Supporting your child to revise using past papers

Past papers are one of the most effective ways to revise and improve grades.
We can use two approaches:

Completing a full question paper
Completing part of a question paper

Full question papers can be accessed at the following address:
http://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464/assessment-resources

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When completing past paper questions students are honing their skills so they need to **focus on:**

- their use of **correct terminology**

- that they **match the number of points they make** to **the marks available**

- that they have the ability to **apply their knowledge** in a variety of **different context**.

- that they make sure they answer **each** part of the **question.**

Using the markscheme:

When given a list of acceptable answers where more than one mark is available you will see 'any **two** from' for example. Each bullet point is a potential mark, *watch out for answers that are from the same marking point i.e. bullet point*

0 5 . 7 Suggest **two** reasons why the survival rates for all cancers have increased.

[2 marks]

1 Improved treatments for patients

2 Improved drugs used

05.7	any **two** from: • improved treatment / drugs • earlier diagnosis • more cancer screening • improved patient knowledge (of risk factors)	allow improved patient diet / lifestyle	2	AO3/2a 4.2.2.6 4.2.2.7

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A bold **and** is used to indicate that **both** parts of the answer are required to award the mark and **or** is used to indicate alternative answers, *don't forget to look in the column additional information for more guidance.*

0 6 . 4 Infected mosquitoes landed on the socks three times more often than uninfected mosquitoes.

Explain how this information can be used to reduce the spread of malaria.

[2 marks]

Wear clean socks to stop mosquitos from being attracted

06.4	use worn socks **or** use chemical from worn socks to attract / trap infected mosquitoes	or accept: wear clean socks / change socks regularly (1) to reduce the chance of attracting mosquitoes (1)	1 1	AO3/3a 4.3.1.5 AO3/3a 4.3.1.5

Brackets (….) are used to indicate which bits of information are **not essential** for the mark *but add clarity to the markscheme.*

0 1 . 6 Describe how an indicator can be used to show when all the sodium hydroxide has reacted with sulfuric acid.

[3 marks]

Put a pH probe into the acid then add the sodium hydroxide until it reads 7.

01.6	Add indicator to sodium hydroxide solution Add sulfuric acid (gradually) until indicator just changes (colour) **or** until universal indicator turns green or shows pH7	allow add indicator to sulfuric acid allow add sodium hydroxide solution (gradually) allow pH probe	1 1 1	AO2/2 5.4.2.2, 4

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Any wording that is **underlined** is essential for the marking point to be awarded.

Allow and **accept** means that the response is creditworthy

0 3 . 2 A helium atom is much larger than an alpha particle.

Give **one** other difference between a helium atom and an alpha particle.

[1 mark]

It is lighter

03.2	(a helium atom) has 2 electrons	accept it has more mass allow it is not charged	1	AO2/1 6.4.1.1

Questions involving chemical formulae, the **case matters** as does the **superscript** and **subscript**.
E.g what is the correct formulae for carbon dioxide?

[1 marks]

Student	**Response**	**Marks awarded**
1.	$CO2$	0
2.	CO_2	1
3.	Co_2	0

Questions involving calculations.
Marks are awarded for **each stage of the calculation** …… so the students are encouraged to **show their working**!

Error carried forward (e.c.f) is used when marking questions involving several parts, where the answer to part 1 is used in the answer to part 2.

See handout [1]

Often **a mark** is allocated to writing the answer to the correct level of precision.

(i) The teacher used 1.00 g of magnesium.

Use the equation to calculate the maximum mass of magnesium oxide produced.

Give your answer to three significant figures.

