HOW TO REVISE GCSE SCIENCE

THE PROCESS

Identify priority areas

Read revision guide & Notes

Actively use information

AQA questions & mark schemes

AQA
Realising potential

GCSE
BIOLOGY
(8461)

Specification
For teaching from September 2016 onwards
For exams in 2018 onwards

Version 1.0 21 April 2016

IDENTIFY PRIORITY AREAS

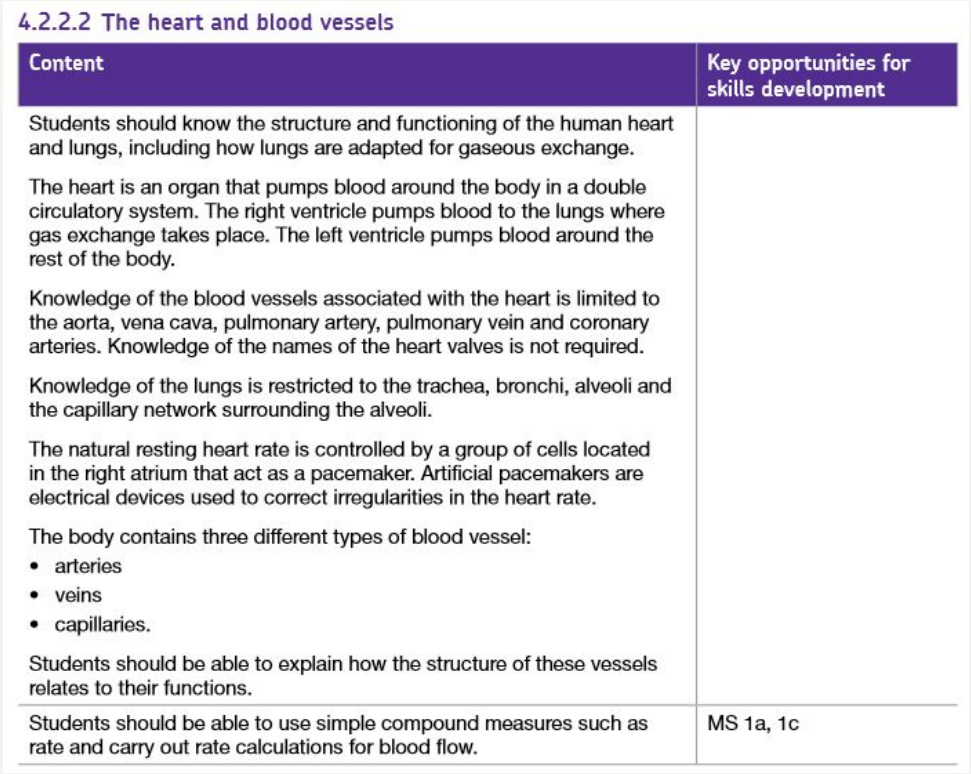
- Go through the specification and highlight any areas that are a concern
- Prioritise these over topics that you feel confident with.

Don't just start revising from page 1!

READ REVISION GUIDE & NOTES

- Before anything else, you must carefully read through your revision guide and/or notes for the topic you have selected

Top tip:
Start early – If you can do 4 x 10/15 min sessions a week NOW it will have the biggest impact



