

SUBJECT	PHYSICAL SCIENCES
TOPIC	ORGANIC CHEMISTRY

CHAPTER SUMMARY

Organic chemistry is the study of **carbon compounds**, which are compounds that contain carbon atoms. These carbon compounds have complex shapes and forms due to the ability of a carbon to form long chains of itself called **Catenation**. Catenation also allows for multiple bonds to form between carbon atoms which allows for the formation of ALKENES and ALKYNES.

LESSON VOCABULARY

KEY TERM	DEFINITION	SOURCE	≡REF
Homologous series	<i>A series of organic compounds that can be described by the same general formulae.</i> <i>It is a series of organic compounds where one member differs from the next with a CH₂ group.</i>	SOUTH AFRICAN PHYSICAL SCIENCES EXAMINATION GUIDELINES.	PAGE 15
Functional group	<i>A bond or a group of atoms that determine the physical and chemical properties of a group of organic compounds.</i>		PAGE 16
Saturated compounds	<i>Compounds consisting only of single bonds between carbon atoms and other atoms.</i>		PAGE 15
Isomers	<i>Molecules which have the same molecular formulae but different structural formulae.</i>		PAGE 16

LESSON EXAMPLES AND REFERS**ESTERIFICATION.**

- Esters are formed when there is an acid catalyzed condensation reaction between an alcohol and a carboxylic acid.
- The products of esterification are and ESTER and WATER
- Names end with suffix "*oate*"
- First name part is from the alkyl group formed from the alcohol.
- Second name part comes from the parent acid with suffix "*oic acid*" replaced by the suffix "*oate*"

LESSON OUTCOMES**LESSON QUESTIONS**

- Understand the basic structure, reactions and usefulness of organic molecules.
- Understand the formation of new molecules through ADDITION, ELIMINATION and SUBSTITUTION reactions.