

THE BOLSOVER SCHOOL

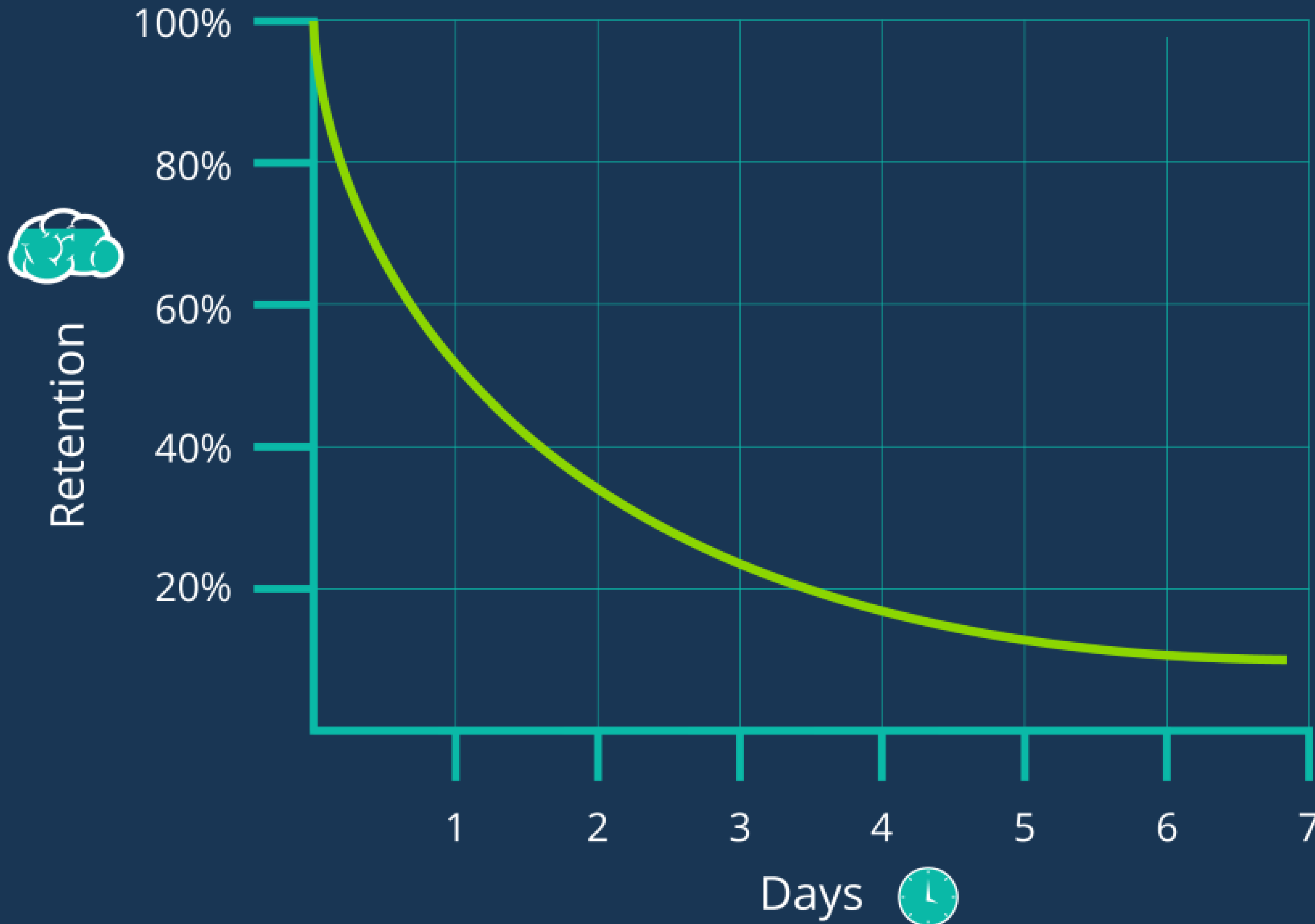
Nothing but the best



Using a revision guide effectively



THE FORGETTING CURVE



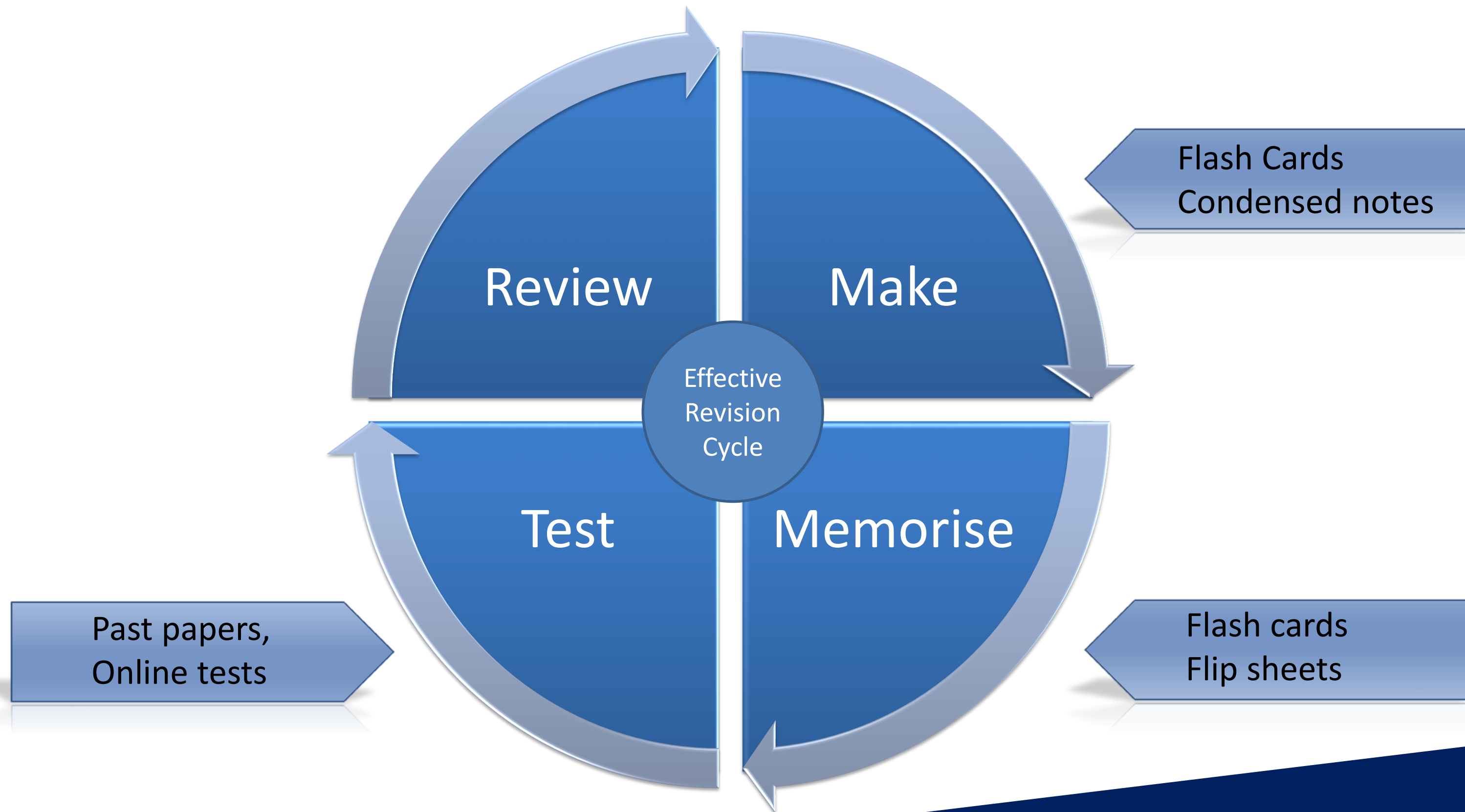
Scientists have studied how we learn and have found that, no matter how clever we are, over time, everyone will start forgetting information they have learnt.

COMBATING THE FORGETTING CURVE



Each time we revise, the information “sticks” better in our brain and moves from our working memory, to our long term memory. The more we revise, the more we remember.

The Bolsover Revision Cycle



Tips for effective revision

Students who test their knowledge perform better on tests than those who simply study

