Lesson Plan

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Slide 1 : TITLE AND INTRODUCTION

- **Subject:** Chemistry
- **Class:** Form 5
- **Module:** ALCOHOL
- **Lesson Title:** ALCANS
- **Objectives:**
  - By the end of this lesson, learners should be able to:
  - Identify the general formula of alkanes.
  - Explain the physical properties of alkanes.
  - Describe the uses of alkanes in everyday life.
  - Illustrate the structural formula of simple alkanes.

Slide 2 : PREVIOUS KNOWLEDGE REVIEW

- **Concepts:**
  - Students should know the basic structure of hydrocarbons.
  - Students should understand the concept of covalent bonding.
- **Question:** What is the simplest hydrocarbon, and what is its molecular formula?

Slide 3 : REAL LIFE APPLICATION

- In Cameroon, alkanes are commonly used as fuels in households and industries. For instance, propane and butane, both alkanes, are used in cooking gas. Understanding how these alkanes function and their properties can help in making informed choices about energy use and safety in their handling.

Slide 4 : PRESENTATION OF CONCEPTS - Concept 1

- **General Formula and Structure of Alkanes:**
  - Alkanes are saturated hydrocarbons with the general formula $C\_nH\_2n + 2$. They consist of single bonds between carbon atoms.
- **Resources:**
  - Educational Site on Alkanes
  - YouTube Video on Alkanes

Slide 5 : PRESENTATION OF CONCEPTS - Concept 2

- **Physical Properties of Alkanes:**
  - Alkanes are generally nonpolar and have low reactivity. Their boiling points increase with molecular weight.
- **Resources:**
  - Educational Site on Alkane Properties
  - YouTube Video on Alkane Properties

Slide 6 : APPLICATION EXERCISES

- **Exercise:** Identify the molecular formula for the following alkanes:
  - Methane
  - Ethane
  - Propane
- **Question:** What are the physical states of these alkanes at room temperature?

Slide 7 : Corrigé de l'exercice 1

- **Solutions:**
  - Methane: CH_4
  - Ethane: C_2H_6
  - Propane: C_3H_8
- **Physical States:**
  - Methane: Gas
  - Ethane: Gas
  - Propane: Gas

Slide 8 : Corrigé de l'exercice 2

- **Note:** There is no second exercise provided.

Slide 9 : SUMMARY

- Alkanes have a general formula of $C\_nH\_2n + 2$.
- They are saturated hydrocarbons with single bonds.
- Alkanes have low reactivity and are mostly used as fuels.

Slide 10 : HOMEWORK

- **Exercise 1:** Draw the structural formula for butane and pentane.
- **Exercise 2:** List two uses of alkanes in daily life and explain their significance.

Slide 11 : BILINGUAL GAME

- **BILINGUAL GAME:**
  - Alkane : Alcane
  - Methane : Méthane
  - Saturated : Saturé
  - Hydrocarbon : Hydrocarbure
  - Formula : Formule