

Lesson 4 - Properties of Alkanes

Learning Intentions:

By the end of this lesson, I will be able to...

- ★ State properties of the Alkane family.

Task 1 - Properties of Alkanes

The alkanes are all _____ and so make excellent _____.

They readily undergo _____ reactions in the presence of _____.

The alkanes are otherwise _____.

Task 2

Use page nine of the data booklet to complete the following table:

| Name | No of Carbon Atoms | Boiling point |
|---------|--------------------|---------------|
| Methane | | |
| ethane | | |
| Propane | | |
| Butane | | |
| Pentane | | |
| Hexane | | |
| Heptane | | |
| Octane | | |

Task 3

From the table you have filled in, what do you notice about the boiling point of alkanes as the number of carbon atoms increases?

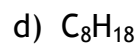
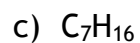
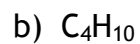
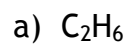
Task 4

Look at the structural formulae you have for the alkanes.

How could you describe the bonds between the carbon atoms?

Task 5

Write the names for the following alkanes:



Task 6

Write the molecular formula for the following alkanes:

a) Propane

b) Pentane

c) Octane

Task 7

Write the full structural formula for the following alkanes:

a) Propane

b) Pentane

c) Octane