

**Provincial Educational Department – Sabaragamuwa –  
Weekly School**

Subject - Science

Week – 11<sup>th</sup> oct – 15<sup>th</sup> oct

Grade - 11

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## Hydrocarbons and their Derivatives

Compounds containing carbon & hydrogen only are hydrocarbons

Ex : Petrol, Methane, LP gas, Kerosene oil, Diesel, Wax

- Study the text book & writ down the steps of a test to confirm that carbon & hydrogen are contained in wax

Based on their structures hydrocarbons are classified into three parts

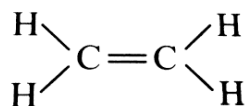
- Alkane
- Alkene
- Alkyne

- What are known as alkanes & Explain the bond type between C & H using an example

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Hydrocarbons in which the number of double bonds is one more are called alkenes

Ex: Ethene (C<sub>2</sub>H<sub>4</sub>)



	Alkane	Alkene	Alkynes
Introduction			
Structure			
Bond type between C & H			

- Name four derivatives of ethene & draw their structures

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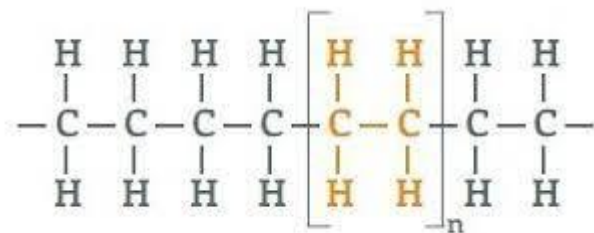
Ethene & derivatives f ethene are used to produce polythene, Styrofoam & Teflon

- What are known as polymers?

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The small molecules forming polymers are known as monomers & the basic structural units contained in the polymer are known as repeating units

Polythene polymer is given bellow



- Mention the repeating unit of polythene .....
- Mention the monomer of polythene .....
- Briefly indicate the polymer of polythene .....
- To which hydrocarbon category the monomer of the polyethene belongs?  
.....

# Apart from polythene, Polymers like polychloroethene (Polyvinyl chloride), Polytetrafluoroethylene (Teflon) can be informed

- Complete the following table

Material	Special Properties	Polymer includes	Structural formula of monomer
Polythene bags			
Water pipes			
Non-Stick cooking pans			

- Polymers can be classified into two parts name them  
1)..... 2).....
- Polymers can be divided into two based on origin name them  
1)..... 2).....
- Write examples for Natural & Artificial polymers  
.....
- Polymers can be classified into three based on structure Name them  
1)..... 2).....  
3).....
- What is the element used in vulcanizing of rubber?  
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- Draw a diagram to show how Sulphur is making cross links in vulcanized rubber