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Crash Course Chemistry #40: Hydrocarbon Power

Name: _____ Date: _____

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- Carbon compounds are called _____ compounds.
- Organic chemistry studies molecules primarily based on the element _____.
- A hydrocarbon in which all carbon atoms have four single bonds is called a _____ hydrocarbon.
- The simplest alkane is _____ with the formula CH_4 .
- Compounds with the same molecular formula but different structures are known as _____.
- A hydrocarbon with four carbon atoms and a branched structure is called _____.
- A chain with five carbon atoms corresponds to the prefix _____.
- The suffix "-yl" is used to indicate a(n) _____ group attached to a carbon chain.
- The rule for naming carbon chains is to assign numbers that give attachments the _____ numbers possible.
- An example of a reaction involving a hydrocarbon and oxygen is called _____.
- In halogenation, _____ atoms replace one or more hydrogen atoms in a hydrocarbon.
- The process of removing hydrogen atoms from a hydrocarbon is called _____.
- The products of complete combustion of a hydrocarbon are carbon dioxide and _____.
- A hydrocarbon with the formula C_4H_{10} can exist as n-butane or _____.
- The compound 2-ethyl-3,5-dimethylnonane contains a main chain with _____ carbon atoms.

Crash Course Chemistry #40: Hydrocarbon Power KEY

- Carbon compounds are called **organic** compounds.
- Organic chemistry studies molecules primarily based on the element **carbon**.
- A hydrocarbon in which all carbon atoms have four single bonds is called a **saturated** hydrocarbon.
- The simplest alkane is **methane** with the formula CH_4 .
- Compounds with the same molecular formula but different structures are known as **isomers**.
- A hydrocarbon with four carbon atoms and a branched structure is called **isobutane**.
- A chain with five carbon atoms corresponds to the prefix **pent-**.
- The suffix "-yl" is used to indicate a(n) **attachment** group attached to a carbon chain.
- The rule for naming carbon chains is to assign numbers that give attachments the **lowest** numbers possible.
- An example of a reaction involving a hydrocarbon and oxygen is called **combustion**.
- In halogenation, **halogen** atoms replace one or more hydrogen atoms in a hydrocarbon.
- The process of removing hydrogen atoms from a hydrocarbon is called **dehydrogenation**.
- The products of complete combustion of a hydrocarbon are carbon dioxide and **water vapor**.
- A hydrocarbon with the formula C_4H_{10} can exist as n-butane or **isobutane**.
- The compound 2-ethyl-3,5-dimethylnonane contains a main chain with **nine** carbon atoms.

15 Questions

Answer Key Included

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