

Active Learning Lesson Plan

Chemistry - Microscopic World II

Polarity of bond and molecule (YoTeach!)

School :	XXX Secondary School		
Subject :	Chemistry		
Form :	S	Date:	DD/MM/YYYY
Number of students:	24	Time:	50 minutes
Topic :	Polarity of covalent bonds		

Prior Knowledge:

- General trends in the electronic arrangement of the main group elements down a group and across a period in the Periodic Table
- Meaning of covalent boards
- Electric diagrams and structural formulae of covalent compounds

Learning Objectives:

- Define the electronegativity of an atom
- Describe the general trends in the electronegativities of the main group elements down a group and across a period in the Periodic Table
- Explain how the sharing of electrons in covalent bonds leads to non-polar and polar bonds

Learning activities planned for this lesson:

- Learn how to recognize and indicate the polarity of polar bonds using **YoTeach!**.

Flow/Breakdown of lesson

Review and Warm-up (10 mins)

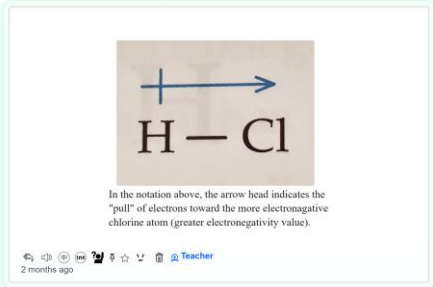
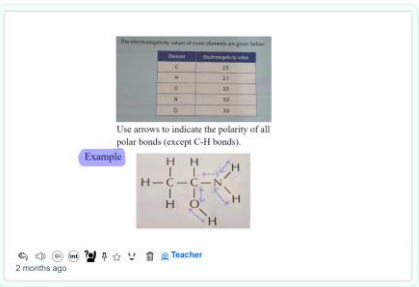


Teacher helps students to recall the prior knowledge including:

- general trends in the electronic arrangement of the main group elements down a group and across a period in the Periodic Table
- Meaning of covalent boards
- Electric diagrams and structural formulae of covalent compounds

Teacher's demonstration and explanation (35 mins)

Teacher teaches the following concepts (could be occurred on the YoTeach! platform).

- Define the electronegativity of an atom
- Describe the general trends in the electronegativities of the main group elements down a group and across a period in the Periodic Table
- Explain how the sharing of electrons in covalent bonds leads to non-polar and polar bonds

Teacher's Activity	Students' Activity
<p>YoTeach! will be used to recognize and indicate the polarity of polar bonds.</p> <p>Teacher explains how to indicate the polarity of polar bonds by giving an example. (Pic 1)</p> <p>By giving another example, teacher shows how to recognize the polar bonds with the given electronegativity value, and indicate the polarity of polar bonds using the "arrow" notation. (Pic 2)</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="124 882 188 909" style="text-align: center;"> <p>Pic 1</p>  </div> <div data-bbox="639 882 703 909" style="text-align: center;"> <p>Pic 2</p>  </div> </div> <p>With a similar question, students try to apply the knowledge learnt from teacher's demonstration</p> <p>Teacher will ask students to write down their solutions in YoTeach!. Teacher will then check all the solutions of students, identify the correct answers, and go over closely which ones are incorrect.</p> <p>Bonus Question is also provided to encourage students to try an advanced cross-topic question.</p>	<div style="text-align: center;">  </div> <p>Enter the room by scanning the QR code and entering the pin: 85180467.</p> <p>Observe and work out according to teacher's demonstration.</p> <p>Students can ask questions through YoTeach!.</p> <div style="text-align: center;">  </div>

Conclusion and Homework assignment (5 mins)

Teacher concludes the lesson by recapping the concepts/objectives learnt in this lesson.

Assign homework to students.

Total: 50 mins