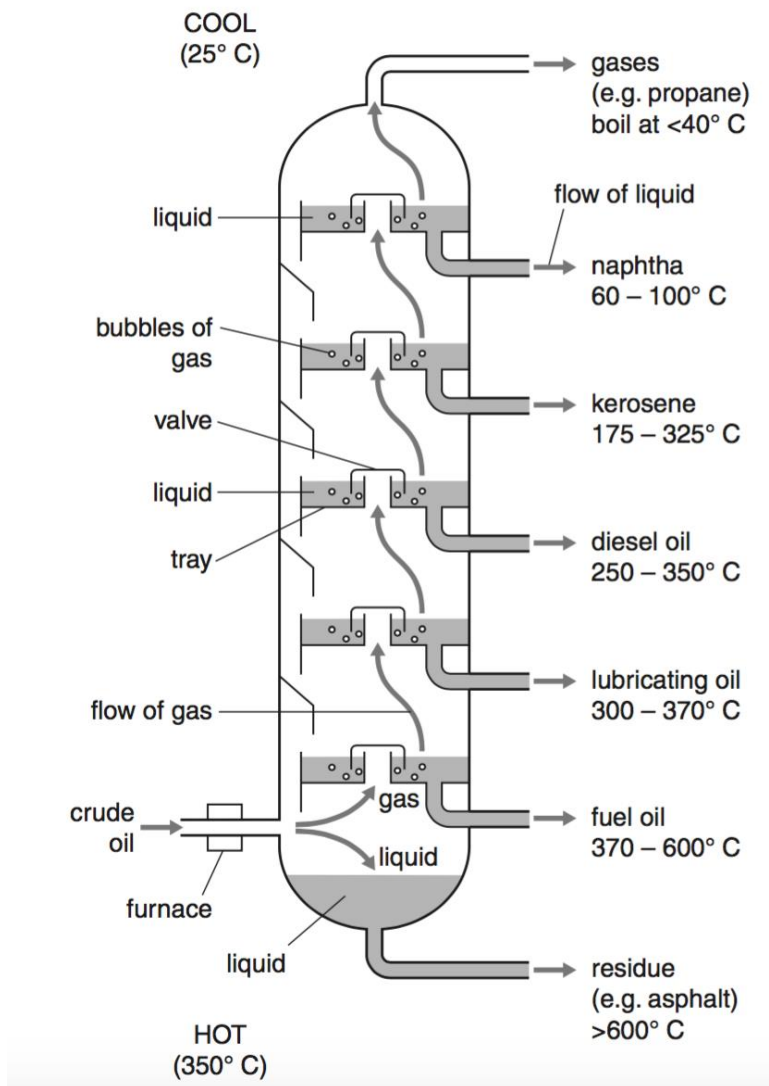


A Story of Three Hydrocarbons



This diagram depicts what takes place in the fractional distillation unit of a petroleum refinery. Use the diagram to complete the summary.

Summary: Petroleum is a mixture of different _____. In order to make useful products from petroleum, these must be separated from one another using a process called _____. There are collecting trays inside the column, which are kept at different temperatures. Oil is heated to a very high temperature in a furnace before it enters the column, which causes most of the substances in petroleum to change from a liquid state to a gas state. Any remaining liquid is collected at the bottom of the column. As the gases move up the column, the temperature _____, causing the gases to _____ into liquids.

The different liquids are separated out at each level. Large, heavy components, such as asphalt, have high boiling points and separate out at _____ °C. Kerosene is a medium-sized component and separates out at _____ °C. Propane is a small component with a low boiling point and separates out at _____ °C.

The Story: Write a story about three hydrocarbons: a very small hydrocarbon called propane, a medium-sized hydrocarbon called kerosene, and a very large hydrocarbon called asphalt. In the story, describe:

- how they formed as petroleum and all ended up together;
- how they are different from one another, even though they are all together in the petroleum;
- their journey and separation through the distillation unit;
- what they each can be used for once they have been separated from one another.

Divide the story into pages/sections using the bulleted items above as a guide. Include at least one illustration for each section. Write the story for an upper-elementary-grade student to help them learn some facts about petroleum and hydrocarbons. Be creative, and have fun!