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| **School of Pedagogical Sciences (SPS)**  **M.G University Kottayam as a part of Ph. D Programme**  Research Scholar  **: Shanavas K.E**  Supervising Teacher **: Dr Sajna Jaleel Professor SPS** | | | |
| **Action Script : E Content Lesson based on CDM 1**  Name of Teacher**:** Shanavas K.E Standard: XI Science  Subject: Chemistry Strength: 59  Topic: Introduction to chemical bonding Time : 6 minutes Chapter: Chemical Bonding and Molecular structure | | | |
| Audio | video | Tg-lg activities | Phases of CDM |
| Dear students, Good Morning All,  Welcome to the world of Chemistry: Chapter 4 Chemical Bonding 2, molecular Structure. This is the E Content Lesson based on CDM 1  Have you been enjoying chemistry to see the Various colorful chemical reactions. of course. Yes. That's Awesome.  What is the Color of hydrogen gas?  Naturally occurring hydrogen gas is colorless or white. The colors codes of H refer the source or the process used to make Hydrogen.  When H is blue in color?  Blue H is produced mainly from Natural gas methane using a process called steam reforming. The output is H but also CO2 as a byproduct.  Students, do you think about, how H2 molecules are formed? Yes, H atoms combine together to form molecules.  What is combined to form molecules? H atom form Bond with other H atoms to form H molecule. Eg H-H bonds in H2 molecule  Is ions form bond with other ions to forms compounds?  Yes.  See the slide.  Can you define chemical bond? The attractive force which bond atoms, ions together to form molecules is called chemical bond.  Why a definite number of atoms used to constitute a particular molecule as far example Hydrogen molecule is H2 and not H3 or H4?  Students, do you know the history of chemical Bonds?  See the video presentation of chemical bonds  The subject of chemical bonding is at the heart of chemistry. In 1916, Gilbert Newton Lewis (1875-1946) published his seminar paper suggesting that the chemical bond is a pair of electrons shared by 2 atoms.  Students do you know, why chemical bonds are formed?  Firstly, they combine together to form various compounds through chemical bonds to satisfy the lowest energy states. Secondly, they want to gain stability or stable electronic configuration similar to Noble gas  Why do atoms take part in chemical reactions?  To attain stability  How atoms attain stability?  The atoms lose or gain electrons and attains stability in octet in their valence shell or convert into noble gas configuration and attain stability in octet states.  Is He2 molecule is formed?  How he attains stability?  Then we can do an assignment.  Dear students,  I think you all have a clear idea about the introduction to chemical bonding.    Thank you, students.  We will see the next E content Lesson 2. | Teacher presents  Slide    Slide          Slide  Definition    Slide    Video history of chemical bonds photo-Lewis  Slide  G.N Lewis and its contributions to chemical bonding  Slide  Images of various chemical bonds  Slide  Valence electrons  Images of Noble gases  Slide  Images of atoms to attain Noble gas configuration in the octet states  No. Helium diatomic or Helium molecule is not formed. Helium attain stability in duplet states. S orbital is fully filled (He (z = 2) IS2  **Time gap online assignment**  What are the basis of all chemical bonds?  What are the states in which atoms attains stability?  Slide  **Thank you** | Gaining the attention to objectives  Presentation of slides  Audio-Video input  Audio-Video input entering into the content  Developing the content  Audio-Video input  Audio-Video Input giving more applications and problems    Asking questions and promote learning  Evaluate and assess the content  Presentation of Slides giving answers  Valence electrons  Octet states  Duplet states | **Phase 1**  Establishes report with the students.  Confrontation with stage relevant task  Elicits Students responses.  **Phase II Inquiry**  Gives perceptual uses  Seeks reasoning  Elicit student’s responses  Seeks justification  **Phase III**  **Transfer**  Offer counter suggestions  Presents a related task.  Probes reasoning Seeks justification  Ask questions related to Concepts  Insisting to think  Accommodation of new learning experience leading to ability to apply in different learning situations    Probes reasoning of new experience results in assimilation and accommodation |