

# 48.1 Organic Chemistry

Chemistry

Summarize main points from each video.

Video Title / topic \_\_\_\_\_

Video Title / topic \_\_\_\_\_

Video Title / topic \_\_\_\_\_

# Topic Introduction



**Summarize your understanding of each paragraph.**

Alkanes are any of the series of saturated hydrocarbons including methane, ethane, propane, and higher members. Scan the list of the first ten alkanes found on a page in this topic.

Methane is a powerful greenhouse gas. Methane is also the main ingredient in natural gas. Because methane can be captured from landfills, it can be burned to produce electricity, heat buildings, or power garbage trucks.

Ethane has many uses. It is abundant in natural gas commonly used in many homes. It is used to produce a chemical called ethylene, which is a chemical needed in manufacturing products like plastic, automotive antifreeze, and detergent.

Propane is used as fuel in furnaces for heat, in cooking, as an energy source for water heaters, laundry dryers, barbecues, portable stoves, and motor vehicles. NOTE THAT ... Commercially available "propane" fuel, or LPG, is not pure

# Read/Summarize Text



1. Read the passage.
2. Underline key expressions in each sentence.
3. Re-write each word (or expression) you underlined.
4. Summarize the passage.

## *Organic Chemistry (in College)*

This topic lightly introduces generalized concepts associated with the advanced topic of organic chemistry.

Often, college-level chemistry begins with a full semester of inorganic chemistry (*Chem I*) – preceding a semester of organic chemistry (*Chem II*).

Here, high school students should acquaint themselves with the importance of carbon (C). Various formulas related to Alkanes and their naming conventions are touched-upon.

Contrasts and comparisons of Alkenes and Alkynes are briefly examined. Last, a few conventions for naming Aromatic compounds are introduced.

Adapted from Honeycutt Science online, virtual textbook.

## *Re-write words you underlined*

\_\_\_\_\_

\_\_\_\_\_

## *Using a complete sentence, summarize or rephrase the passage*

\_\_\_\_\_

# Read Text for Comprehension

Read this extract for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

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## 7 Tips to Survive Organic Chem



Are you ready to learn a year's worth of organic chem in seven short, glorious weeks? Organic Chemistry is a substantial, yet manageable, undertaking. And you won't be alone. About 200 students will join you in this quest to study carbon and fulfill medical school requirements.

Heed the advice of a teaching assistant and four former students, and you, too, can survive organic chem.

1. REVIEW ORGANIC CHEM BASICS BEFORE THE FIRST CLASS.
2. MAKE ORGANIC CHEM YOUR PRIORITY.
3. ASK A LOT OF QUESTIONS.
4. FORM STUDY GROUPS.
5. LEARN FROM YOUR MISTAKES.
6. DON'T SIMPLY MEMORIZE; SEEK TO UNDERSTAND.
7. GIVE YOURSELF THE CREDIT YOU DESERVE.

### One student is quoted as follows:

*"I was trying to memorize 11 basic reactions for the first exam, but I kept getting them mixed up. Then I had my eureka moment that all 11 reactions were just different versions of the same process of electrons movement. I couldn't believe how easy it was after that! Understanding the molecular orbital theory made chemistry interesting and fun! It was like a little puzzle every time different things tried to react. Instead of memorizing, I was actually understanding the material and applying it."*

NOTE: inclusion of this extract here does not imply endorsement of Honeycut Science by the originating organization.

Extracts and adapted from <https://www.summer.harvard.edu>

# Copy the List



Neatly Copy the List Shown

List

CH <sub>4</sub>	methane
C <sub>2</sub> H <sub>6</sub>	ethane
C <sub>3</sub> H <sub>8</sub>	propane
C <sub>4</sub> H <sub>10</sub>	butane
C <sub>5</sub> H <sub>12</sub>	pentane
C <sub>6</sub> H <sub>14</sub>	hexane
C <sub>7</sub> H <sub>16</sub>	heptane
C <sub>8</sub> H <sub>18</sub>	octane
C <sub>9</sub> H <sub>20</sub>	nonane
C <sub>10</sub> H <sub>22</sub>	decane