Proportion of recall on final testing

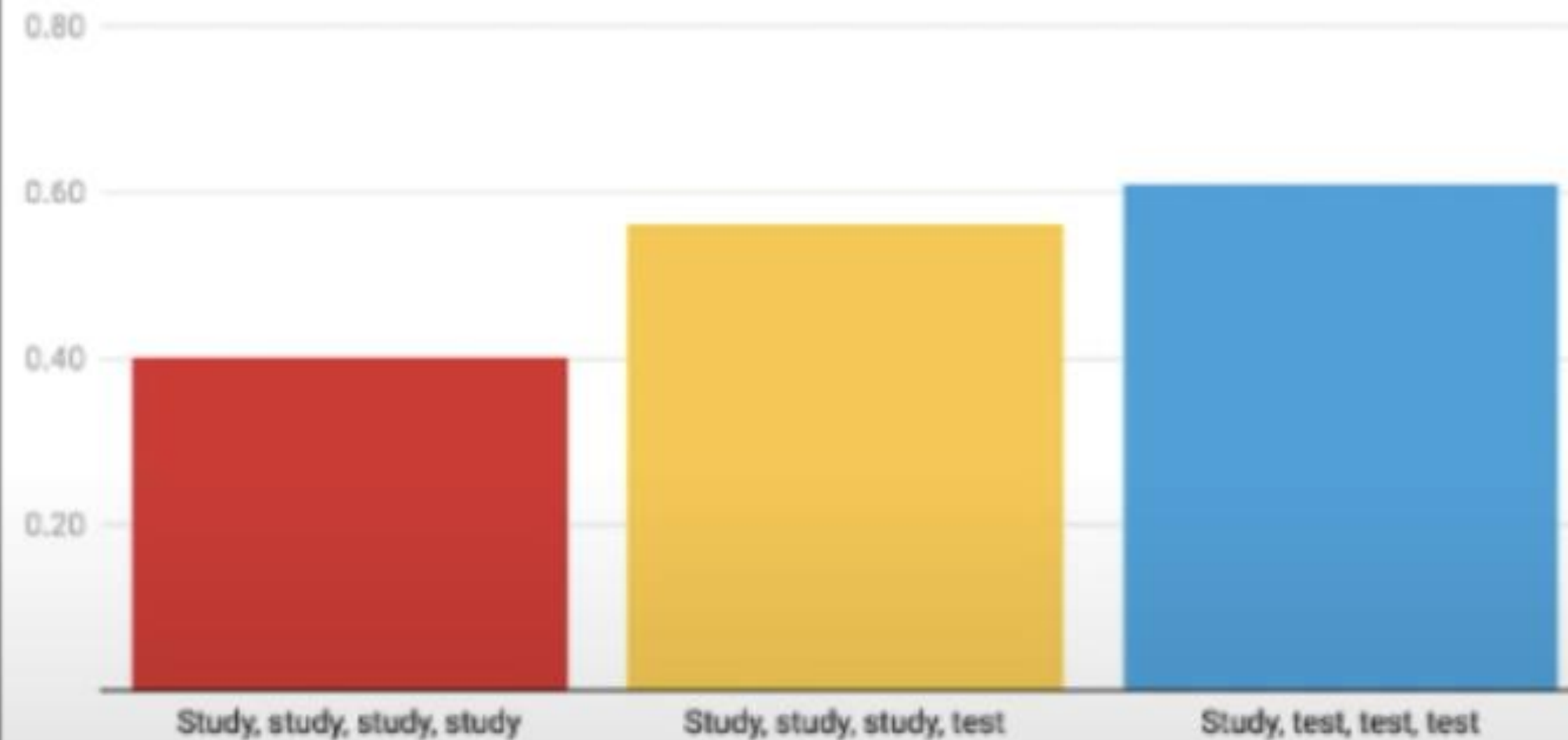
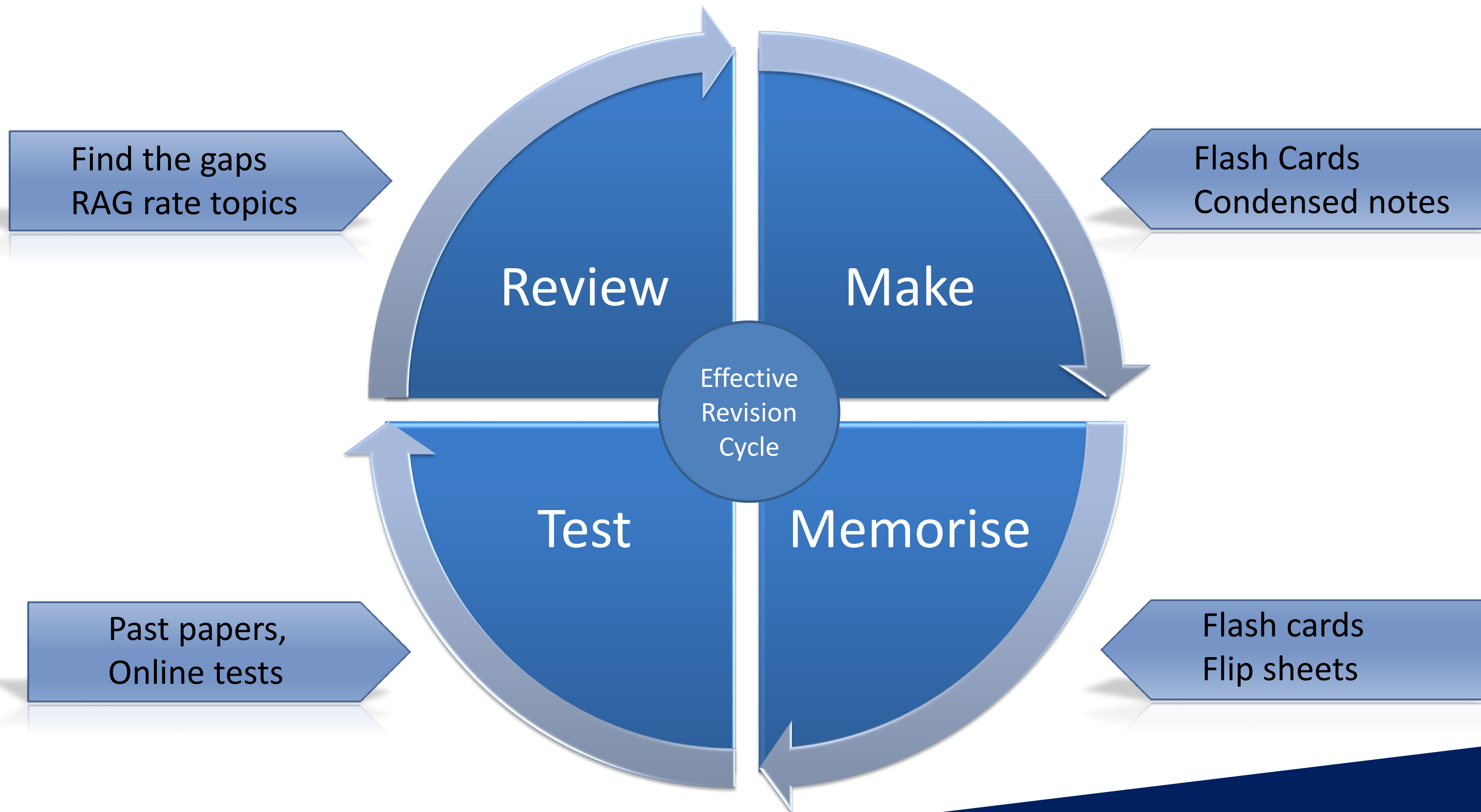
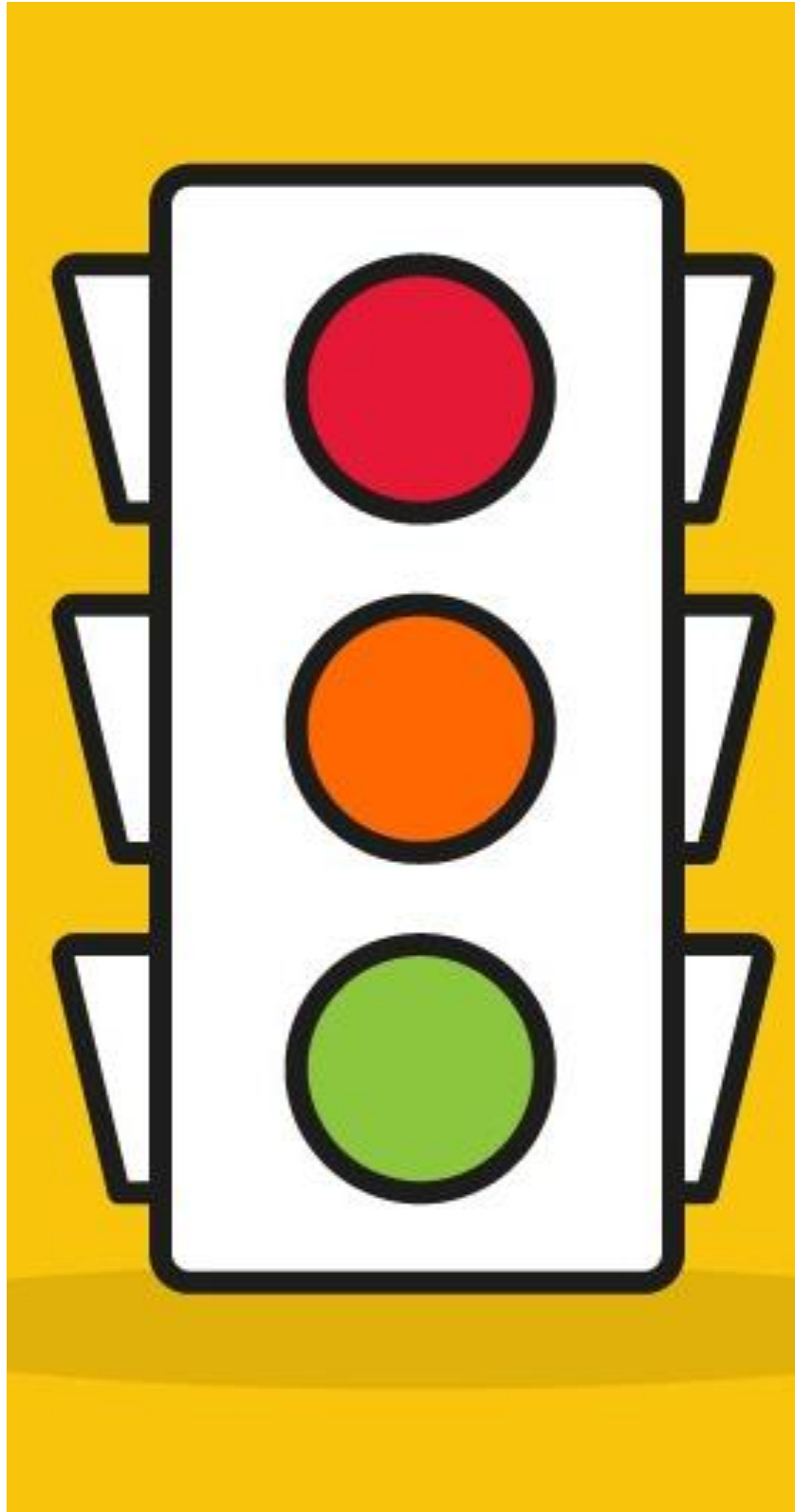


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The Bolsover Revision Cycle



Traffic lights / RAG rating



- Knowing your strengths and weaknesses helps us to revise more effectively.
- You can use a contents list in a revision book.

Traffic lights / RAG rating

Contents

Working Scientifically

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- Mark **green** the topics you feel confident
- Mark **amber** the ones you are less sure of
- Mark **red** the ones you struggle with.

Next steps

- Quiz your self on the **green** ones – retrieval practice.
- Bullet points and flash card your notes on the **amber** ones before you try quizzing yourself.
- Watch videos, go to revision sessions or ask your teacher for help on the **red** topics before you can try recalling the information in revision.

How to use a revision guide

RAG the content pages

Then pick one of the topics based on this (note which ones you've covered)

Read through then condense notes, mind map, flash card
key words

Have a go at the Qs at the end of chapter (or question booklet)

Then BBC Bitesize topic and past paper questions

Over time continue to test yourself on the flash cards

area of high concentration to an area of low concentration which is in a high concentration in the blood. Air arriving at the alveoli, **diffuses** into the alveoli to reach a high concentration in the alveoli, diffuses out to be collected by the red blood cells.

Respiratory muscles

The diaphragm is responsible for breathing in (inspiration) and out (expiration). At rest: the **diaphragm** and **intercostals**. In fact, the effect is to draw air into the lungs (see diagram).

Function and effect of respiratory muscle contraction

Function	Effect
Increase the volume of the chest cavity which decreases the pressure inside the lungs	Air is drawn into the lungs (inspiration)

When the intercostals relax, the rib cage moves in and the chest cavity volume, which in turn raises the pressure of the lungs (expiration).

Diffusion Movement of gases across a membrane from an area of high to low concentration

Breathing frequency (f)
The number of inspirations or expirations each minute (breaths/min)

Tidal volume (TV)
The volume of air inspired or expired each breath (ml)

Minute ventilation (VE)
The volume of air inspired or expired each minute (l/min)

Typical mistake

Carbon dioxide moves **out** of the blood into the alveoli to be expired and oxygen moves **into** the bloodstream from the air inspired. Make sure you get them the right way round!

Key definitions.
These are suitable for
flash cards.

These are important.
Learn them, then test
yourself on them.

Now test yourself

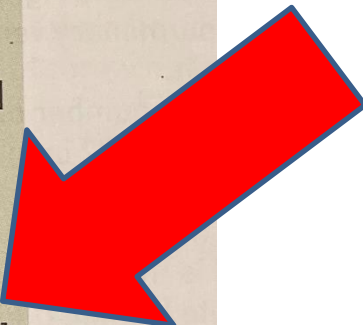
TESTED ☐

- 1 Compare the duration of aerobic to anaerobic exercise.
- 2 Give two examples of anaerobic exercise.
- 3 Using a sporting example, describe the intensity and duration of aerobic exercise.
- 4 What is a disadvantage of anaerobic exercise?
- 5 True or false? To perform anaerobic exercise oxygen is required to create energy.
- 6 True or false? Aerobic activity raises heart rate and breathing rate and can be sustained for a long period of time.
- 7 True or false? Throwing the javelin is an anaerobic activity.

Exam practice

- 1 Which chamber of the heart is responsible for ejecting blood into the aorta?
a) right atrium
b) left atrium
c) right ventricle
d) left ventricle. [1]
- 2 What is the volume of air expired from the lungs per breath measured as?
a) breathing frequency
b) stroke volume
c) tidal volume
d) minute ventilation. [1]
- 3 Which of the following activities is an example of anaerobic exercise?
a) 100 m sprint
b) 200 m sprint
c) discus
d) all of the above. [1]
- 4 Describe the pathway of air through the body to the lungs. [4]
- 5 Define cardiac output and state how it can be calculated. [2]
- 6 Identify one role of red blood cells. [1]
- 7 Give one common feature of capillaries and alveoli. [1]
- 8 Describe the role of the diaphragm and intercostals in creating one breath in (inspiration). [2]
- 9 Using practical examples, compare the intensity and duration of aerobic and anaerobic exercise. [4]

At the end of each Chapter, use these Questions to check your understanding



- to win at all costs as a result of the fear of losing
- the belief that other performers are doing the same or the belief that they can get away with it.

