



REVISION @ PILTON YEAR 10

REVISION AT PILTON

1

Summarise



[Create a Revision Plan](#)



Organise your stationery and work area



[Revision Clocks](#)



[Create Flash Cards](#)



[Creating a Mind Map](#)



[Create revision Notes using the Cornell Method](#)



Dual coding: combine written text with diagrams, sketches or visual aids in your mind maps, clocks, notes and flash cards



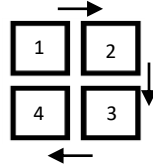
Save your resources in folders by subjects

2

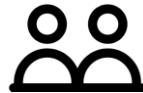
Revise



Re create your mind map or revision clock from memory: If stuck re-look at the mind-map or clock and redo in a different colour. Start with a small section then move to the whole thing



Retrieval Relay Race: Write as much as you can about a topic in box 1, read your notes for 5 mins, add further info on the topic in box 2. Repeat for box 3 and 4.



Have a friend or family member test you with your flash cards



Create a Question and answers sheet. Cover the answers and write out your answer again. Cover the question and rewrite the question from the answer



BLURT out all that you know on a topic in a set time – 10mins max. Then refer to your revision guide and add to them with a different colour pen. Any areas in a different colour need revision guides and a mind map

3

Test Yourself

Completing practice questions is the best way to consolidate knowledge and identify your gaps



Visit the exam board website and download past papers. Watch the video to see how to do this



Complete the questions under timed conditions. General rule is 1 mark = 1 minute. Do this for 15 minutes – 20 minutes



Mark your answers



Those questions you have not answered well need to be revised in the remaining session time



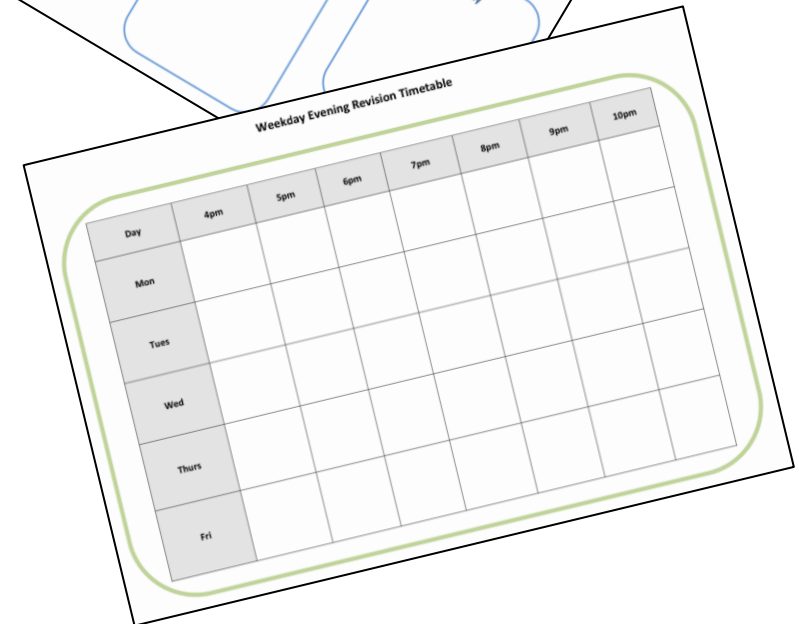
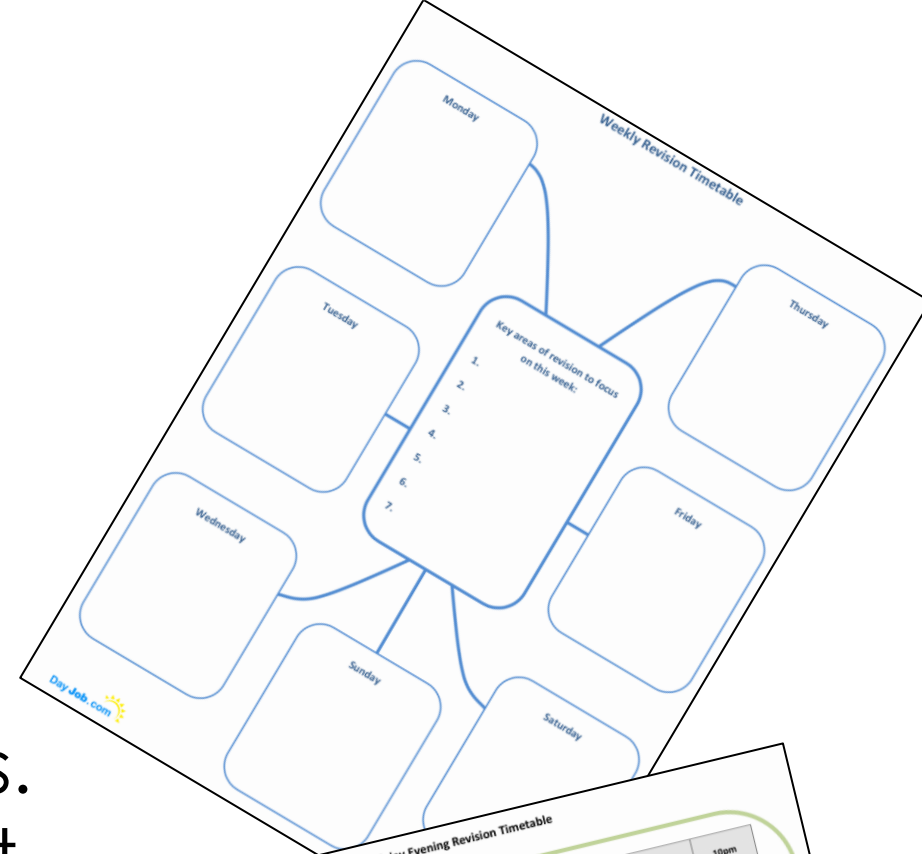
After revising go back to the questions and redo in a different colour