**Copy the first ten alkanes.**

*Then, try to list them without looking ... by thinking about the patterns.*

# Interpret a Graph



Write the title of the graph \_\_\_\_\_

Circle the type of chart this represents

*Bar Chart   Line Chart   Pie Chart   Other*

If applicable,

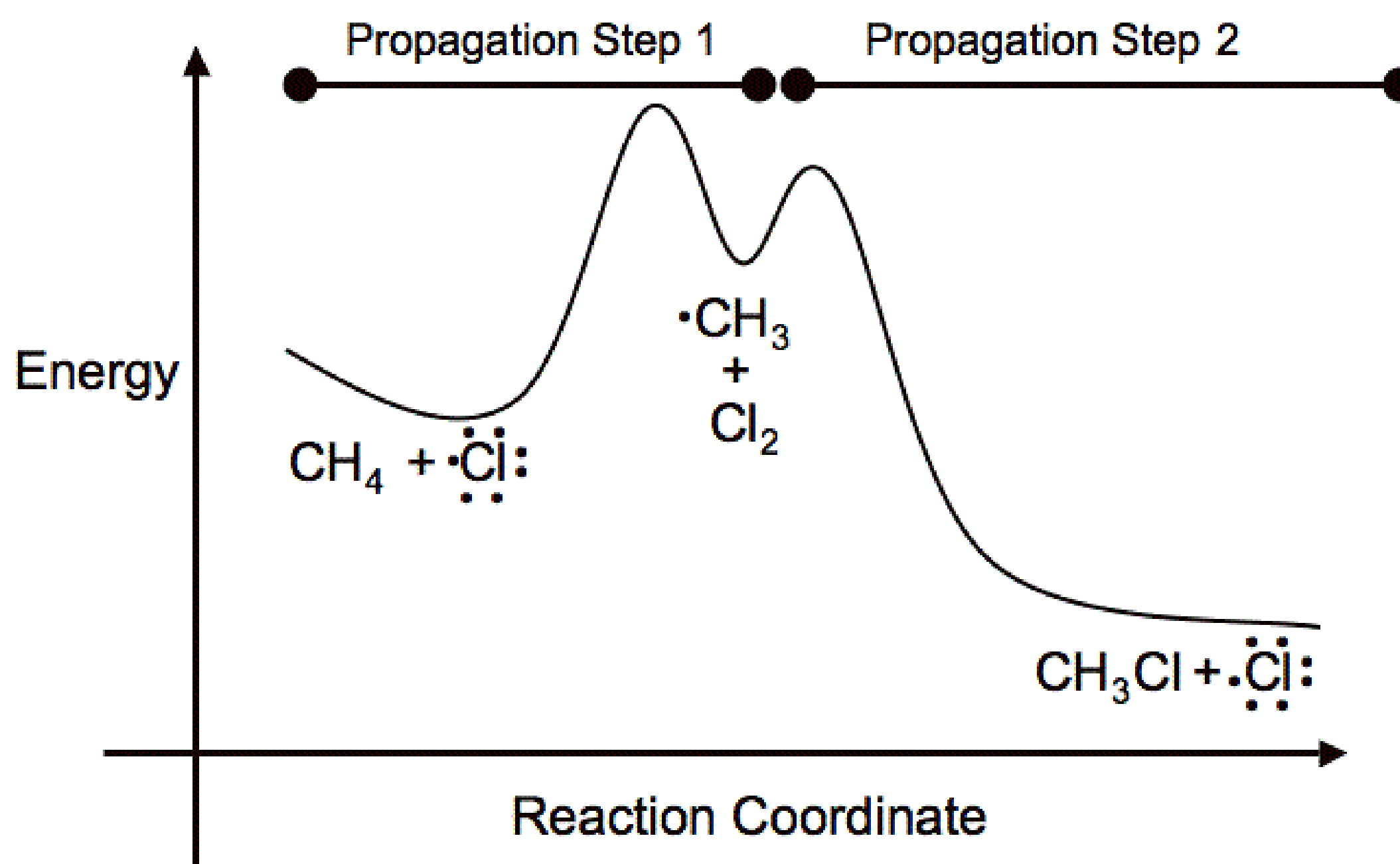
What does the X-axis represent \_\_\_\_\_

What does the Y-axis imply \_\_\_\_\_

Summarize what this graph represents or conveys

\_\_\_\_\_

<https://chem.libretexts.org>



The first propagation step is endothermic. In contrast the second propagation step is exothermic.