Table 2.1.3 Three typical drugs used in sport with the effects on performance and side effects

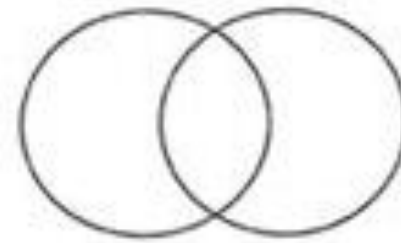
Type of drug	Example	Effects on performance	Negative side effects
Anabolic steroids	Weightlifters, throwers, sprinters and 50 m swimmers	Increased muscle mass and strength Increased speed of recovery Increased intensity and duration of training	Aggression and mood swings Acne and hormonal problems Liver damage and heart failure
Beta-blockers	Snooker, archery and shooting	Decrease blood pressure, heart rate, muscle tremors and anxiety	Dry mouth, dizzy spells, tiredness and stomach problems
Stimulants	Motor sport drivers, sprinters and long-distance cyclists	Increased alertness, focus and concentration Increased use of fats and endurance of performance	Sleep problems and anxiety Stomach problems

The impact of drug use in sport can affect both the athlete and the sport itself. In addition to the side effects listed in Table 2.1.3 there are impacts

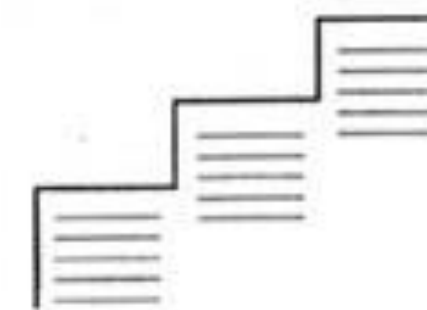
Graphic Organisers

Graphic Organisers get you to **TRANSFORM** information and provide a different way of seeing and thinking. There are templates for lots of these in the revision section on our school website.

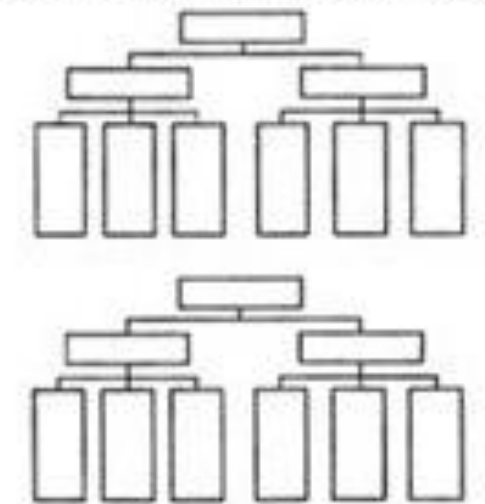
Venn Diagram



Sequential Thinking Model



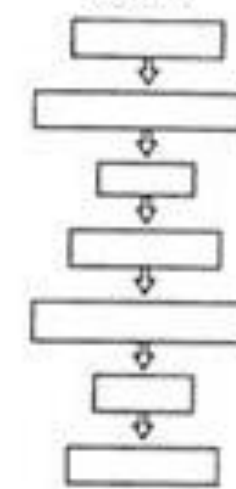
Sequential Thinking Model



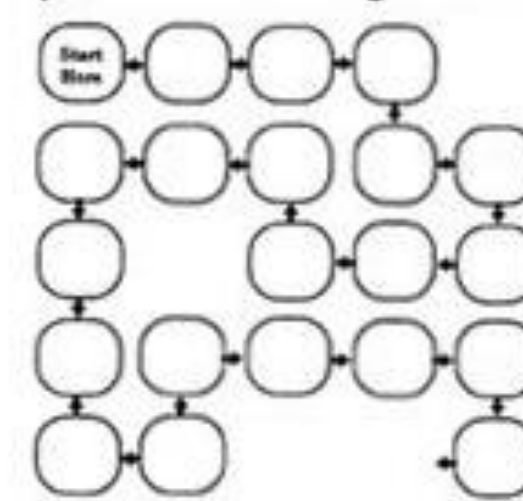
Chain



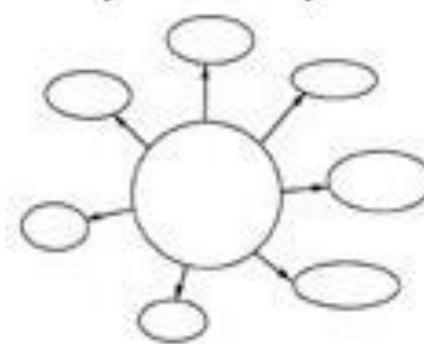
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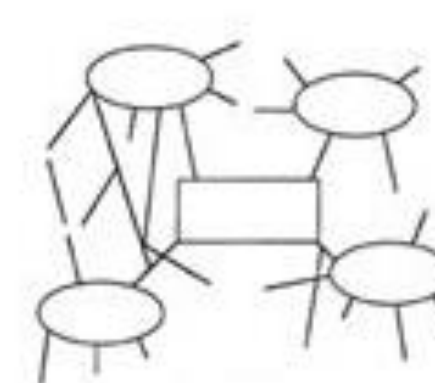
Sequential Thinking Model



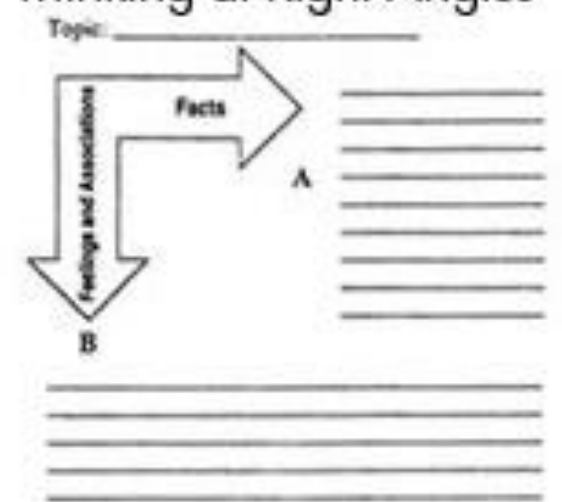
Spider Map



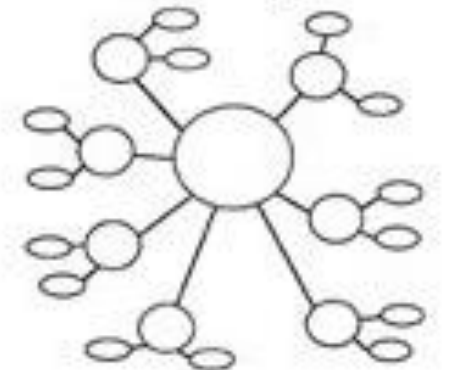
Web



Thinking at Right Angles



Mind Map



Condensing Your Notes

Now your notes are as neat as a pin, it's time to get cracking. You can't learn every word you've ever written, so you need to condense your notes — these will act as prompts for your main notes. Off we go...

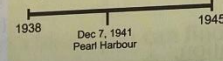
Condense Your Notes In Your Own Words

- 1) Simplify and summarise your notes into key points so they're easier to revise from.
- 2) Aim to get each topic onto a single page. Cut out the waffle and pick out what's important.
- 3) Try to reorganise the material in some way, e.g. by grouping it differently or linking topics together.
- 4) How you present your notes might depend on the subject. For example, you could make:

Labelled
diagrams
for Science.



A timeline of key
dates for History.



A page of key quotes
for English Literature.



A table of formulas
and rules for Maths.

$$a^2 + b^2 = c^2$$

- 5) Condensing topics makes your revision interactive — it's better than just re-reading your notes. Plus, you're more likely to remember your own words than something someone else has written*. To test this out, have a go at condensing the notes for one of your topics.



EXAMPLE

Here's an example of some condensed notes for a Physics topic.

Wind turbines *don't produce pollution in order to generate power, and there are no fuel costs to run them. However, they can be quite noisy for people who live nearby and they don't produce electricity in very strong winds or when there's no wind.*

Wind Turbines

Positives

- No pollution
- No fuel costs

Negatives

- Noisy
- Dependent on wind

Test Yourself On What You've Covered

When you've simplified a topic, it's time to test yourself:

- 1) Cover up your notes and write down as much as you can remember.
- 2) Compare what you've written to your notes, then fill in any gaps — use a different colour so you know which bits you missed.
- 3) Keep doing this until you remember everything on the topic.
- 4) This is an active recall technique — there's more about this on p.24.

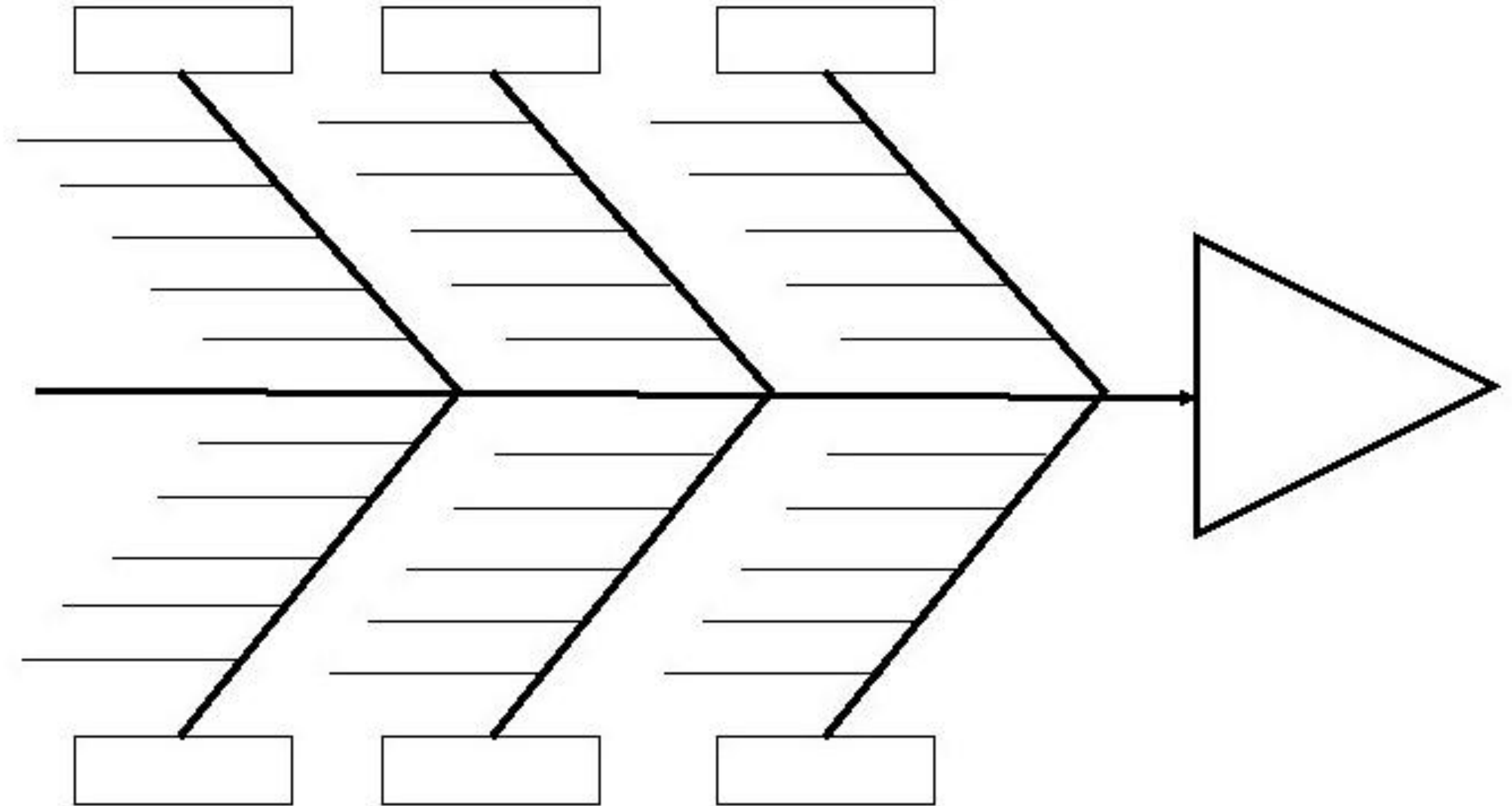
It's a good idea to come back and test yourself again later, to see what you can still remember. (See p.51 for more about spaced practice.)

