1 What does this hazard symbol warn of?



A The substance is explosive.

B The substance burns easily.

C The substance supplies oxygen to fires.

D The substance puts out fires.

2 The three sides of a fire triangle are:

E fire, water, heat. **F** heat, water, fuel.

G heat, oxygen, fuel. **H** fire, oxygen, fuel.

3 What happens in an exothermic reaction?

A Energy is released that increases the temperature of the surroundings.

B Energy is taken in from the surroundings, reducing the temperature.

C The reacting substances always explode.

D You need to heat a substance or substances to get a reaction to occur.

4 The best way to put out a small electrical fire is:

A spray it with water to cool it down.

B spray with foam to exclude air and cool it down.

C cover with a wet cloth to exclude air and cool it down.

D spray with a powder extinguisher to exclude air.

Use words from the box to complete the sentences correctly. Not all the words will be used.

burn	flames	hot	fire extinguisher	wet	wood

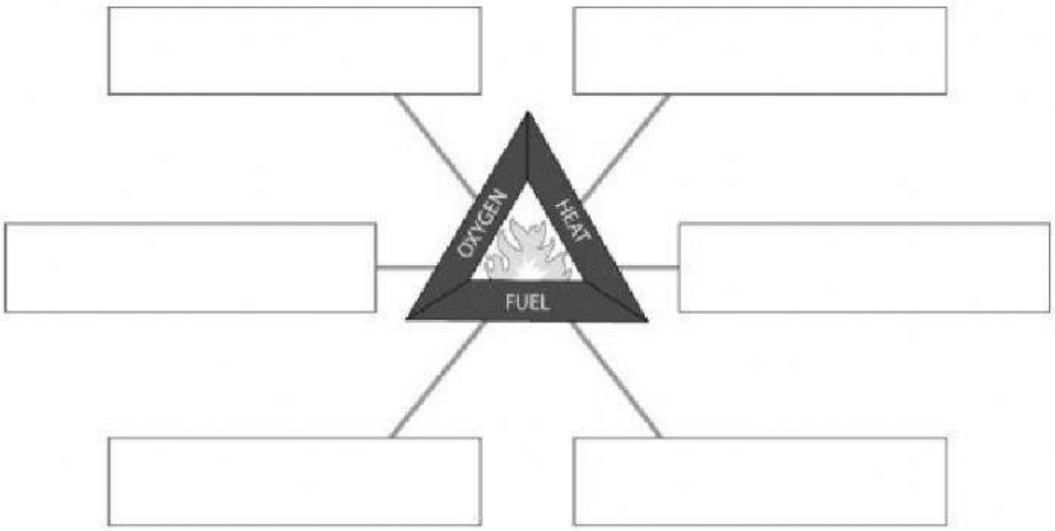
(a) To light a bonfire, you need to make the wood very _____

(b) We can tell when the wood starts to burn, because we can see _____

(c) To put the fire out, we can use a _____

LIVEWORKSHEETS

Drag the statements and drop them in the appropriate places:



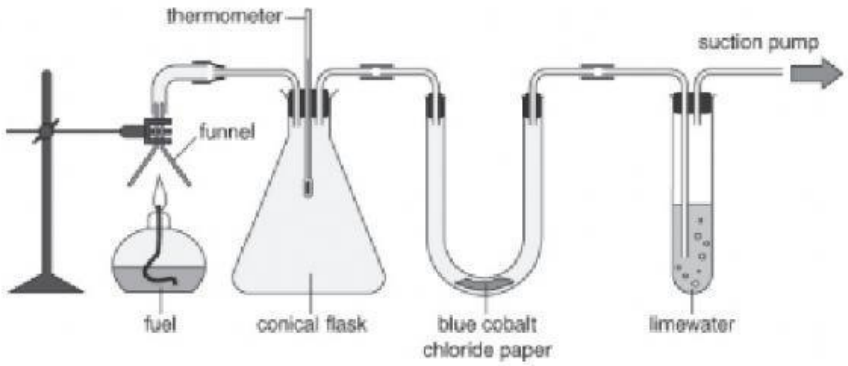
the gas in the air that is needed for things to burn	a substance that contains a store of energy	energy needed to start a fire
a water extinguisher cools the fire and takes this away	taken away if you smother a fire with a fire blanket	cutting down trees in a forest fire takes this away

Draw lines to link each of the words on the left with its meaning shown on the right.

combustion	a reaction when a substance combines with oxygen
fuel	a substance made of only hydrogen and carbon
hydrocarbon	a substance containing stored energy that can be released during burning
oxidation	a reaction when burning happens

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The apparatus shown below is used to show what happens during the combustion of a hydrocarbon fuel.



(a) Tick **one** box to complete each sentence in parts (i), (ii) and (iii) below.

(i) The thermometer will show that during the experiment the temperature:

- ☐ **A** decreases
- ☐ **B** increases
- ☐ **C** stays the same
- ☐ **D** varies

(ii) The blue cobalt chloride paper will change to pink because:

- ☐ **A** water is being produced.
- ☐ **B** oxygen is being produced.
- ☐ **C** carbon dioxide is being produced.
- ☐ **D** heat is being produced.

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(iii) The limewater will change from clear to:

- ☐ **A** pink
- ☐ **B** blue
- ☐ **C** dark
- ☐ **D** cloudy

What happens to the mass of reactants and mass of products in this reaction? Tick **one** box.

- ☐ **A** The mass of the products is more than the mass of the reactants.
- ☐ **B** The mass of the products is less than the mass of the reactants.
- ☐ **C** The mass of the products is the same as the mass of the reactants.
- ☐ **D** The mass of the products is not comparable with the mass of the reactants.

When 4.9g of magnesium is burnt in air, 8.1 g of product is formed.

(a) What is the name of the product formed? Tick **one** box.

- ☐ **A** magnesium oxide
- ☐ **B** magnesium dioxide
- ☐ **C** carbon dioxide
- ☐ **D** magnesium chloride

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(b) Explain the increase in mass.

_____

_____

_____

Complete the following paragraph by dragging the suggested words and dropping them where it makes sense.

Heat	Fire blanket	Fuel
Water	Oxygen	Fire

The three factors needed by fire are heat, _____ and oxygen. Removing one of these factors will put out the _____. You can put down an electric fire by using a _____. This stops the fire by smothering it, which means removing the _____. Other fires, such as wood or paper fires, can be put out using _____. This puts out the fire by removing the _____.

Match the hazard symbols below with their meaning and danger.



Explosive

Releases oxygen



Flammable

Contains enough stored energy to explode



Oxidising

Easily bursts into flames

LIVEWORKSHEETS