Repeat

CREATING A REVISION TIMETABLE

- Plan to do four 30 minute revision sessions per day.
- Download one of the templates from our website.
- Sessions should be separated by breaks.
- List your subjects from easiest to hardest.
- For each subject, list the topics you need to revise.
- Add one subject with a specific topic to each of the revision sessions slots.

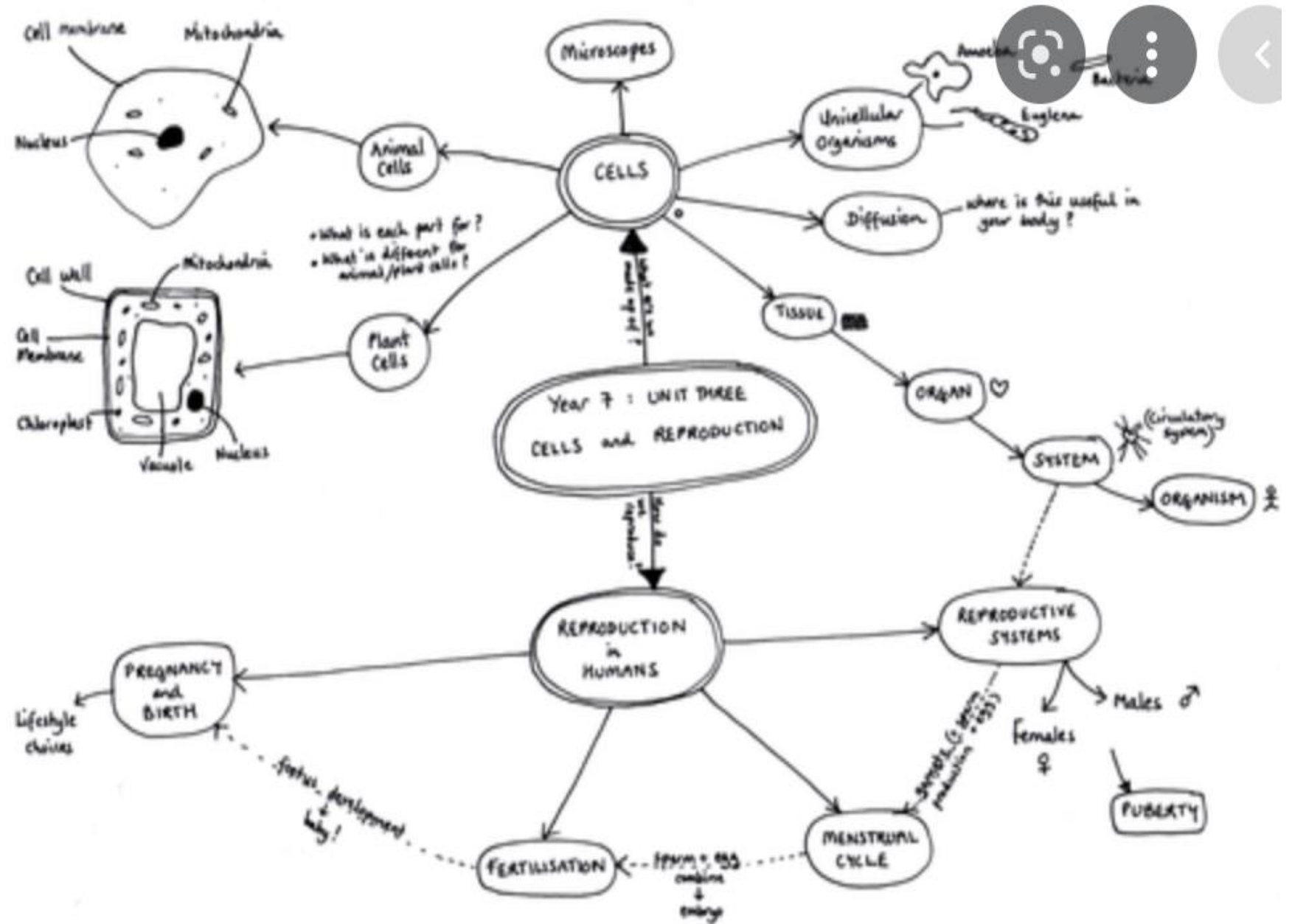


1

SUMMARISE

- The actual process of condensing notes into bullet points and/or pictures helps you to remember more information as you have to think hard about how to reduce the information.
- Creating resources for **active recall**
- Spend 1/3 of your time only
- Use this time to create
 - Mind maps
 - Revision clocks
 - Flash cards
 - Cornell notes

MIND MAPS



REVISION CLOCKS



FLASH CARDS

What are the 2 biological
methods of extracting
metals?

From low grade ores or waste produced
when metals extracted.

CORNELL NOTES

the mole

2.1.3
2.1.1

09/18

- Define the 'amount of substance'.
- What is Avogadro's constant?



- What is 'molar mass'?
- State the equation involving amount of substance + mass.
- Define molar gas volume
- State the equation involving molar gas volume at RTP
- What is the molecular formula?
- What is the empirical formula?

- What is water of crystallisation?
- What does 'anhydrous' mean?

amount of substance
counts the number of particles in a substance. (n)

measured in moles (mol)

the amount of any substance with the same amount of atoms that are in 12g of carbon-12.

MOLAR MASS

the mass per mole of a substance.
(g mol^{-1})

the volume per mole of gas molecules at a stated temp + P.

at the same temp + P, equal volumes of different gases contain the same number of molecules

Formulae

MOLECULAR

The number of atoms of each element in a molecule

Relative Molecular Mass (M_r)

compares mass of molecule to mass of C-12 atom

Relative Formula Mass