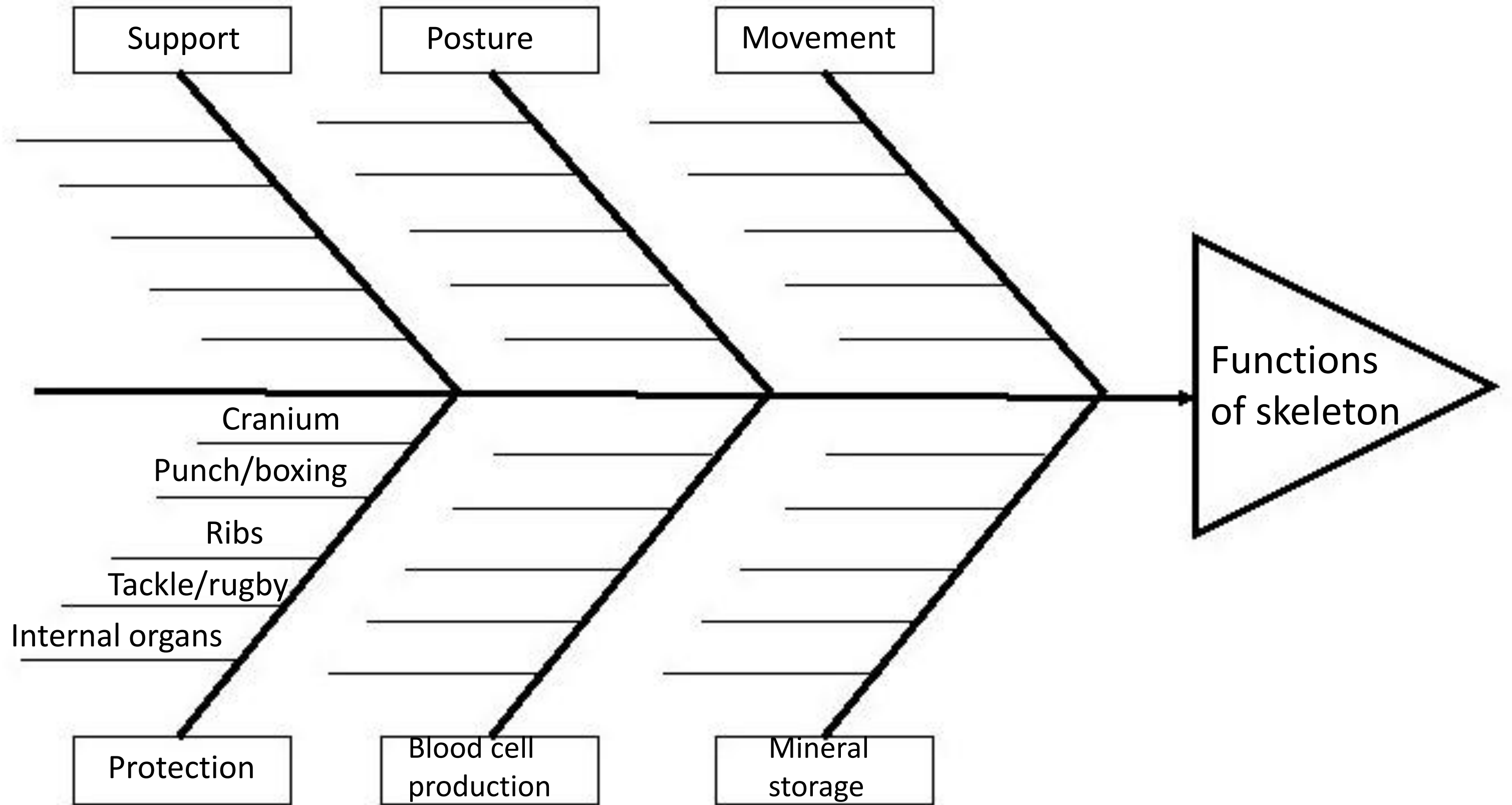
***apart from my words — you'll definitely remember my words...**

The key to condensing is picking out the right points. Try highlighting the important bits before you start writing.

This technique helps to breakdown larger revision topics into the main facts

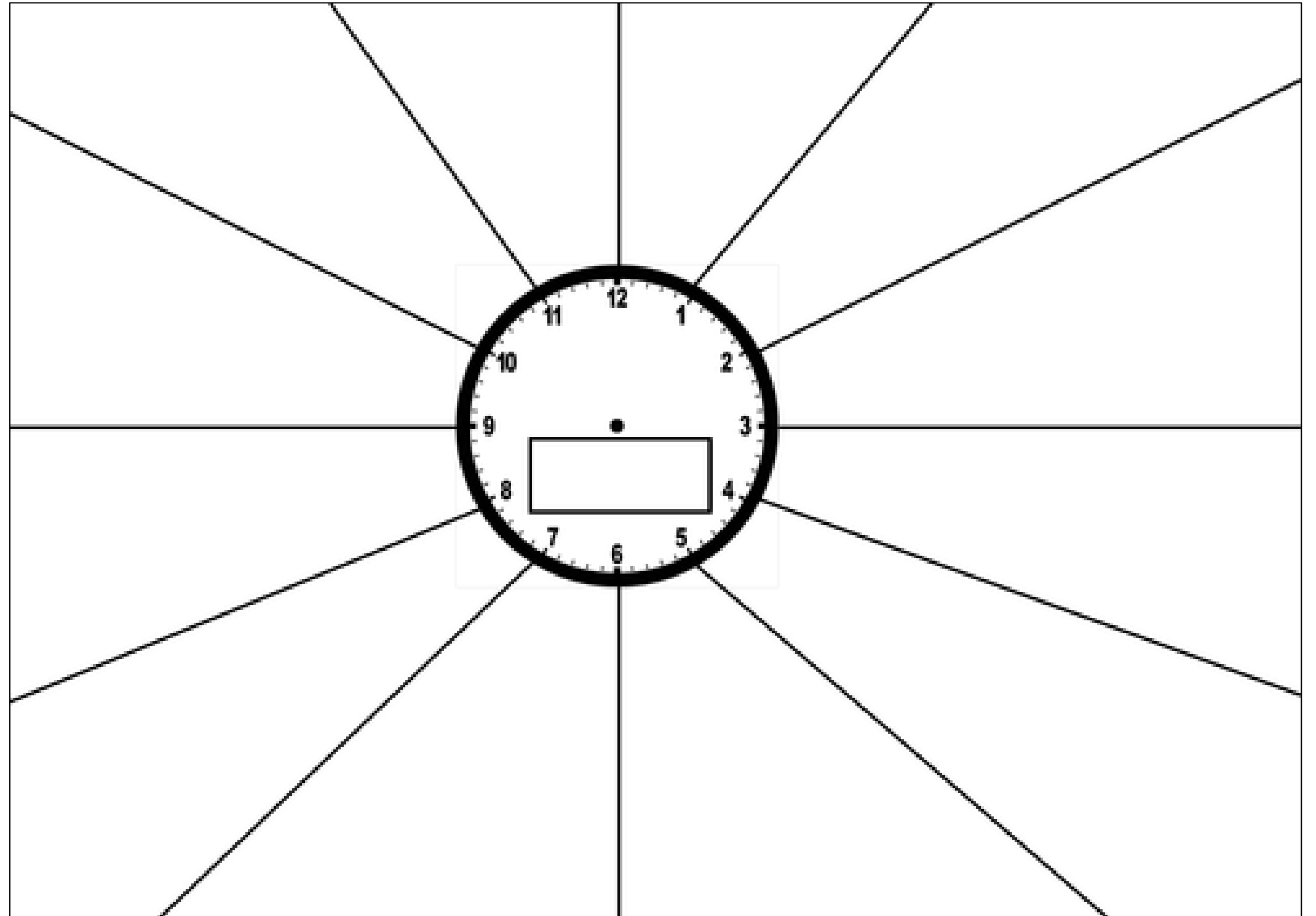
Fishbone diagram





Revision Clock

- Revise a topic.
- Put 12 key themes in the segments – one theme per segment.
- Give yourself 5 minutes per segment to write down everything you can remember about the theme.
- Change segment every 5 minutes, with a short break after 30 minutes.
- Check your notes against the revision guide.



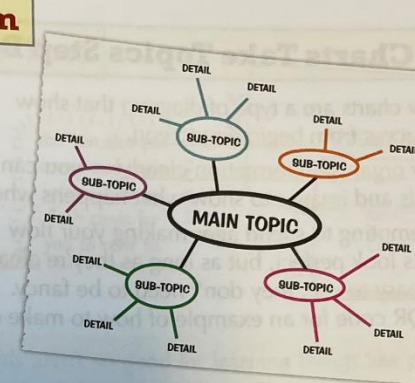
Drawing Mind Maps

21

If you say 'mind map' as fast as you can 40 times while looking at a topic, one will draw itself...

A Mind Map is a Type of Diagram

- 1) Mind maps are a visual way to organise information.
- 2) One mind map usually represents one topic.
- 3) The name of the topic goes in the middle, with sub-topics and further detail added around it.
- 4) Details are short and to the point.
- 5) Boxes or bubbles around some of the information can help it stand out.
- 6) A good mind map uses colour and images.



Mind Maps Are Great For Revising Topics

- 1) Organising material visually can make it easier to recall in an exam.
- 2) Colour and images can help topics and information to stick in your memory.
- 3) Mind maps can help you to identify the key ideas of a topic and find links between them, which can help you see the topic in different ways.

You Can Use Them Throughout Your Revision

Mind maps are really useful for subjects where there are lots of links between ideas (e.g. History or English) but less useful for learning a list of formulae or a vocab list.

At the start

Use your notes and other resources to draw a mind map of a topic — it's a great way of revising key information.



During revision

You could pin your completed mind maps up in your revision space so that you see them regularly.



To test yourself

Draw a mind map of a topic from memory, then refer to the original and fill in any gaps in a different colour — this shows you what you still need to revise.