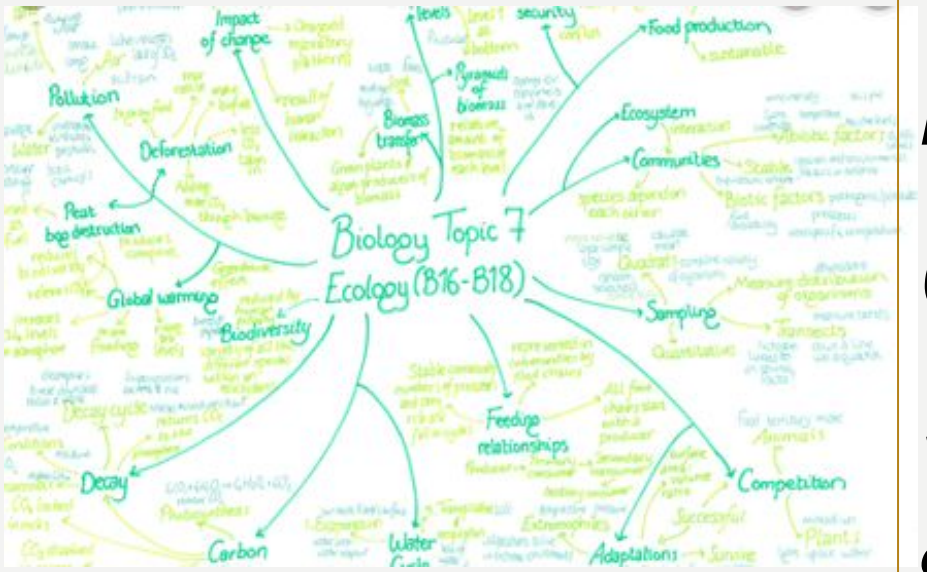
4.2.2.2 The heart and blood vessels

Content	Key opportunities for skills development
Students should know the structure and functioning of the human heart and lungs, including how lungs are adapted for gaseous exchange. The heart is an organ that pumps blood around the body in a double circulatory system. The right ventricle pumps blood to the lungs where gas exchange takes place. The left ventricle pumps blood around the rest of the body. Knowledge of the blood vessels associated with the heart is limited to the aorta, vena cava, pulmonary artery, pulmonary vein and coronary arteries. Knowledge of the names of the heart valves is not required. Knowledge of the lungs is restricted to the trachea, bronchi, alveoli and the capillary network surrounding the alveoli. The natural resting heart rate is controlled by a group of cells located in the right atrium that act as a pacemaker. Artificial pacemakers are electrical devices used to correct irregularities in the heart rate. The body contains three different types of blood vessel: • arteries • veins • capillaries. Students should be able to explain how the structure of these vessels relates to their functions.	
Students should be able to use simple compound measures such as rate and carry out rate calculations for blood flow.	MS 1a, 1c

ACTIVELY USE INFORMATION

- **The most important revision tip** – You must actually ***DO SOMETHING*** with the information you are reading. Reading alone is **passive** and will have a very limited retention. Its is only when you **ACTIVELY USE** the information and think about it will you retain it.

Examples:



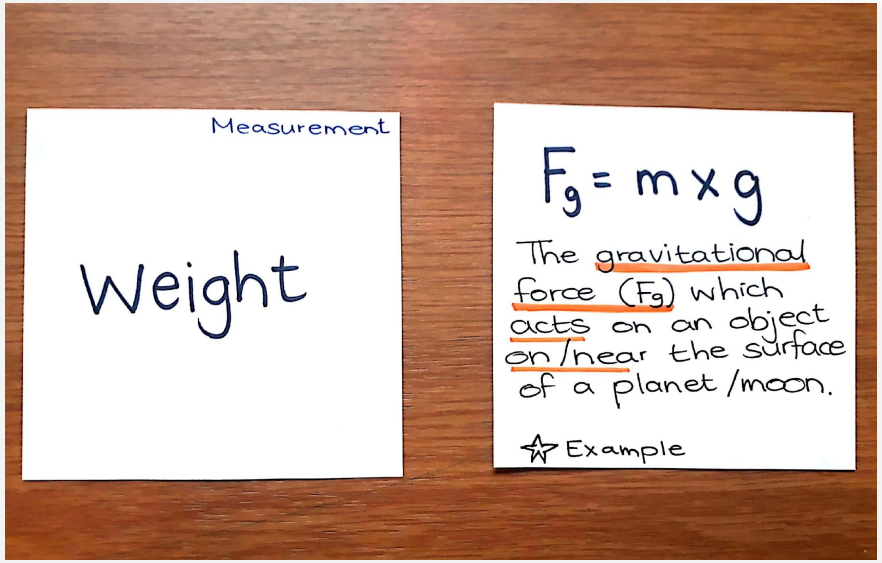
If the answer is

water is lost by osmosis

What is the question?

WHAT MAKES A GOOD FLASH CARD?

- Use both sides
- Limit the amount of information
- Use key words
- Images help
- *DON'T JUST MAKE IT A MINI REVISION GUIDE*
- Watch "College Info Geek"



AQA QUESTIONS

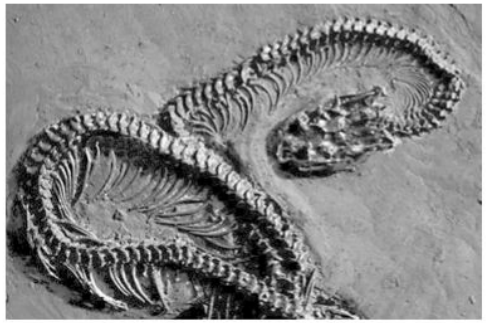
& MARK SCHEMES

- The key to top marks
- The only way to know what the examiner is looking for

0 1 . 2 Studying fossils helps scientists understand how living things have evolved.

Figure 1 shows a fossilised snake.

Figure 1



Explain how the fossil in **Figure 1** may have formed.

[3 marks]

01.2	(snake is) covered in sediment / mud **or** sinks into the mud		1	AO2/1 4.6.3.5
	(then) the soft parts decay / are eaten **or** bones / hard parts do not decay		1	AO2/1 4.6.3.5
	(so) minerals enter bones **or** bones are replaced by minerals		1	AO1/1 4.6.3.5

(c) (i) What does a vaccine contain?

_____

_____

(1)

(ii) Explain how a vaccination prevents infection.

_____

_____

_____

_____

_____

_____

_____

(3)

(c) (i) dead / inactive pathogens / viruses / bacteria

allow antigens / proteins from pathogens / viruses / bacteria

ignore microorganisms

1

(ii) white blood cells produce antibodies

1

antibodies produced rapidly (on re-infection) **or** response rapid (on re-infection)

allow ecf if antibodies incorrectly identified in first marking point

1

these antibodies kill pathogens / viruses / bacteria

*do **not** accept idea that original antibodies remain in blood and kill pathogens*

1