapour already present in surroundings air.
3. Convert 20°C into Kelvin scale
4. Collect the applications of specific heat.
5. Frame any two questions on differentiating between evaporation and boiling.

SIGNATURE OF THE TEACHER

SIGNATURE OF THE HEADMASTER

VISITING OFFICER WITH REMARKS