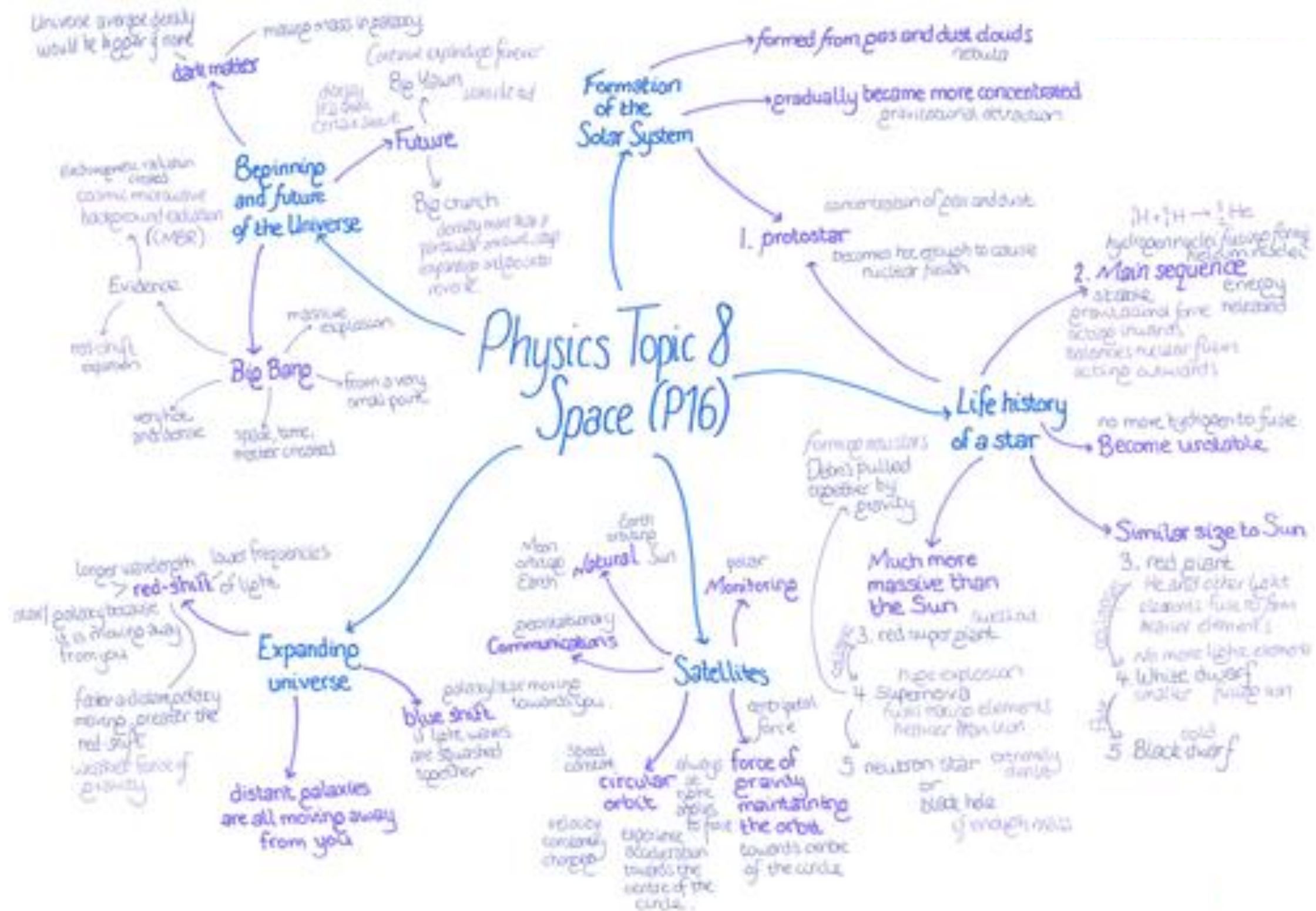
They told me to mind my own business...

... so I minded my business, my history, my maths, my geography. Making and using mind maps will make your revision really effective and more fun, so pick a topic and have a go at making one yourself.

Revision Techniques

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Mind Maps



Getting Your Notes in Order

Before you start revising, you need to get your notes together and make sure they're as useful as they can be...

Start By **Gathering** the Notes You Have

- 1) You'll have made notes in many ways — class notes, homework, coursework, independent study, etc.
- 2) Arrange your notes in a sensible way, e.g. have a separate folder for each subject, and split each subject into topics — this'll make it easier to keep track of what you've got and find what you need.
- 3) To make sure you have notes on every topic, check the exam spec.
Exam specs show what you need to know or do to perform well in the exam.

Fill in Any Gaps

- 1) If you're missing notes on a topic, you can find information to fill in the gaps in lots of places — revision guides, textbooks, online resources, etc.
- 2) When you write notes, don't just copy things down word for word.
- 3) Instead, you should write the key information in your own words. This will help you actively learn the content while you're studying. It will also make your notes easier to understand and refer to.
- 4) There's more on how to make effective notes below.



Make Sure Your Notes Are Neat and Clear

- 1) If your notes are muddled or hard to read, you won't be able to revise effectively from them.
- 2) Tidy them up and rewrite any parts that are particularly confusing and hard to follow.
When you fill in gaps or rewrite notes, try these methods to make your notes as useful as possible:

You Could **Split** Your Notes Into Sections

- 1) Splitting your page into different parts means you need to think about what fits where, so it's a great way of checking that you understand it.
- 2) You could divide your page into:

- the title of the topic at the top of the page.
- a large right-hand column for writing your notes.
- a small left-hand column — after you've written your notes, fill this column in with review questions and key words based on your notes. These will act as prompts for remembering the information in the notes column.
- an area at the bottom of the page to summarise your notes once you've written them.

||||| This is called the
||| Cornell method.
|||||

TITLE	
Key Words and Questions	Notes
Summary	



Cornell Notes

Subject	Topic	Date
---------	-------	------

Key words	Notes

Summary

Cornell Notes

A: Write the questions below.

E: Fold this page under and turn the page over to test yourself again on P4

B: Write the answers below.

D: Fold p3 over here to "Cover and Check" definitions →

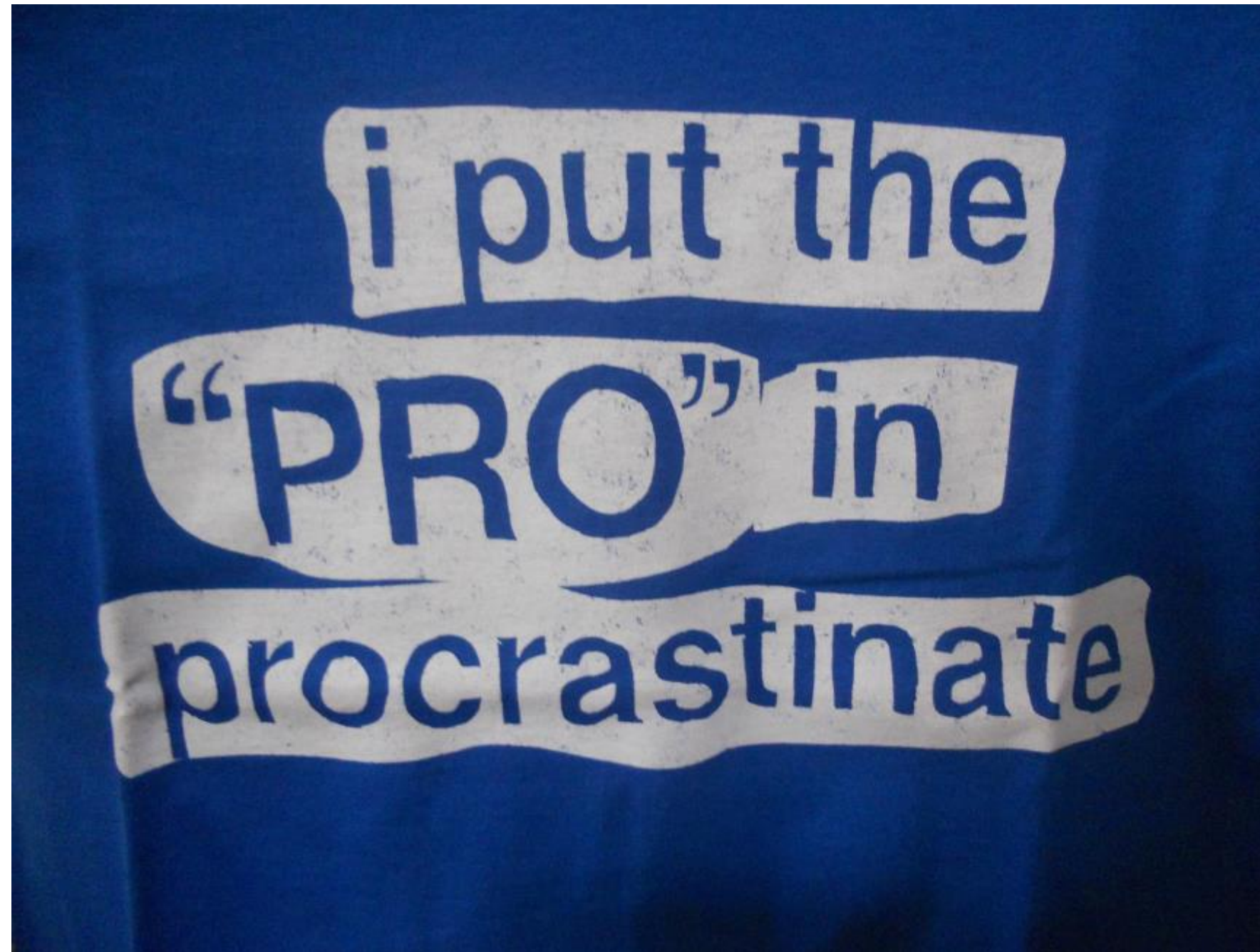
C: Write key terms to expand your answers ↓

What are the functions of the skeletal system?

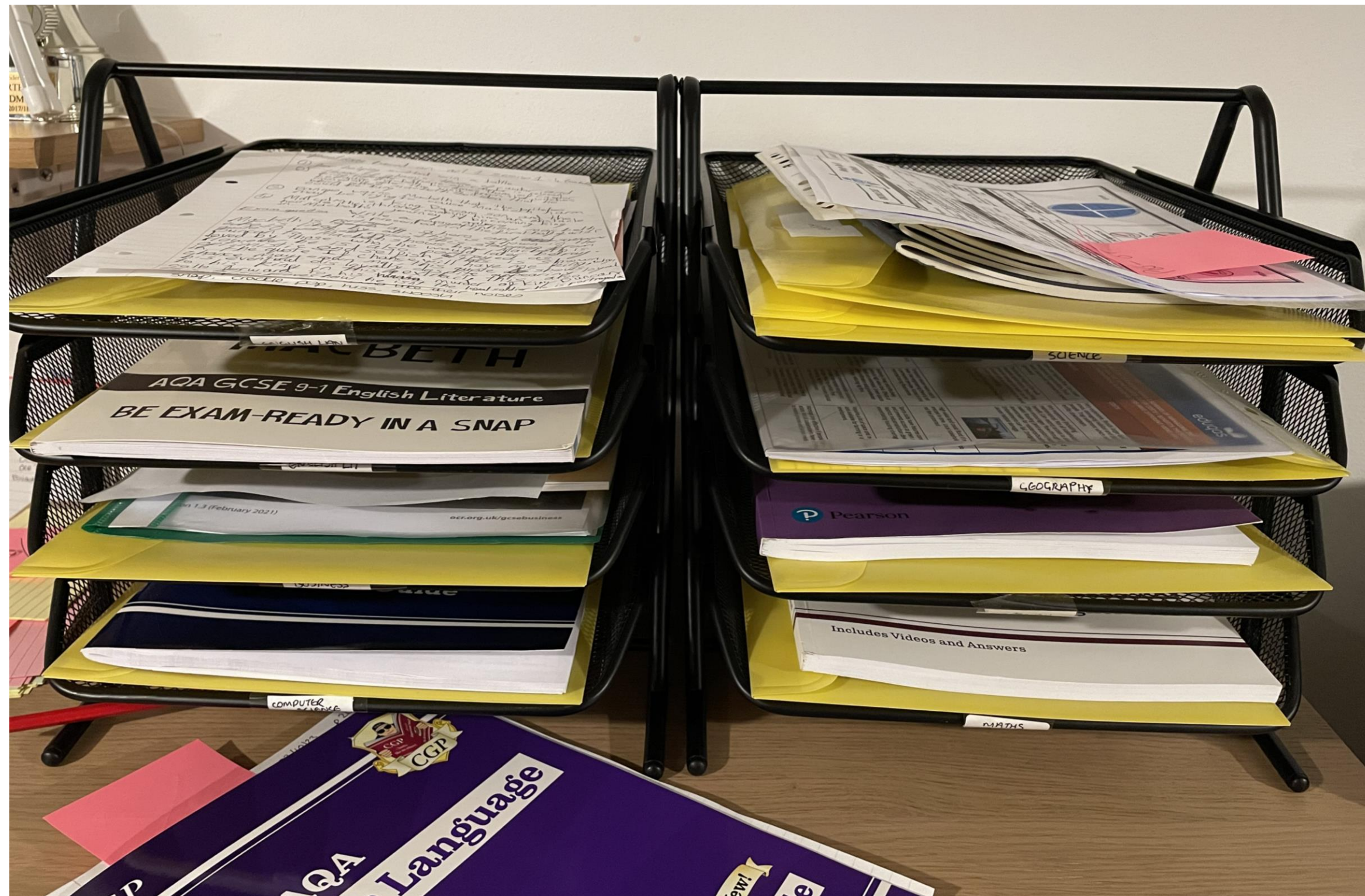
Support, Posture, Protection, Blood production,
Movement, Mineral storage

Calcium/iron – Bone marrow – ribs/cranium - Levers

There is no magic wand. You simply have to put the time in to revising. Get the revision done first in an evening, then your time is your own.



