9H End of Unit Test (Levels 3-5)

Name _____ **Class** _____

1 We use lots of different materials. Most of these materials are made from other substances using chemical reactions.

Match each material with the things it is made from.

Material	**Made from**
iron	part of a plant
plastics	metal ore, found in rock
cotton	crude oil, found in the Earth

[2 marks]

2 Complete the sentences using words from the box. You do not need to use all the words.

We can use different kinds of reactions to provide energy.
Chemicals such as _____ or hydrogen can be used as _____. Fossil fuels burn to produce _____ energy in a _____ reaction.
If two different _____ are put into acid they can produce a voltage.
The reaction releases _____ energy.

carbon dioxide	combustion	electrical	fuels	heat
kinetic	metals	methane	sound	water

[3 marks]

3 Many fuels contain atoms of hydrogen and carbon.

a When a fuel burns it reacts with a gas from the air.

What is this gas? _____ *[1 mark]*

b Name the **two** products formed when a hydrocarbon fuel burns.

i _____

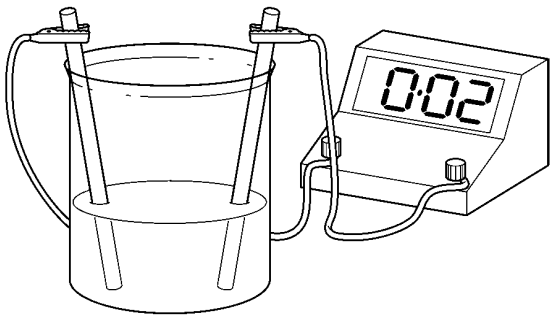
ii _____ *[2 marks]*

c Hydrogen gas is a very clean fuel. Give **two** disadvantages of using hydrogen as a fuel.

i _____

ii _____ *[2 marks]*

4 This apparatus can be used to produce an electric current.



Two pupils used different kinds of metal for the electrodes to see which combination of metals gave the highest voltage.

Write down **two** things they should do to make sure their investigation is a fair test.

i _____

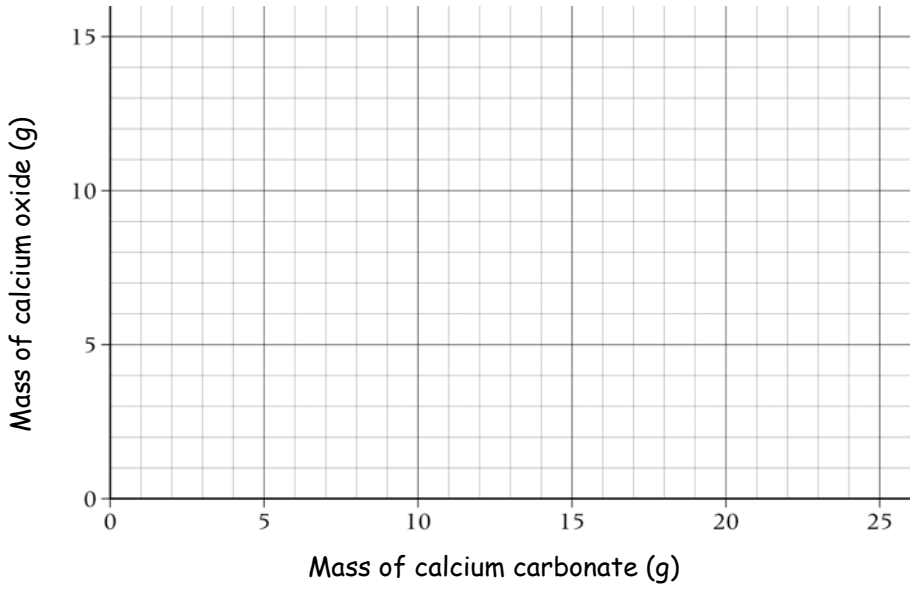
ii _____ *[2 marks]*

5 If you heat calcium carbonate, it turns into calcium oxide and gives off carbon dioxide gas.

Five pupils heated calcium carbonate. The table shows their results.

Pupil	Mass of calcium carbonate at start (g)	Mass of calcium oxide at end (g)
Angela	5	3.0
Ben	10	5.5
Con	15	8.5
Deepak	20	13.5
Ellie	25	14.0

a Plot these results on the graph paper.



[1 mark]

b What mass of calcium oxide would you expect to get if you heated 12 g of calcium carbonate? Use your graph to help you work out your answer.

_____ *[2 marks]*