

Lesson_Plan_1

Subject:	Chemistry
Level:	Sec 3
Topic:	Chemical Bonding
Learning Outcome(s):	<ul style="list-style-type: none"> ▪ Able to understand electronegativity of some elements ▪ Able to use the electronegativity values to decide the polarity of molecules ▪ Able to use LinoIT as a collaborative tool
Students' Pre-requisites	<p>a) describe the formation of ionic (electrovalent) bonds between metals and non-metals as the electrostatic force which holds two oppositely charged ions together.</p> <p>b) state that ionic materials contain a giant lattice in which the ions are held by electrostatic attraction</p> <p>c) deduce the formulae of other ionic compounds from diagrams of their lattice structures, limited to binary compounds</p> <p>d) relate the physical properties (including electrical property) of ionic compounds to their lattice structure</p> <p>e) describe the formation of a covalent bond by the sharing of a pair of electrons in order to gain the electronic configuration of a noble gas</p> <p>f) describe, including the use of 'dot and cross' diagrams, the formation of covalent bonds between non-metallic</p> <p>g) describe covalent bonding in terms of orbital overlap, giving σ and π bonds</p> <p>h) describe hydrogen bonding</p> <p>i) describe intermolecular forces (van der Waals' forces)</p> <p>j) relate the physical properties (including electrical property) of covalent substances to their structure and bonding</p> <p>k) describe metallic bonding in terms of a lattice of positive ions surrounded by mobile electrons ('sea of electrons')</p> <p>l) relate the electrical conductivity of metals to the mobility of the electrons in the structure</p> <p>m) describe, interpret and/or predict the effect of different types of bonding (ionic bonding; covalent bonding and metallic bonding) on the chemical and physical properties of substances</p>
Total Duration of Lesson:	60 min
ICT tools used:	LinoIT http://en.linoit.com/

Description		Duration	Resources
1.	<ul style="list-style-type: none"> ▪ Teacher directs students to the home site of LinoIT. She gives instructions on how students can sign up for a free account. ▪ Teacher informs students that once they log in, they will see the class' canvas for today's lesson. 	10min	<ul style="list-style-type: none"> ▪ Personal laptops ▪ http://en.linoit.com/
2.	<ul style="list-style-type: none"> ▪ Teacher reminds students that they have completed giant ionic, giant metallic and simple molecular structures, are there any important ideas and concepts which they should take note of? ▪ Teacher asks students to post their ideas taking 	20min	

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	<p>any post it from the side bar.</p> <ul style="list-style-type: none">▪ Teacher also asks students to make comments on what others have posted.▪ Teacher reminds students that they can post images and videos.▪ Teacher shows the canvas using the projector.▪ Teacher prompts students with questions when reading the comments and ideas posted by them.		
3.	<ul style="list-style-type: none">▪ Teacher informs students to put on their earphones to listen and watch the videos posted on the canvas.▪ Teacher advises students to read the links given on the canvas to understand more on electronegativity.▪ Teacher asks students to post their comments on how electronegativity can be used to decide whether a molecule is polar or not.	15min	<ul style="list-style-type: none">▪ Youtube videos on electronegativity▪ canvas
4.	<ul style="list-style-type: none">▪ Teacher closes the lesson by showing on the whiteboard how to decide whether a water molecular is polar, using the electronegativity values of oxygen and hydrogen atoms.▪ Teacher informs students next lesson they will be completing a worksheet on polarity.	10min	<ul style="list-style-type: none">▪ Whiteboard