

CurriculumVisions Lesson

Students: fill in next to the word answer and return the document for assessment.

Science Book: Changing materials (6D)

Pages 18-23

Everything here is based on our Curriculum Visions book Changing materials (6D).

In this segment, we are going to learn about how some chemicals react with air, how liquids are separated out from oil and turned into plastics and how iron is made from rock.

Part 1

You will need to go to pages 18-19 of the book. Draw a symbol that means danger when you see it on containers. What are three examples of chemicals where you might see that symbol.

Answer.....

The symbol is a red exclamation mark inside a red triangle. Examples could include: caustic soda, oven cleaner, drain cleaner/de-clogger, antifreeze, bleach, some all-purpose cleaners - you may like students to look around their homes for products (being careful not to touch them) or to bring in some examples and discuss why they are dangerous and safe handled.

Part 2

Go to pages 20-21. Describe how the liquids used to make plastic are separated from oil. You may want to draw a diagram of the process, or describe it in words.

Answers should include.....

A mention of heating the oil until the materials turn to gas (boiling point) and then separating them based on what temperature they condense (turn back to liquid). This may also be phrased as the different materials in oil having different boiling points.

The process of making plastic involves an irreversible change. As a group, discuss why this might make plastics difficult to recycle.

Students' own answers.....

You might want to turn this into a discussion of the environmental dangers from plastics, including microplastics.

Part 3

Go to pages 22-23. Describe how iron is separated from rock. You may like to draw a picture of the process, describe it as a list of steps or as text.

Answer.....

Answers could include mining the ore, heating it in a blast furnace with coke and limestone, pumping in air/oxygen to make the temperature hotter, the iron melting, the impurities mixing with the limestone and floating to the top of the liquid metal, the pure iron is removed from the bottom of the furnace.

If you are interested in this topic continue to browse the book and watch our amazing videos. They start right on the book cover.