mass of a formula unit compared to mass of C-12 atom

avogadro's constant
is the number of atoms per mole of carbon-12.

6.02×10^{23} particles

moles = $\frac{\text{mass}}{\text{molar mass}}$

molar GAS volume

At RTP, the molar gas volume is $24.0 \text{ dm}^3 \text{ mol}^{-1}$

moles = $\frac{\text{volume}}{\text{molar gas volume}}$

EMPIRICAL

The simplest whole no. ratio of atoms of each element in a compound

hydrated salts

water - H_2O molecules are part of crystalline structure of crystallisation

e.g. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$

anhydrous = CuSO_4 → different colours

heat to drive off water.

Summary:

- Amount of substance = no. of atoms in 12g C-12 (mol)
- Avogadro's constant = 6.02×10^{23} particles
- Molar mass = mass per mole of a substance
- moles = mass ÷ molar mass
- Molar gas volume = volume / mole of a gas (depends on T, P)
- At RTP, $V_m = 24 \text{ dm}^3 \text{ mol}^{-1}$
- moles = volume ÷ molar gas volume
- Empirical → ratio; molecular → no. of atoms
- Water of crystallisation: H_2O molecules in salt's structure

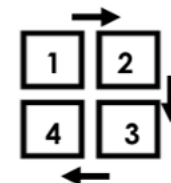
REVISE (RECALL)

- Embeds knowledge into your long term memory.
- Retrieving information from memory through testing yourself at every stage not only strengthens our ability to retain information but also improves connections in our brains between different concepts.
- Active recall is more difficult and mentally more taxing than re-reading. But the key point is, ***revision should be cognitively demanding!***

REVISE



Re create your mind map or revision clock from memory: If stuck re-look at the mind-map or clock and redo in a different colour. Start with a small section then move to the whole thing



Retrieval Relay Race: Write as much as you can about a topic in box 1, read your notes for five minutes, add further info on the topic in box 2. Repeat for box 3 and 4.



