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| School of Pedagogical Science (SPS), M.G University, Kottayam as a part of Ph.D. Programme  Research Scholar : SHANAVAS K E  Supervising Teacher : Prof (Dr.) SAJNA JALEEL, SPS, M.G University, Kottayam. |

Action Script for E Content Lesson based on CDM 3

Name of Teacher : Shanavas K E Standard : XI Science

Name of School : JHSS Thandekkad Strength : 59

Subject : Chemistry Time : 3 Minutes

Topic : Thermodynamics functions and processes

Chapter /Unit : 6 Thermodynamics

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| Audio | Video | Tg - Lg Activities | Phases of CDM |
| Hello plus one students,  Welcome to the world of plus one chemistry. Chapter 6 Thermodynamics. This is the E-Content lesson based on CDM 3. Today I focus upon important Thermodynamics functions and processes.  Let us start with a puzzling question. Assess the statement given.  What are these properties?  Can you give examples of Macroscopic properties  What are Macroscopic Thermodynamics?  What is the state of System?  What is Initial state?  What is Final state?  Then can you define state function?  Can you give examples of state function?  What is path function?  Can you give examples of path function?  The graphical representation of various chemical processes w r to pressure, volume behaviour of given amount of ideal gas.  Identify the graph AB, AC, AD and AE  What is cyclic process?  What is reversible process?  What is Irreversible process?  Then various process discussed above, what is thermodynamic process?  **Time gap online assignment** In the p-v graph, isothermal process curve at the top than adiabatic curve. Explain? | Teacher presents  **Slide**  “In order to note that temperature of water we do not deal with individual molecules but we consider the molecules in bulk”  Slide Macroscopic properties  Examples of Macroscopic properties: Pressure, Temperature, Volume  Slide Definition of Macroscopic Thermodynamics  It refers to the properties of a system which arise from the collective behaviors of large number of species or the bulk.  Slide Definition State of system is the condition of the system. It refers to the conditions of existence of a system when macroscopic properties have definite values.  Slide Definition Initial state refers to starting state of the system in equilibrium.  Slide Final state refers to end state of the system in equilibrium.  Slide It is a property of system whose values depend only on the initial and final states of the system.  Slide Variables P, T, V are called state function because their values depend only on the state of the system and not how it is reached.  Slide It is a property of system whose values depend on the path followed to reach that specific value. Slide Heat q and Work w        Slide In cyclic process, a system undergoes a series of changes and returns back to its initial state. Slide It is the process carried out slowly that the system and surroundings are always in equilibrium.  Slide The process carried out so rapidly that the system does not get a chance to attain equilibrium.  Slide Thermodynamic process bring change in the state of system.  Isothermal expansion does greater than adiabatic expansion.  **Thank you**  Designate a study area  Get Organized. Enjoy Chemistry. Learn well | Gaining attention to objectives  Presentation of slides  Audio- Video input  Developing the content  Audio-video input entering into the content  Asking questions  Developing the content  Audio-video input  Audio-video input giving experiments  Audio-video input giving more application and problems  Evaluate and assess the content | **Phase I**  Establish rapports with the students  Confrontation with stage relevant task  Presents a puzzling problem  Elicit student’s Responses  Seeks reasoning  **Phase II**  Inquiry  Insist to think  Probes reasoning.  Offer counter suggestions  Elicit student’s responses  Giving perceptual Cues or Hints  Probes reasoning.  Insist to think  Elicits student’s responses  Seeks Justification results in Assimilation  Accommodation of new learning experience leading to ability to apply in different learning situations. |