## DCP FOR CHAPTER-1

## MATTER

| Number of periods | Sub-Topics |
|---|---|
| 1 | Matter, Characteristics of molecules, States of matter |
| 2 | Molecular model of solids, liquids and gases, Change of state. |
| 3 | Melting, freezing, vaporization or boiling, condensation. Evaporation |
| 4 | Rate of evaporation, Applications of evaporation, |
| 5 | Sublimation, explanation of sublimation by the molecular model. |
| 6 | Summarization of the chapter, Exercise questions. |

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**ODM Teachers' Note**

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| **Class** | VIII | **Subject** | PHYSICS |
| **Prd** | 1 | **Chapter-1** | MATTER |
| **Sub-Concepts** | Matter, Characteristics of molecules, States of matter. | | |
| **Teaching Aid To be used** | Smart Class, PowerPoint presentation. | | |
| **Learning Outcome** | Students will be able to<br>• Demonstrate matter in three states<br>• Distinguish the three states of matter in terms of movement of particles.<br>• Relate the three states of matter with energy of movement of particles in them. | | |
| **Sl. No** | **Step Wise (What to be done)** | | |
| 1. **Introduction** | **For Achievers**<br>➢ Discuss the previous knowledge with the students.<br>➢ Molecules: mono atomic, di atomic molecules. | **For Average**<br>➢ Discuss the previous knowledge with the students.<br>Molecules: mono atomic, di atomic molecules. | |
| **2.Matter** | ➢ Define matter.<br>➢ Explain the composition of matter by showing a video.<br>➢ https://youtu.be/FxS-pzysJJA | | |
| **3.Characteristics of molecules** | Explain the characteristics of molecules<br>➢ Small size<br>➢ They have spaces between them.<br>➢ They are in constant motion.<br>➢ They attract each other. | | |
| **4. States of matter** | ➢ Explain the three states of matter.<br>➢ https://youtu.be/o2qM4o8e_Vo | | |
| **Home** | Exercise: B- 1,2,3 | | |

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| **Assignment** | 1. Define the term matter. What is it composed of?<br>2. State three properties of molecules of matter.<br>3. What do you mean by inter molecular spaces? How do they vary in different states of matter? |
| **8. Common Errors** | |

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| **Class** | VIII | **Subject** | PHYSICS |
| **Prd** | 2 | **Chapter-1** | MATTER |
| **Sub-Concepts** | Molecular model of solids, liquids and gases, Change of state. | | |
| **Teaching Aid To be used** | Smart Class, PowerPoint presentation. | | |
| **Learning Outcome** | • Students will be able to<br>• Demonstrate different change of states.<br>• Differentiate between solids, liquids and gases on the basis of their molecular models. | | |
| **Sl. No** | **Step Wise (What to be done)** | | |
| 1. **Introduction** | **For Achievers**<br>➢ Recapitulate the previous topic by asking the following questions.<br>1. Evaporation takes place at _____ temperatures.<br>2. _____ Process is just the reverse of melting.<br>3. _____ is a process that involves direct conversion of a solid into its vapour on heating.<br>4. The temperature at which a solid converts into a liquid is called its _____.<br>5. The smallest unit of matter that exists freely in nature is called _____.<br>6. Molecules of a substance are always in a state of _____and so they | **For Average**<br>➢ Recapitulate the previous topic by asking the following questions.<br>7. Evaporation takes place at _____ temperatures.<br>8. _____ Process is just the reverse of melting.<br>9. _____ is a process that involves direct conversion of a solid into its vapour on heating.<br>10. The temperature at which a solid converts into a liquid is called its _____.<br>11. The smallest unit of matter that exists freely in nature is called _____.<br>12. Molecules of a substance are always in a state of _____and so they | |

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| | possess _____.<br><br>Inter molecular space is maximum in _____ less in _____ and least in _____.<br>➢ | possess _____.<br><br>Inter molecular space is maximum in _____ less in _____ and least in _____.<br>➢ |
| **2 .Molecular model of solids** | ➢ The teacher will explain the molecular model of solids liquids and gases by showing a video.<br>➢ https://youtu.be/6bHkWh5T3mk<br>➢ Distinguish between solids liquids and gases. | |
| **3. Change of state** | 1. The teacher will explain the change of state by showing a video.<br>2. https://youtu.be/ENVKQVIDNLY<br>3. Define change of state<br>4. Define melting, freezing, boiling, condensation. | |
| **4.Home Assignment** | Exercise: B- 4,5,6,7 | |
| **Common Error(s)** | Difference between boiling and evaporation. | |

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| **Class** | X | **Subject** | PHYSICS |
| **Prd** | 3 | **Chapter-1** | MATTER |
| **Sub-Concepts** | Melting, freezing, vaporization or boiling, condensation. Evaporation. | | |
| **Teaching Aid To be used** | Smart Class, PowerPoint presentation | | |
| **Learning Outcome** | Students will be able to<br>• Define melting.<br>• Define freezing.<br>• Define boiling, condensation, evaporation.<br>• Differentiate between boiling and evaporation. | | |
| **Sl. No** | **Step Wise (What to be done)** | | |
| 1. **Introduction** | **For Achievers**<br>➢ Recapitulation of the previous topic by asking the following questions.<br>➢ Discuss the three states of matter solid, liquid and gas on the basis of molecular model. | **For Average**<br>➢ Recapitulation of the previous topic by asking the following questions.<br>➢ Discuss the three states of matter solid, liquid and gas on the basis of molecular model. | |
| **2. Melting** | ➢ Define melting.<br>➢ Show an activity on melting of wax.<br>➢ Discuss about melting point of different substances. | | |
| **3. Freezing** | ➢ Define Freezing<br>➢ Discuss about freezing point of different substances. | | |
| 4. **Vaporization or boiling** | ➢ Define Vaporization.<br>➢ Define and explain condensation. | | |
| **5.Condensation** | ➢ Define condensation.<br>➢ Explain the process of condensation. | | |

