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Education and Technology Team
Ethio-Parents' Schools: Addis Ababa (Gerji/Gullele) and Hawassa.
Chemistry centralized lesson guideline for home study

This guideline is designed to help and facilitate students' independent -learning in their stay at home because of state of emergency. Thus, students are expected to follow and apply it strictly in their independent- study.

Date: April 20-May 1, 2020 **Unit:** Four Five **Topic:** CHEMISTRY IN INDUSTRY AND ENVIRONMENTAL POLLUTION PERIODIC CLASSIFICATION OF THE ELEMENTS

We all must prevent and treat ourselves and our community from corona virus, COVID – 19, and stop its spread by following the instruction of the WHO and/or the Ethiopian Health Minister.

Grade 7	Lesson 1 (April 21, 2020)	Lesson 2 (April 22, 2020)	Lesson 3 (April 23, 2020)	Lesson 4 (April 24, 2020)
Subtopics to be covered	4.3 ***Structure of the atom*** ☑ *Electron Configuration* ☞ *Definition* ☞ *Maximum number of electrons in each shell* ☞ *Common examples* ☞ *Complete shell of electrons*	4.3 ***Structure of the atom*** ☑ *Valence electrons* ☑ *Valence shells* ☞ *Definition* ☞ *Common examples* ☞ *Sample problems*	4.3 ***Structure of the atom*** 4.3.5 ***IONS*** ↳*Definition* ↳*Possibility of ion* ↳*Formation* ↳*Types of ions* ↳*Common Examples*	24.4 ***Molecules*** ↳ *Definition* ↳ *Classification* 4.4.1 ***Molecules of elements*** ↳ *Monatomic,* ↳ *diatomic,* ↳ *polyatomic,* *Common Examples*
Objectives	***At the end of covering the above lessons, you will be able to:*** ✓ *Define the concept electron configuration and complete shell of electrons* ✓ *Write the electronic configuration of the first 18 elements in the main shell*	✓ *Define the term like valence electrons and valence shells* ✓ *Determine the number of valence electrons and identify valence shells of the first 18 elements*	✓ *Define ions and explain the possibility of their formation from a neutral atom by losing and gaining electrons* ✓ *Give common examples of positive and negative ions* ✓ *Differentiate between atom and ion*	✓ *Define terms like molecules in general and molecules of elements in particular* ✓ *Give examples of monatomic, diatomic and polyatomic molecules of elements* ✓ *Compare and contrast between monatomic, diatomic and polyatomic molecules of elements*
Text Page range	**97-99**	**100**	100-101	**101-102**
Evaluation	**Activity 4.9** **Exercise 4.5**		Exercise 4.6	**Activity 4.10**

Grade 7	Lesson 5 (April 27, 2020)	Lesson 6 (April 28, 2020)	Lesson 7 (April 29, 2020)	Lesson 8 (May 1, 2020)
Subtopics to be covered	*4.4* ***Molecules*** *4.4.1* ***Molecules of compounds*** ✓ *Definition* ✓ *Common Examples* ✓ *Summary Exercises*	*5.1* ***Historical Development of periodic classification of the elements*** ☑ *Law of Triads - Group of Three* ✓ *Statement of the law* ✓ *Common examples* ☞ *J.W. Dobereiner*	*5.1* ***Historical Development of periodic classification of the elements*** ☑ *Law of Octaves - Group of Eight* ✓ *Statement of the law* ✓ *Common examples* ☞ *John Newland*	*5.2* ***Mendeleev's Periodic Classification*** ✓ *Periodicity* ✓ *Mendeleev's periodic law* ✓ *Mendeleev's periodic table*
Objectives	***At the end of covering the above lessons, you will be able to:*** ✓ *Define terms like molecules of molecules of compounds* ✓ *Give examples of molecules of compounds* ✓ *Compare and contrast between molecules of elements and compounds*	✓ *Give common examples that show repetition in nature* ✓ *Describe importance of classifying elements* ✓ *State the law of triads and give common examples*	✓ *State the law of triads and give common examples* ✓ *Compare and contrast between the law of triads and the law of octaves*	✓ *State Mendeleev's periodic law and explain its meanings* ✓ *Describe periodicity* ✓ *Compare and contrast between the law of triads, the law of octaves and Mendeleev's periodic law*
Text Page range	**102-108**	**109-111**	111	**112**
Evaluation	**Exercise 4.7** **Review exercise**	**Exercise 5.1**		Activity 5.1 Exercise 5.2 **Centralized self-test**

Note:

- ☑ You are highly recommended to use centralized note uploaded on EPS telegram channel along with your text book.
- ☑ You are kindly requested to use the learning outcomes check list at the end of each unit in your text book. This will help you to evaluate yourself whether you achieved the minimum learning competencies or not.