

Grade 7 Science – Petroleum Products

Petroleum was once an unwanted material that was wasted but in the last 150 years, scientists discovered how to separate the sticky, oily mixture into useful products – initially just two (kerosene and buggy wheel grease). Today there are over a half million products – making petroleum one of the most valued resources in the entire world!! Below is a partial list of petrochemicals.

Petrochemicals	Polymers & Fibers	Petroleum Chemicals	Healthcare
Basic Feedstock Butadiene Ethylene Para-xylene Propylene Intermediates Acetic acid Ammonia n-Butene Cyclohexane Dodecylbenzene Ethanol Ethanolamine Ethylene glycol (EG) Ethylene oxide (EO) Formaldehyde Methanol Methyl tert-butyl ether (MTBE) Phenol Propylene oxide Purified terephthalic acid (PTA) Styrene monomer (SM) Urea Vinyl acetate monomer (VAM) Vinyl chloride monomer (VCM)	Acrylic fiber Acrylonitrile butadiene styrene (ABS) Acrylonitrile styrene (AS) Polybutadiene (PBR) Polyvinyl chloride (PVC) Polyethylene (PE) Polyethylene terephthalate (PET) Polyol Polypropylene (PP) Polystyrene (PS) Styrene butadiene (SBR) Urea-formaldehyde (UF)	Lubricants Additives Catalysts Marine fuel oil Petroleum refining Adhesives and sealants Agrochemicals Construction chemicals Corrosion control chemicals Cosmetics raw materials Electronic chemicals and materials Flavourings, fragrances, food additives Specialty and industrial chemicals Specialty and industrial gases Inks, dyes and printing supplies Packaging, bottles, and containers Paint, coatings, and resins Polymer additives Specialty and life sciences chemicals Surfactants and cleaning agents	Health care Pharmaceuticals

Do a bit of research online and come up with answers to the following questions.

1. Where does crude oil come from?
2. What top 5 countries produce the most oil?
3. What is the process called that separates crude oil into different useful parts?
4. What is cracking in crude oil distillation?
5. What is polymerization?
6. How is plastic made from oil?