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| **6. Evaporation** | ➢ Define evaporation.<br>➢ Explain the process of evaporation with the help of a video.<br>➢ https://youtu.be/k9l0s5zVibo<br>➢ https://youtu.be/e27UguK78C4 |
| **6.Home Assignment** | Exercise:B-10,11,12. |

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| **Class** | X | | **Subject** | PHYSICS |
| **Prd** | 4 | **Chapter-1** | MATTER | |
| **Sub-Concepts** | Rate of evaporation, Applications of evaporation. | | | |
| **Teaching Aid To be used** | Smart Class, PowerPoint presentation, prism | | | |
| **Learning Outcome** | • Students will be able to<br>• Explain the concept of evaporation.<br>• Explain how the temperature influences the rate of evaporation. | | | |
| **Sl. No** | **Step Wise (What to be done)** | | | |
| 1. **Introduction** | **For Achievers**<br>➢ Recapitulation of the previous topic by asking the following questions.<br>➢ Define evaporation.<br>➢ Explain the terms melting and melting point.<br>➢ A liquid can change into vapour state at a fixed temperature and at all temperatures. Name the processes involved in it. | | **For Average**<br>➢ Recapitulation of the previous topic by asking the following questions.<br>➢ Define evaporation.<br>➢ Explain the terms melting and melting point.<br>➢ A liquid can change into vapour state at a fixed temperature and at all temperatures. Name the processes involved in it. | |
| **2.** Rate of evaporation | ➢ Explain evaporation by showing a video.<br>➢ https://youtu.be/e27UguK78C4 | | | |
| **3. Application of evaporation** | ➢ Explain the applications of evaporation.<br>➢ In summer water gets cooled in the earthen pot.<br>➢ Putting wet cloth on the forehead of a patient having high fever.<br>➢ Helps to maintain the body temperature. | | | |
| **6.Home Assignment** | Exercise: B-17,18,19,20 | | | |

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| **Class** | X | **Subject** | PHYSICS |
| **Prd** | 5 | **Chapter-1** | MATTER |
| **Sub-Concepts** | Sublimation, explanation of sublimation by the molecular model. | | |
| **Teaching Aid To be used** | Smart Class, PowerPoint presentation | | |
| **Learning Outcome** | • Students will be able to<br>• Define sublimation.<br>• Explain sublimation by molecular model.<br>• Differentiate between sublimation and deposition. | | |
| **Sl. No** | **Step Wise (What to be done)** | | |
| 1. **Introduction** | **For Achievers**<br>➢ Recapitulation of previous topic by asking the following questions.<br>➢ Define evaporation.<br>➢ What are the applications of evaporation?<br>➢ Differentiate between evaporation and boiling. | **For Average**<br>➢ Recapitulation of previous topic by asking the following questions.<br>➢ Define evaporation.<br>➢ What are the applications of evaporation?<br>➢ Differentiate between evaporation and boiling. | |
| **5. Sublimation** | ➢ Define sublimation.<br>➢ Define deposition or solidification.<br>➢ Show an activity on sublimation.<br>➢ https://youtu.be/sDeCg6FNuPg | | |
| **3.Explanation of sublimation by molecular model.** | ➢ Explain sublimation by molecular model.<br>Answer the following questions:<br>➢ What do you mean by sublimation? Explain with an example.<br>➢ Why does the size of naphthalene ball decrease when left open? | | |
| **6.Home Assignment** | Exercise:B- 28,29,30. | | |

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| **Class** | X | **Subject** | PHYSICS |
| **Prd** | 6 | **Chapter-11** | MATTER |
| **Sub-Concepts** | Summarization of the chapter, Exercise questions. | | |
| **Teaching Aid To be used** | Smart Class, PowerPoint presentation | | |
| **Learning Outcome** | • Students will be able to<br>• Demonstrate matter in three states.<br>• Demonstrate change of state.<br>• Explain different terms like boiling, melting, freezing. | | |
| **Sl. No** | **Step Wise (What to be done)** | | |
| 1. **Introduction** | **For Achievers**<br>➢ Ask the following questions<br>➢ Define matter.<br>➢ Characteristics of molecules.<br>➢ Three states of matter.<br>➢ Evaporation | **For Average**<br>➢ Ask the following questions<br>➢ Define matter.<br>➢ Characteristics of molecules.<br>➢ Three states of matter<br>➢ Evaporation | |
| **2. Summarization of the chapter** | All topics are to be discussed with the students. | | |
| **3. Exercise** | 13. Exercise questions are to be discussed.<br>14. True false, Fill in the blanks, Match the following, Short question answers are to be discussed. | | |
| **6.Home Assignment** | Exercise: A: 1,2,3,4. | | |