Relative atomic masses (A_r): O = 16; Mg = 24

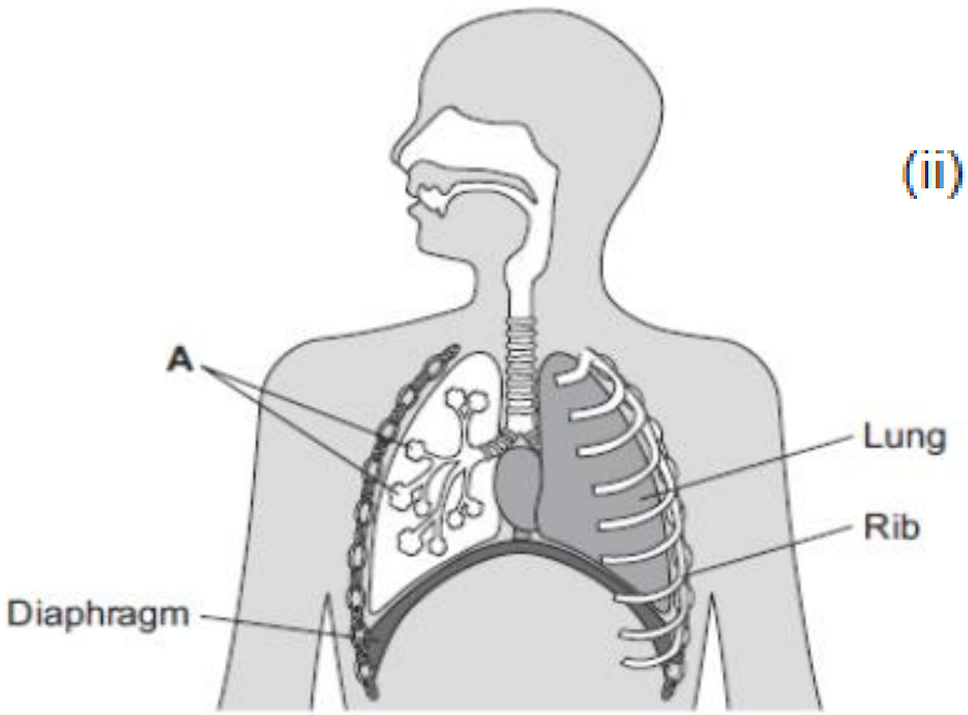
Maximum mass = _____ g

(3)

Phonetic spelling of correct scientific terminology is **acceptable unless** there is a possible confusion with another technical term.

Our lungs help us to breathe.

The image below shows the human breathing system.



(a) (i) Name part **A**.

_____

(1)

(ii) Give **one** function of the ribs.

_____

(1)

