

Fossil Fuels and Plastics

Student Name:

Class:

Teacher Name:

School:

Question 1



Fuel A



Fuel B



Fuel C

a) Name the fossil fuels above.

Fuel A:

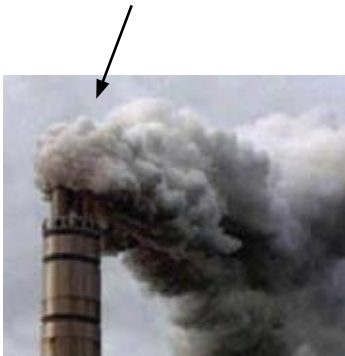
Fuel B:

Fuel C:

Why are fossil fuels called hydrocarbons?

b) Coal contains sulfur as well as carbon.

The factory in the picture below burns coal as a source of energy.



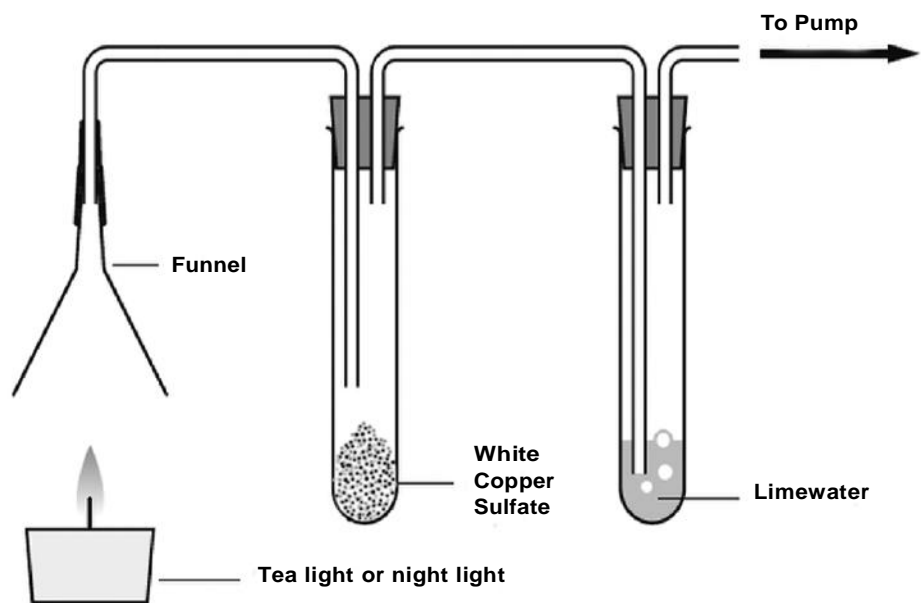
Name the chemical formed when sulfur reacts with the oxygen in the air.

Explain the effect this chemical has had on the stone statue pictured above.

The picture above shows trees in a forest in the same country as the factory. They do not have any leaves. Explain how there might be a possible link between this and the factory.

Suggest an alternative energy source for this factory that would reduce the pollutants emitted into the air.

A student uses the apparatus right to examine the products of the combustion of a hydrocarbon. The pump keeps the air moving from left to right in the apparatus.



What change to the colour of the white copper sulfate did the student notice?

What change did the student notice happen to the limewater?

From this investigation the student concluded that the products of the combustion of hydrocarbons are

Product 1:

Product 2:

Natural gas has the formula CH_4 . Suggest a reason why burning natural gas is the cleanest fossil fuel?

What effect would replacing the candle with burning natural gas have on (i) the white copper sulfate and (ii) the limewater?

(i)

(ii)