Maximise your revision time by having everything at hand and organised.





Two 30 minute sessions, four times per week
(increase closer to the exams)

Monday Textiles
Monday History

Tuesday Maths
Tuesday Science*

Thursday Business
Thursday English Lit

Sunday English Lang
Sunday French

**3 school weeks until the mocks
= just 1.5 hours per subject**

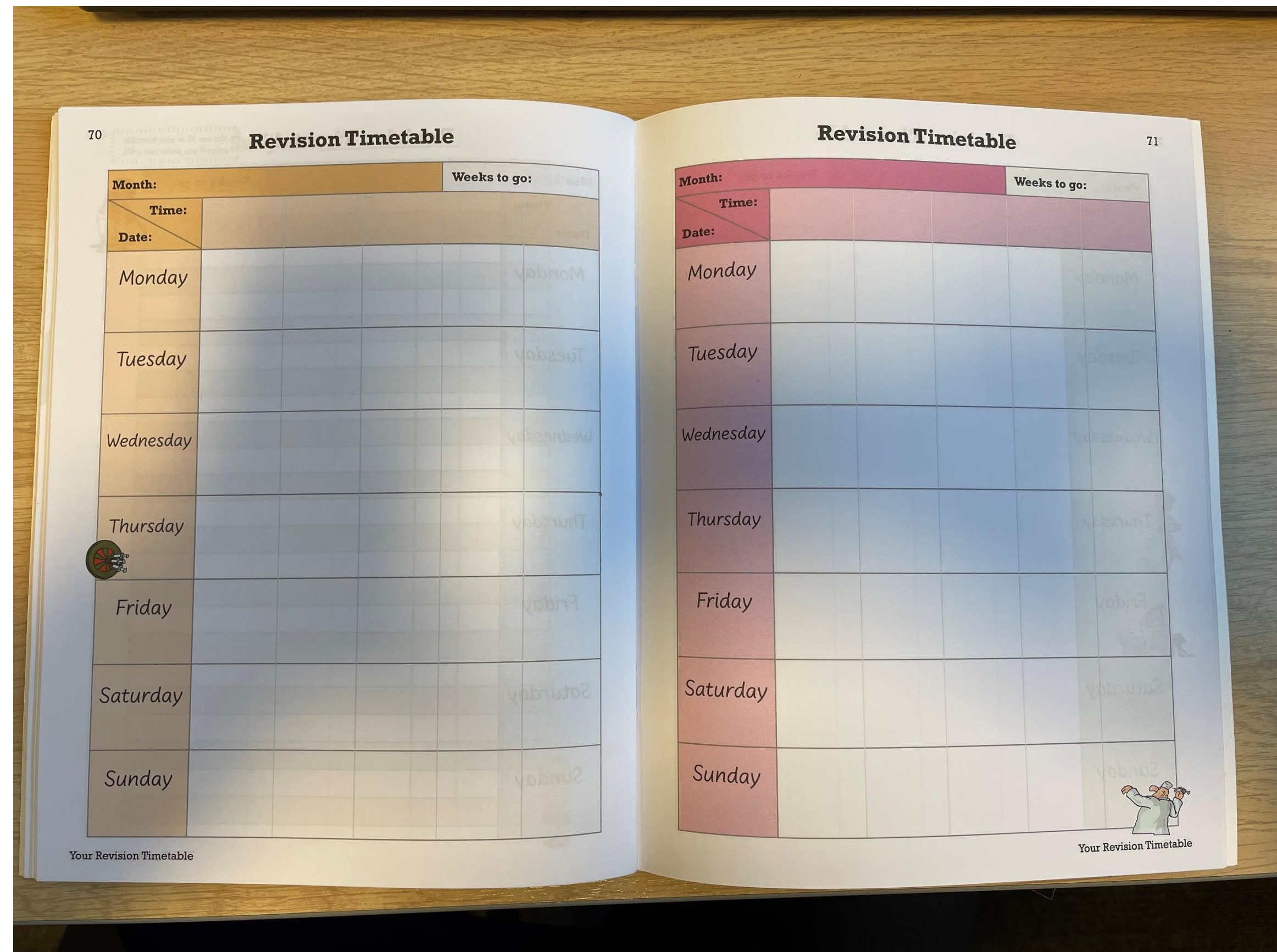
**17 school weeks until the GCSEs
= 8.5 hours per subject**

Weekly Revision Timetable

Week beginning _____

Day	Session 1	Session 2	Session 3	Session 4
Example	4:30 – 5:00pm Geography Formation of volcanos		7:30 – 8:00pm PE Commercialisation	
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

Pages 70-85





Flash cards

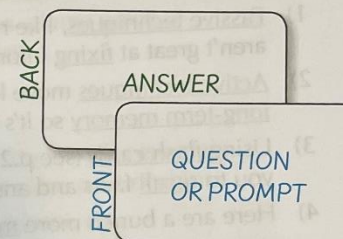
Using Flash Cards

Flash cards are one of the simplest, but most effective, revision tools. You might not be able to play solitaire or snap with them, but with a little patience, they'll help you bridge any gaps and make you número uno.

Flash Cards Are a Great Revision Tool

- Flash cards are **small cards** with a **question or prompt** on **one side**, and the **answer or information** on the **other side**.
- They're a great way to **test yourself** and **find gaps** in your knowledge.
- Flash cards are useful for learning things like:
 - important **dates** in History
 - language **vocabulary**
 - key words** and **definitions**
 - formulae**
 - labelled diagrams**

You can also put condensed topic information on flash cards for you to refer to.



Flash cards aren't so good for learning things like processes and more complex information that can't be easily split up — take a look at the rest of this chapter for ideas on how to revise these.

- There are lots of flash cards available online, but it's a good idea to **make your own**. Working through your notes and picking out information is part of the **revision process**.

Another great way to use flash cards is by filling one side with **example questions** about a topic, and the other side with the **answers**. This can be useful **after you've revised** a topic and want to **test yourself** on it. (I hear **CGP** do a pretty awesome range of **revision question cards**...)

Use Them to Test Yourself

Have a go at these methods for using your flash cards **effectively**:

Say your answers out loud — this forces you to **answer** the questions **properly**.

Group your flash cards based on how well you know the content. Test yourself **more often** on the groups you **struggle with** than those you know better.



Make sure you **test yourself both ways** — e.g. you need to know vocab translations from English to French and French to English.

Ask someone else to test you — it removes the temptation to check the other side yourself before answering.



Flash Cards
Extras

Flash cards — lighting the way to revision success...

Flash cards are useful because they're pocket-sized — imagine all the wonderful places you can take them to revise.

Memory Techniques

Here's a lovely heap of memory techniques — try them all out and see which ones work for you.

Active Learning is More Effective Than Passive Learning

- 1) Passive techniques, like reading and highlighting notes, aren't great at fixing information in your mind.
- 2) Active techniques move knowledge from your short-term memory into your long-term memory so it's there when you need it (i.e. in the exam).
- 3) Using flash cards (see p.23) is one active learning technique — flash cards get you to recall facts and answers in order to help them stick in your memory.
- 4) Here are a bunch more memory techniques that involve active learning...



Blurting Helps You See What You Do And Don't Know

Blurting is pretty much what it sounds like — getting all your knowledge onto the page.

- Read a text or watch a video about a specific topic.
- Using a coloured pen, write down everything you can remember.
- Compare your notes to the text or video and use a different coloured pen to add anything you missed.
- By using two colours, you can see what you need to test yourself on more.

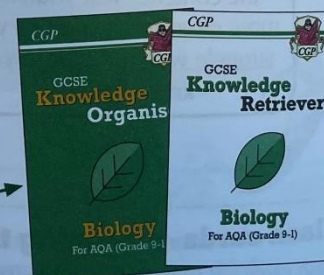
EXAMPLE

Here's an example of blurring from part of a history mind map — everything in green was written without notes, and the information in red was added later.



Knowledge Organisers And Retrievers Help You Actively Learn

- 1) Knowledge organisers are a great revision tool — they strip topics back to only the most important information.
- 2) Once you feel confident that you know the topic, you can use a knowledge retriever — these help you actively learn by testing your ability to recall information from the knowledge organiser.
- 3) You can find knowledge organisers and retrievers online, though the best ones are available from CGP (totally unbiased opinion here...).



More Revision Tips

Don't panic about what other people are doing — do what works for you. Be a revision warrior, not a worrier — face your revision head-on and be proactive. Repeat after me: I can do this. I can do this...

Revise With a Friend

- 1) Test each other on different topics, e.g. using flash cards.
- 2) Try speaking for a minute on a topic, then get your friend to ask you questions on it.
- 3) Come up with funny pictures or stories to help you remember information. Get creative!



- Revising with a friend can be useful, but it's best not to do it all the time — it can be distracting, and it's important to do your own revision too.
- Don't chat while you're revising. Take regular breaks, as you would if you were revising alone, and save your chatting for then.

Say It Out Loud

Saying things out loud is a great way to engage with topics — it stops you skimming over details. Have a go at incorporating this into your revision by using these ideas:

- Record yourself reading the key points of a topic and then listen to the recording regularly. Say the points out loud as you listen to them.
- Change the lyrics to your favourite songs to be about topics you need to remember — challenge your friends to do the same and share your lyrics.