(a) (i) alveoli / alveolus

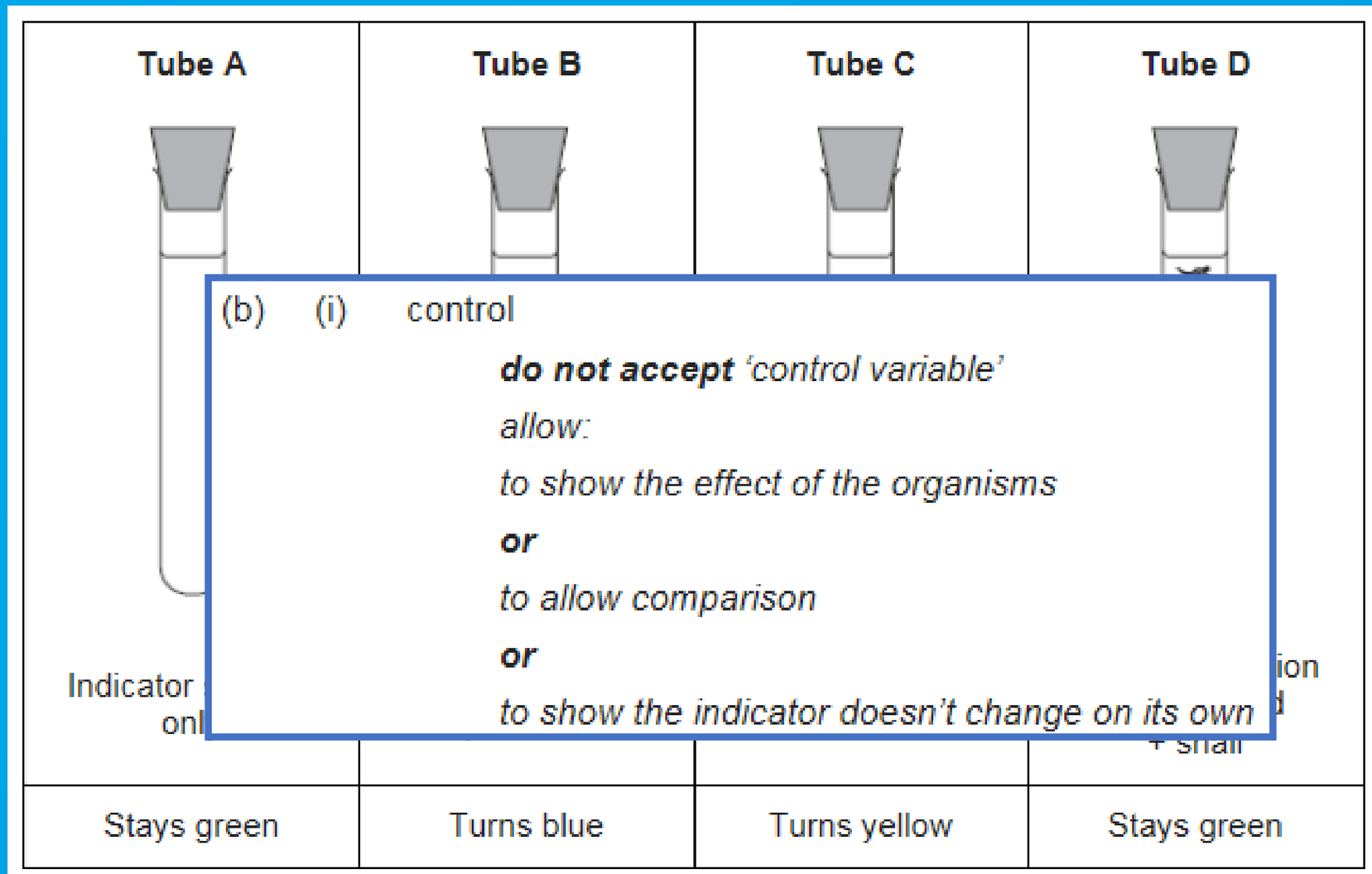
allow air sacs

allow phonetic spelling

(ii) any **one** from:

- protection (of lungs / heart)
- help you breathe / inflate lungs.

Do not accept means an answer is **wrong** even if the correct answer is also given but **ignore** means that further amplification can still gain full credit.



Tube A	Tube B	Tube C	Tube D
Stays green	Turns blue	Turns yellow	Stays green

(b) (i) control

do not accept *'control variable'*

allow:

to show the effect of the organisms

or

to allow comparison

or

to show the indicator doesn't change on its own

(i) What is the purpose of **Tube A**?

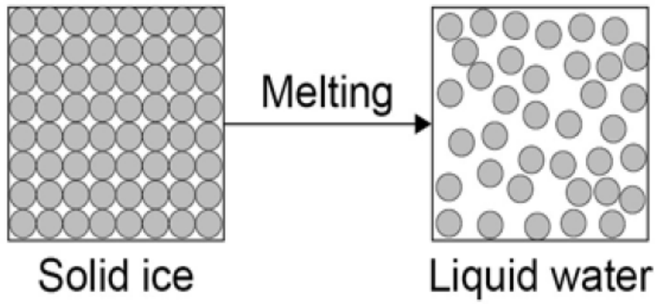
_____

_____

(1)

0 5 . 1 Use the particle model to describe how the heating element causes the arrangement of particle in ice to change as the ice melts.

Figure 7



Your should include a description of how the particles are arranged in the solid ice and in the water

[6 marks]

When tackling this type of question students are encouraged to:

- plan their answer before attempting it, *so that it is presented in a logical order*
- make sure that they answer all parts of the question, *so highlight each part.*

They can bullet point their answers, but they must be in a logical order to gain full credit.

Extended response questions are marked using a **level of response** mark schemes.

05.1	**Level 3:** A clear, logical explanation containing accurate ideas presented in the correct order with links between ideas.	5–6	6	2 AO2/1
	Level 2: Key ideas presented with some linked together to form a partial explanation.	3–4		2 AO2/1
	Level 1: Fragmented ideas, some may be relevant, insufficient links to form an explanation.	1–2		2 AO1/1 6.3.1.1
	No relevant content.	0		6.2.4.2

Step 1: Determine a level

Start at the **lowest level** of the mark scheme and use it as a **ladder** to see whether the answer meets the descriptor for that level.

When assigning a level you should look at the **overall quality** of the answer as well as the **indicative content**.

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	Level 1: Fragmented ideas, some may be relevant, insufficient links to form an explanation.	1–2		2 AO1/1 6.3.1.1
	No relevant content.	0		

Step 2: Determine a mark

If the response is predominantly level 2 with a small amount of level 3 material it would be placed in level 2 but be awarded a mark at the top of the level because of the level 3 content.

Indicative content

- current in the wire causes heating
- increases temperature of the metal wires / ice

Solid

- arrangement of particles is regular
- particles vibrate about a fixed position

Melting

- internal energy of the ice increases, increasing the temperature to melting point
- so (as the temperature increases) particles vibrate faster
- eventually particles vibrate fast enough to break free from the (strong) bonds
- therefore the arrangement of particles becomes irregular

Liquid

- arrangement of particles is irregular
- particles movement (translational) is random

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