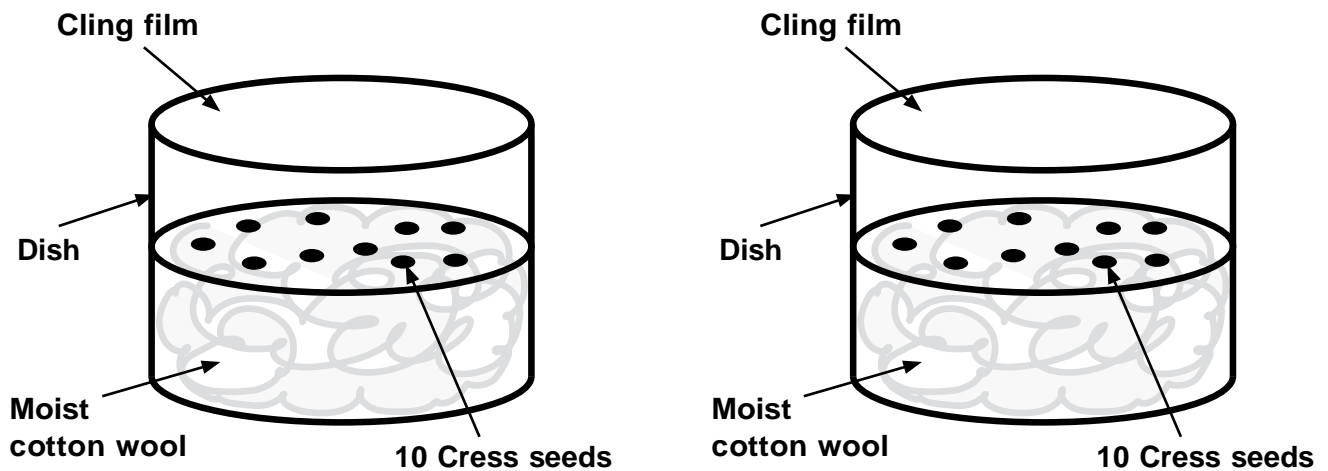
Question 2

The diagram below shows part of the apparatus used by a student to show the effect of acid rain on the growth of cress seeds.

The student set up two identical containers

The cress seeds were placed on moist cotton wool.

The containers were left in a warm place to allow the seeds to germinate.



Why did the student sow ten cress seeds on the moist cotton wool?

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How did the student make this investigation a fair test?

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When the seeds had germinated, the growing cress plants in one container were watered with tap water and those in the other container were watered with “acid rain”.

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Why was the room temperature kept constant for this investigation?

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How did the student make the acid rain solution?

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Question 3 - Plastics

The picture shows a modern car.



Name three parts of the car which are made from plastic?

1.

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2.

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3.

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Name two advantages that plastics have over metals?

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The pictures shows plastic bottles and biodegradable plastic bags.



Name the raw material used in the making of plastics.

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Most plastics are non-biodegradable. Explain the term non-biodegradable.

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How do you think the biodegradable plastics are broken down in the environment.

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Give one advantage to the environment of using biodegradable plastic bags.

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Plastic chairs are suitable for outdoor use.



What are two advantages of using plastic instead of wood for garden chairs?

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Give an example of where plastics are widely used in hospitals.

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The diagram shows three everyday plastics.



Aeroboard



Polystyrene Cup



Polythene Bag

Give one property of each plastic that makes it suitable for its use.

Aeroboard:

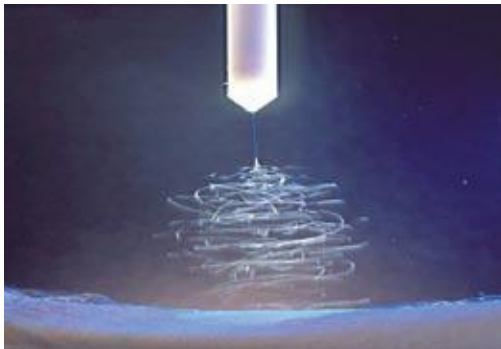
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Polystyrene:

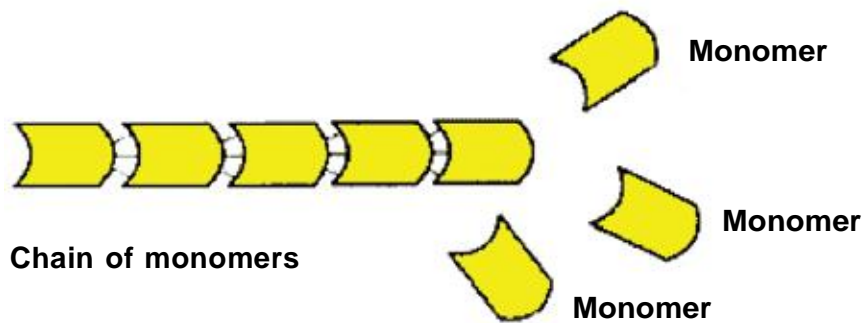
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Polythene:

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All plastics are made up of monomers linked together in a process called polymerisation.



What is the long chain of monomers linked together called?

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Chemistry has an important role in all of our lives.
Give one example of how the knowledge learned from chemistry has a benefit for humans in each of the following.

Medicine:

Food industry:

Agriculture:

Leisure:

Sport:



For teacher use only.

Comment:

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How to improve:

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