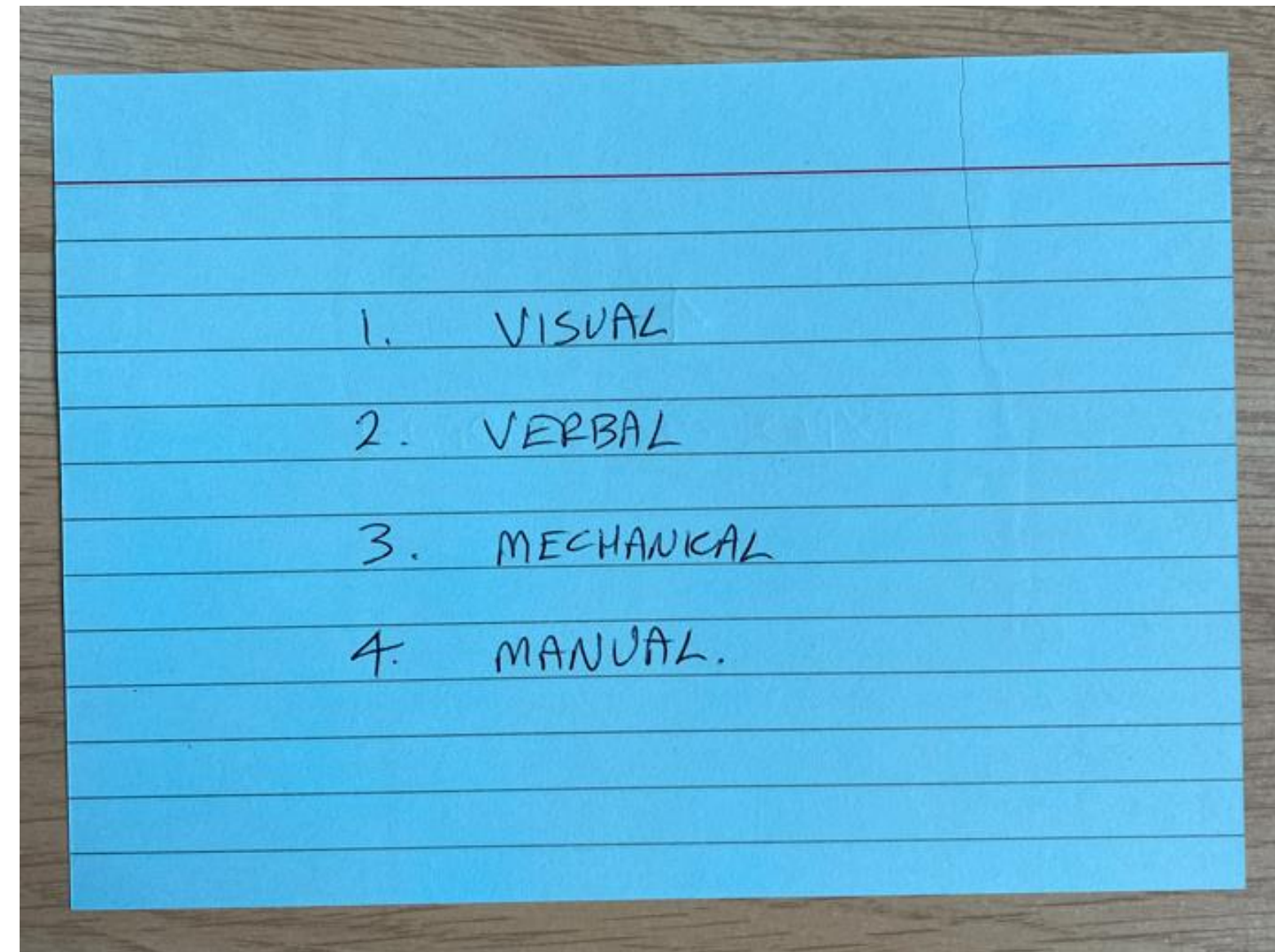
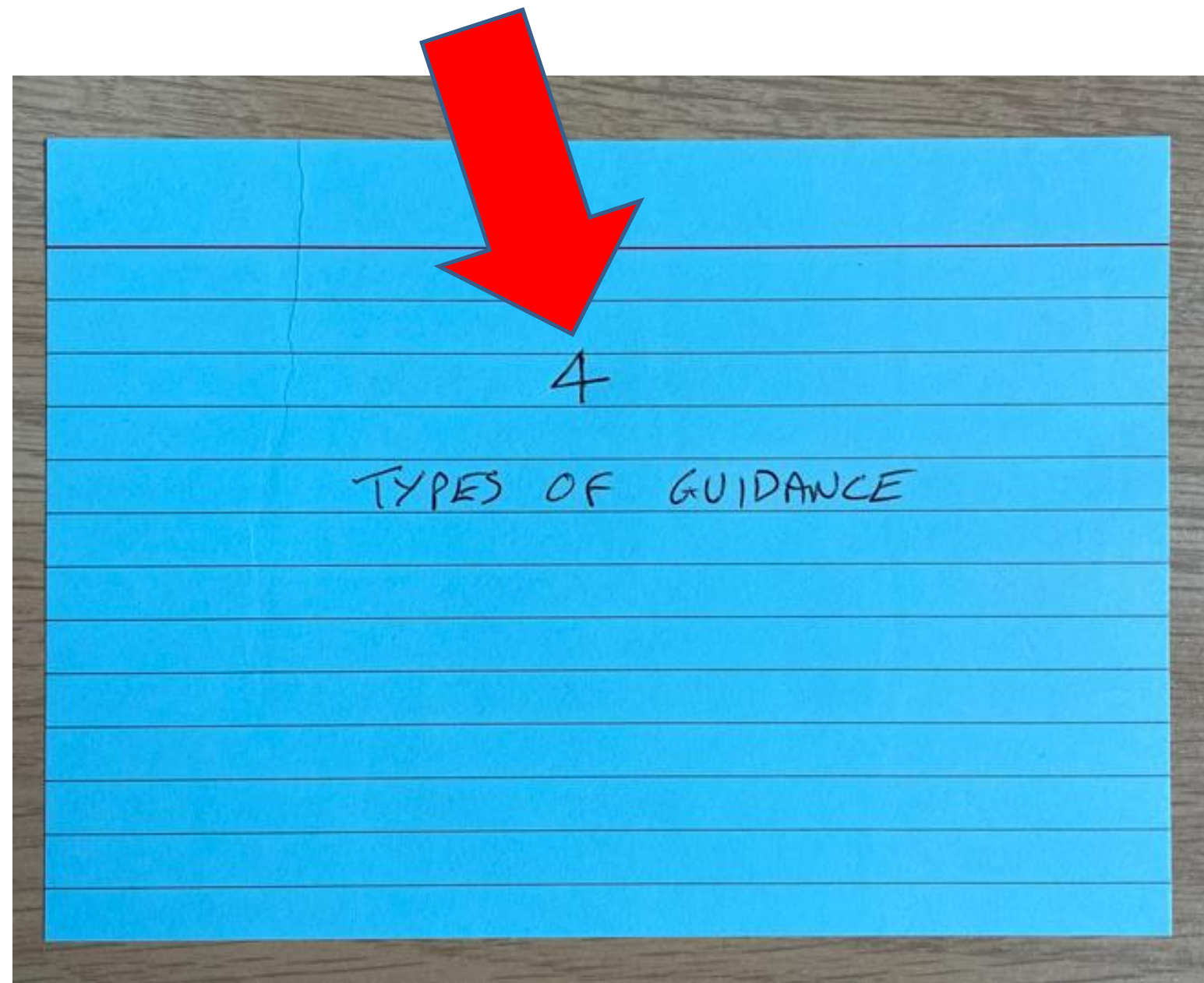


Exercise Your Mind and Your Body

Incorporating exercise into your revision routine can really pay off because exercise stimulates your brain (see p.7). There are lots of different ways of doing it, for example:

- To help with language revision, you could hit a tennis ball against a wall, reciting a different part of the verb table every time it bounces.
- Play catch with a friend and say a fact about a topic or the next step in a sequence when the ball comes to you.

Flash Cards



Where to find the information to go on the cards?

Flash Cards

D
LIGAMENTS

A STRONG TISSUE THAT CONNECTS
BONE TO BONE AND STABILISERS
A JOINT.

Where can I get flash cards from?

School will provide an initial sample.

You can purchase more at Amazon* – next day delivery!
100 for £3.99!

*other retailers are available.

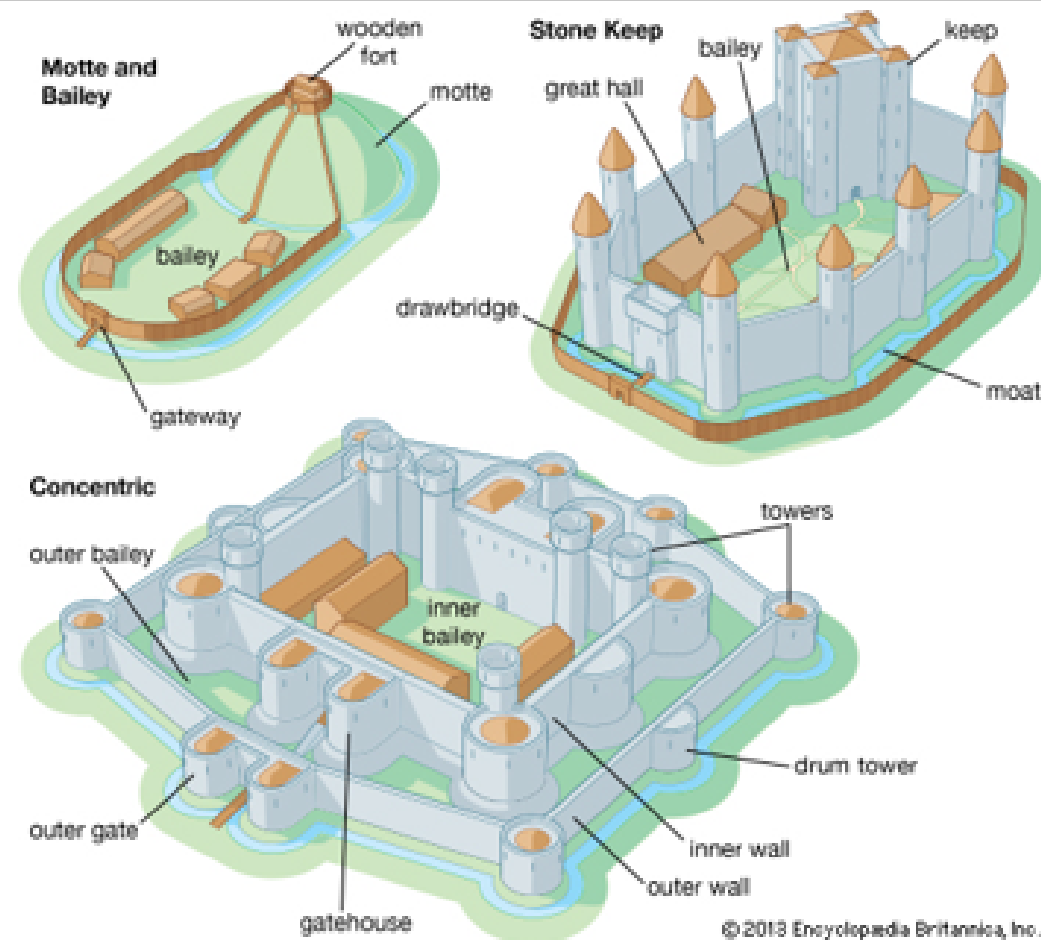


KAV 6x4 inches 100-Sheet
Coloured Record Flash Cards -
Study Revision, Indexing, for
Home Office and School Use ...

£3⁹⁹

Describe the key features of a castle.

1



2

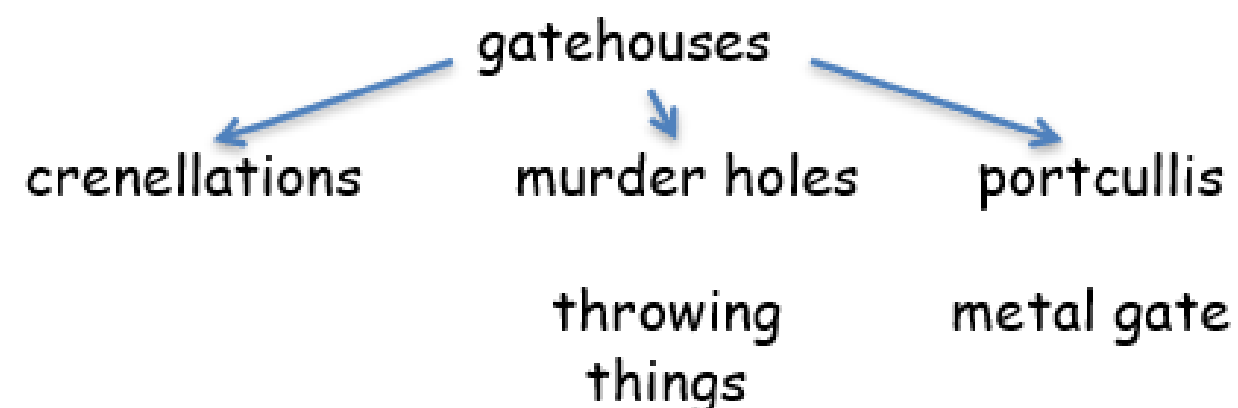
Castles defended themselves in a number of ways. Firstly, they often had a thick curtain wall surrounding the main part of the castle. This was thick, high and made of stone. Another feature castles had were tall towers. These were very high and again made of thick stone to make it difficult to attack. Sometimes, castles were surrounded by deep moats, often filled with water, but sometimes without water. Even if moats had no water in they were so steep that it would have been impossible to climb up. Many castles also had gatehouses. These had lots of features which helped to protect a castle including crenellations (which allowed archers to hide behind before shooting), murder holes (for dropping hot sand down) and portcullises (big metal gates).

