



*Rewarding Learning*

General Certificate of Secondary Education  
2010–2011

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**Science: Single Award (Modular)**

Chemical Patterns and our Environment  
Module 3

Higher Tier

**[GSC32]**

**THURSDAY 19 MAY 2011, MORNING**

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**MARK  
SCHEME**

		AVAILABLE MARKS
<b>1</b>	<b>(a) (i)</b> 8, 9 points correctly plotted [2]	
	7, 6 points [1]	
	less than 6 [0]	[2]
	joined correctly	[1]
	<b>(ii)</b> 5 cm $\pm$ 0.1 Must agree with graph	[1]
<b>(b)</b> the greater the amount, the higher the honeycomb [1]		
it stops at 28g [1]	[2]	
<b>(c)</b> 28g		[1]
<b>(d)</b> vinegar is an acid/reacts with baking soda [1]		
it will react to produce (more) CO <sub>2</sub> [1]	[2]	
<b>(e)</b> ethanoic acid/water	[2]	11
<b>2</b>		
<b>(a)</b> number of protons + neutrons (in nucleus)	[1]	
<b>(b)</b> 2, 8, 2 arrangement	[1]	
<b>(c)</b> two or more elements [1] combined/chemically joined [1]	[2]	
<b>(d)</b> magnesium – group 2		
oxygen – period 2		
magnesium oxide	[3]	7
<b>3</b>		
<b>(a)</b> molten rock/magma from [1] moves up to the surface [1]		
gases + molten rock come out of the crater [1]		
rock flows down the side as lava [1]	Any three [3]	
<b>(b)</b> it would have speeded up cooling [1]		
it could cause it to form solid faster [1]		
it turned some of the molten rock into fine hard particles [1]	Any one [1]	
<b>(c)</b> plates [1] rub against each other [1]	[2]	6

