FORM 3

TERM 1

SUBJECT: CHEMISTRY.

TOPIC 1: GAS LAWS.

**TEACHER’S NAME: ………………………………………… TSC NO: …………….**

**SCHOOL/ INSTITUTION : ……………………………………………………………….**

**FORM: 3 TERM: 1 YEAR……………..**

**NUMBER OF STUDENTS……. SUBJECT: CHEMISTRY**

TOPIC: GAS LAWS.

SUB-TOPIC: BOYLE’S LAW.

**WEEK: …….. LESSON NUMBER: ……..**

**DATE: …….. TIME: ……….**

**OBJECTIVES**: **By the end of the lesson the learner should be able to;**

-State Boyle’s law.

-Explain Boyle’s law using kinetic theory of matter.

-Represent Boyle’s law mathematically and graphically.

-Solve further problems involving Boyle’s law.

-Plot and interpret graphs involving pressure and volume of gases.

LESSON PRESENTATION

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| **TIME** | **CONTENT** | **LEARNING ACTIVITIES** | **RESOURCES** | **REFERENCE** |
| 5 MINUTES | **INTRODUCTION**State the Boyle’s law. | Discussion.Questions and answers. | -Chalk board/white board.-A piece of chalk/ marker pen. | ***K.L.B. BK III****PP. 1-5* |
| 30 MINUTES | **BODY DEVELOPMENT**-State Boyle’s law.-Explain Boyle’s law using kinetic theory of matter.-Represent Boyle’s law mathematically and graphically.-Solve further problems involving Boyle’s law.-Plot and interpret graphs involving pressure and volume of gases. | -State Boyle’s law.-Explain Boyle’s law using kinetic theory of matter.-Represent Boyle’s law mathematically and graphically.-Solve further problems involving Boyle’s law.-Plot and interpret graphs involving pressure and volume of gases. | Chart Volume-pressure relationship.Syringes.Calculators.Graph papers. | ***K.L.B. BK III****PP. 1-5****Longhorn Book III****PP 1 -8* |
| 5 MINUTES | **CONCLUSION**Giving assignments. | Questions and answers. | -Chalk board/white board.-A piece of chalk/ marker pen. | ***K.L.B. BK III****PP. 1-5* |

SELF-EVALUATION:­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**TEACHER’S NAME: ………………………………………… TSC NO: …………….**

**SCHOOL/ INSTITUTION : ……………………………………………………………….**

**FORM: 3 TERM: 1 YEAR……………..**

**NUMBER OF STUDENTS……. SUBJECT: CHEMISTRY**

TOPIC: GAS LAWS.

SUB-TOPIC: CHARLE’S LAW.

**WEEK: …….. LESSON NUMBER: ……..**

**DATE: …….. TIME: ……….**

**OBJECTIVES**: **By the end of the lesson the learner should be able to;**

State Charles’ law.

Explain Charles’ law using kinetic theory of matter.

Convert temperature in degree Celsius to Kelvin and vice-versa.

Express Charles’ law with equations.

Give a graphical representation of Charles’ law.

Solve numerical problems based on Charles’ Law.

LESSON PRESENTATION

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| **TIME** | **CONTENT** | **LEARNING ACTIVITIES** | **RESOURCES** | **REFERENCE** |
| 5 MINUTES | **INTRODUCTION**-State Charles’ law. | Discussion.Questions and answers. | -Chalk board/white board.-A piece of chalk/ marker pen. | *Longhorn Book III PP 9-14* |
| 30 MINUTES | **BODY DEVELOPMENT**Teacher demonstration:- To show expansion of air when heated and contraction when pressure is constant.Explain increase in volume when temperature is raised.Q/A: - relation between volume and temperature, leading to Charles’ law.Teacher explains inter-conversion of the units.Students complete a table of temperature in the two unitsDerive equations from volume and temperature relationship.Exposition: - Teacher exposes a volume-temperature graph and extrapolates it to obtain the absolute temperature. The definition of absolute temperature is exposed.Worked examples.Supervised exercise. | Teacher demonstration:- To show expansion of air when heated and contraction when pressure is constant.Explain increase in volume when temperature is raised.Q/A: - relation between volume and temperature, leading to Charles’ law.Teacher explains inter-conversion of the units.Students complete a table of temperature in the two unitsDerive equations from volume and temperature relationship.Exposition: - Teacher exposes a volume-temperature graph and extrapolates it to obtain the absolute temperature. The definition of absolute temperature is exposed.Worked examples.Supervised exercise. | Calculators.Colored water,Glass tube,Warm water,Cork and Flask. | ***K.L.B.******BK III*** *P. 6-12**Longhorn Book III PP 9-14* |
| 5 MINUTES | **CONCLUSION**Giving assignment on the sub-topic. | Questions and answers. | -Chalk board/white board.-A piece of chalk/ marker pen. | *Longhorn Book III PP 9-14* |

SELF-EVALUATION:­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**TEACHER’S NAME: ………………………………………… TSC NO: …………….**

**SCHOOL/ INSTITUTION : ……………………………………………………………….**

**FORM: 3 TERM: 1 YEAR……………..**

**NUMBER OF STUDENTS……. SUBJECT: CHEMISTRY**

TOPIC: GAS LAWS.

SUB-TOPIC: COMBINED LAW.

**WEEK: …….. LESSON NUMBER: ……..**

**DATE: …….. TIME: ……….**

**OBJECTIVES**: **By the end of the lesson the learner should be able to;**

-Derive the Gas Law.

-Derive the combined gas law equation.

-Solve numerical problems using the equation.

LESSON PRESENTATION

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| **TIME** | **CONTENT** | **LEARNING ACTIVITIES** | **RESOURCES** | **REFERENCE** |
| 5 MINUTES | **INTRODUCTION**Explain and deduce a formulae for the combined gas equation. | Discussion.Questions and answers. | -Chalk board/white board.-A piece of chalk/ marker pen. | ***K.L.B.******BK III*** *P. 12* |
| 30 MINUTES | **BODY DEVELOPMENT**Q/A: - Combining Boyle’s and Charles’ Laws.Worked examples. | Q/A: - Combining Boyle’s and Charles’ Laws.Worked examples. | Calculators. | ***K.L.B.******BK III*** *P. 12**Longhorn Book III PP 14-16* |
| 5 MINUTES | **CONCLUSION**Oral evaluation on the sub-topic. | Questions and answers. | -Chalk board/white board.-A piece of chalk/ marker pen. | ***K.L.B.******BK III*** *P. 12* |

SELF-EVALUATION:­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**FOR FULL LESSON PLANS TEXT 0722546300/ click this WHATSAPP link wa.link/12zftz**