3

curtain wall → thick/stone/tall

towers → tall/thick/stone

moats - water or dry → steep/hard to climb

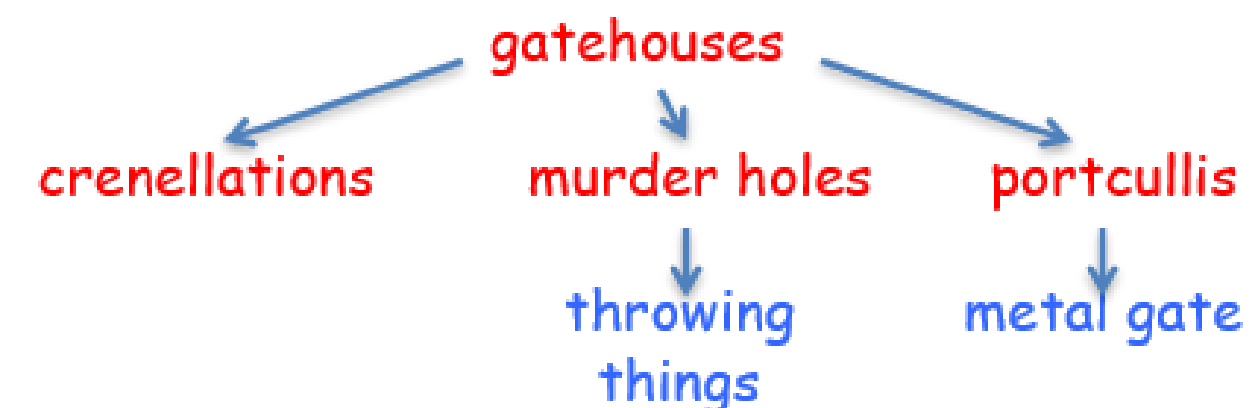


4

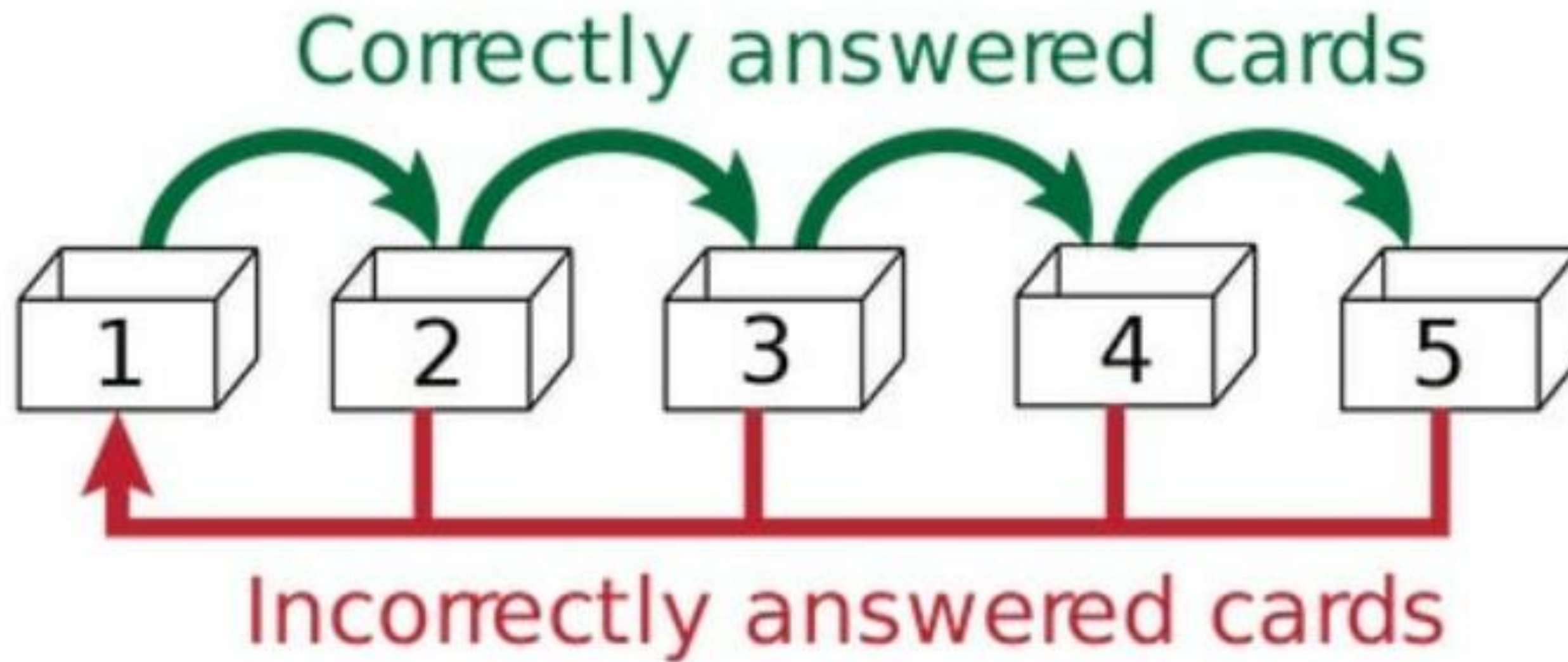
curtain wall → thick/stone/tall

towers → tall/thick/stone

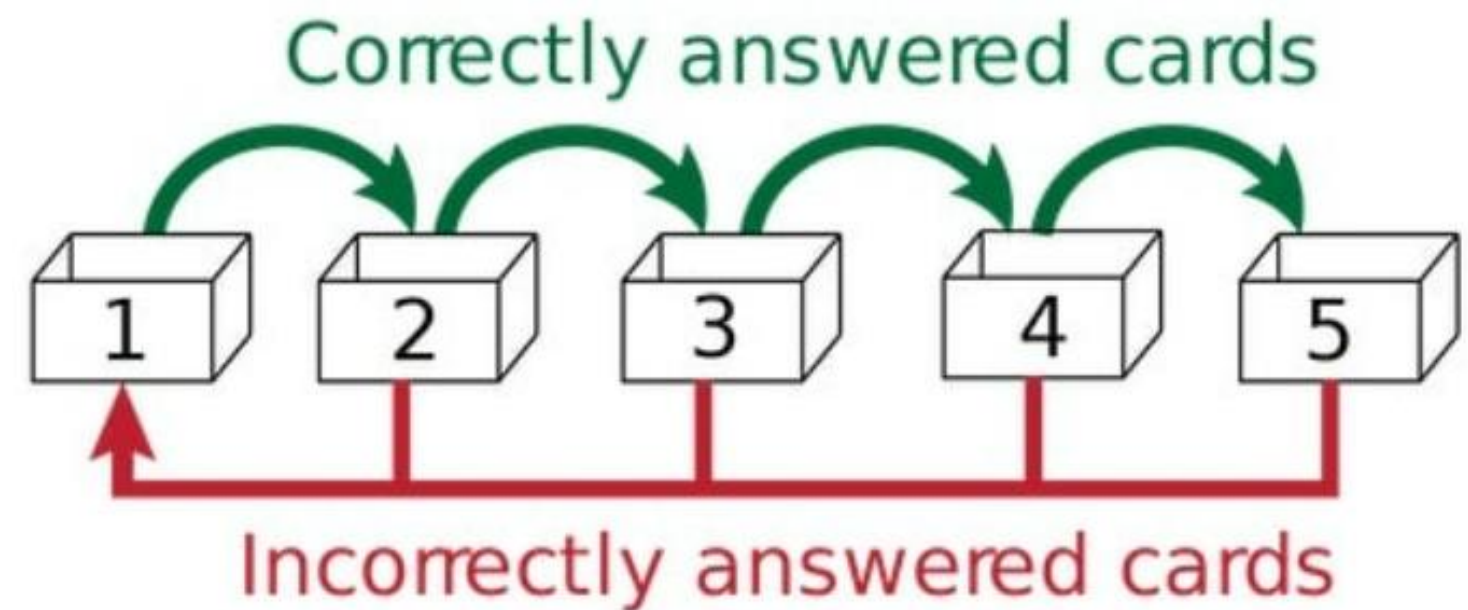
moats - water or dry → steep/hard to climb



How to use flash cards



**These takeaway
boxes are a
great way to
sort your flash
cards.**









Top tips:

- Use different coloured flash cards for each subject – you can mix these up in your revision but it makes it easier to separate them back out if required.
- Have a competition with a friend – see who can be the first person to get 15 correct answers when using each others flash cards.



Top tips:

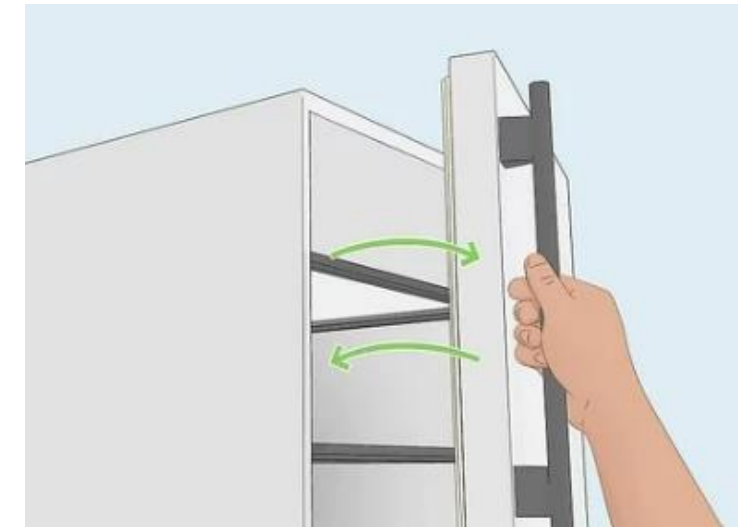
- Ensure your writing is large and positioned in the middle of your flash card – make it easy to read.
- If revising alone, say answers out loud before turning your card over to check your answer. Speaking out loud helps to commit to our memory!

 What are the units for kinetic energy? (E_k) <small>Primrose Kitten – YouTube Tutorials for Science and Maths</small> Q-1	 What are the units for mass? (m) <small>Primrose Kitten – YouTube Tutorials for Science and Maths</small> Q-2
 What are the units for speed? (v) <small>Primrose Kitten – YouTube Tutorials for Science and Maths</small> Q-3	 What are the units for elastic potential energy? (E_e) <small>Primrose Kitten – YouTube Tutorials for Science and Maths</small> Q-4
 What are the units for spring constant? (k) <small>Primrose Kitten – YouTube Tutorials for Science and Maths</small> Q-5	 What are the units for extension? (e) <small>Primrose Kitten – YouTube Tutorials for Science and Maths</small> Q-6



Top tips:

- Blue tack flash cards around commonly used places in your house, i.e.
 - Fridge door – you must check the correct answer before getting something from the fridge!
 - Pillow – you must check the correct answer before getting into bed.
 - Next to your phone charger – you must check the correct answer before plugging in your phone!



Over to you!



**Use this time to make
some flash cards.**

Start with the RED sections of
your revision guide first.

