**LESSON PLAN TEMPLATE**

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| **Term** | **Date** | **Subject** | **Class** | **Unit** | **Lesson** | **Duration** | **Class Size** |
| **I** | **21/10/2020** | **Chemistry** | **S4** | **4** | **1out of 4** | **40minuts** | **15** |
| Type of special Educational Needs to be catered for in this lesson and number of learners in each category | | | | No special education need | | | |
| Unit title | Covalent bond and molecular structure | | | | | | |
| Key Unit competence | Demonstrate how the nature of the bonding is related to the properties of covalent compounds and molecular structures. | | | | | | |
| Title of the lesson | Overlap of atomic orbitals to form covalent bonds | | | | | | |
| Instructional objective | Using dot and cross diagrams to show how a covalent bond is formed in: | | | | | | |
| Plan for this Class (location: in/outside) | Inside class room | | | | | | |
| Learning Materials (For all learners) | Computer, flip charts, chalk board and internet | | | | | | |
| References | E-source, chemistry student and teachers book for S4. | | | | | | |

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| Timing for each step | Description of teach and learning activity  Having the different examples Water formation student will be guided how Water molecule is formed by two atoms of hydrogen and one atom of oxygen, its formula is H2O. | | Generic competences and Cross cutting issues to be addressed + a short explanation |
| **Teacher activities** | **Learner activities** |  |
| Introduction  (5minuts) | **Engage phase**  With the chats of different molecules  Ask the learners to give examples molecules from the flip chart. | -The learners will observe and they will answer questions from teacher by stating organisms seen from the flip chart. | Critical thinking,  brainstorming, cooperation,  communication skills, problem solving  Learner centered learning utilizing ICT with 4E  (Exposure, Enjoy, Engage, Evaluate)  (a)Gender education: During forming the groups, we based on  the number of boys and girls in the class |
| Development of the lesson (30 minutes) | A) **Explore phases**  Students are organized into five group and they are observing in front of them the flip chart.  Teacher will develop scratch animation showing how molecules of hydrogen and oxygen combine together to form water to facilitate learners to explore the content  B) **Elaborate phase**  I ask the learners to observe the video  Downloaded from you tube that shows how different molecules are formed like Hydrogen molecule (H2) (b) Hydrogenchloride molecule (HCl) (c) Chlorine molecule (Cl2)**.**  supporting the groups and help them where possible  Ask the learners to note what they have observed  Using the blackboard, ask the learners to present their findings  **(c) Explain phase**  -In their groups, learners, referring  to the above activity, are going to give type of bonding that exist in the formation of above molecules  - I ask them to present their findings and are noted on the blackboard. | -The learners go to their groups and choose the secretaries and time keepers of the group  - They understand carefully instructions from teacher and work together in order to achieve to good results.  -The learners in their group, carry out the simple experiment in their group joining different substances using chewing gums and note their observations  They present their findings on the black board  The learners watch video, provided in scratch games | (b) Peace education: acknowledging our differences and be the importance of living together  (c) Inclusive education: to pay attention to all learners in the class, based on their ability of learning  (d) Environmental education different organism are important in ecosystem  to environment |
| Conclusion (5minuts) | **Evaluate phase**  I ask learners to play the scratch GAME, and ask them toanswer individually | The learners with their machines connected to  the network ,start a scratch project showing bonding of mention molecules |  |
| Teacher self-evaluation |  | | |