Have a friend or family member test you with your flash cards



Create a Question and Answer sheet. Cover the answers and write out your answer again. Cover the question and rewrite the question from the answer



BLURT out and write down all that you know on a topic in a set time (10 minutes max.), then refer to your revision guide and add anything you forgot in a different colour. Any areas in a different colour need revision guides and a mind map.

SUMMARISE

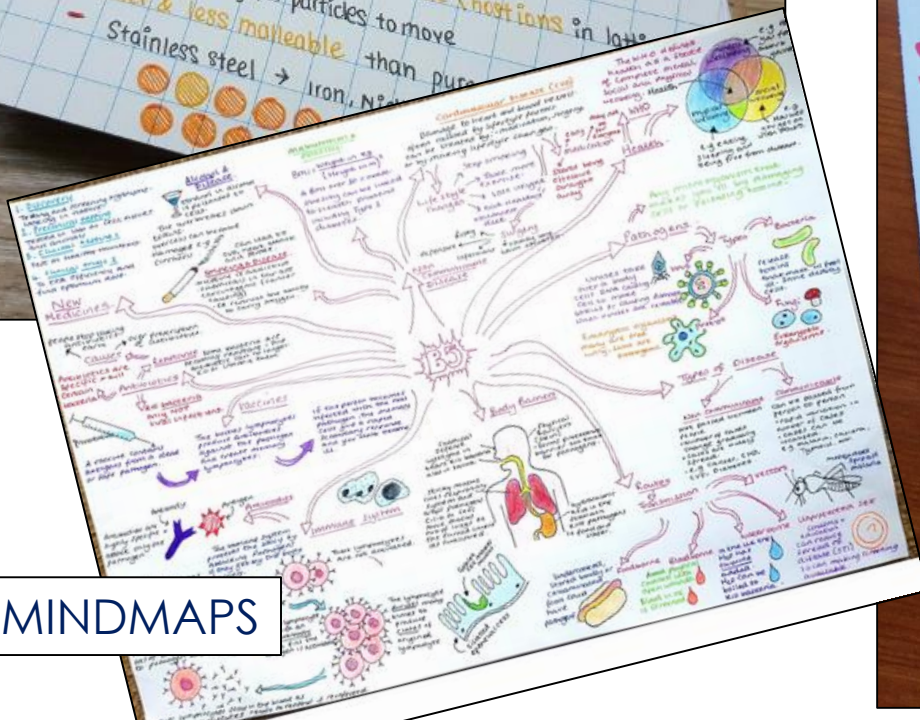
Reducing revision guides, notes, textbooks etc down to manageable chunks should not be your whole revision focus. Creating resources will not commit the knowledge to memory. It's only the start...



FLASH CARDS



MINDMAPS



the mole

2.1.3
2.1.1 09/18

Define the 'amount of substance'.

What is Avogadro's constant?

amount of Substance (n) measured in moles (mol)

Avogadro's constant is the number of atoms per mole of carbon-12.

6.02 x 10²³ particles

Molar mass (M_r) is the mass per mole of a substance (g mol⁻¹)

Molar gas volume (V_m) is the volume per mole of gas molecules at a stated temperature and pressure.

At RTP, the molar gas volume is 24.0 dm³ mol⁻¹

Formulae

- MOLECULAR: The number of atoms of each element in a molecule
- EMPIRICAL: The simplest whole no. ratio of atoms of each element in a compound
- Hydrated salts: Water (H₂O) molecules are part of crystalline structure of a substance. e.g. CuSO₄ · 5H₂O

Relative Molecular Mass (M_r)

Relative Formula Mass (M_r)

Amount of substance = no. of atoms in 12g C-12 (mol)

Avogadro's constant = 6.02 x 10²³ particles

Molar mass = mass per mole of a substance

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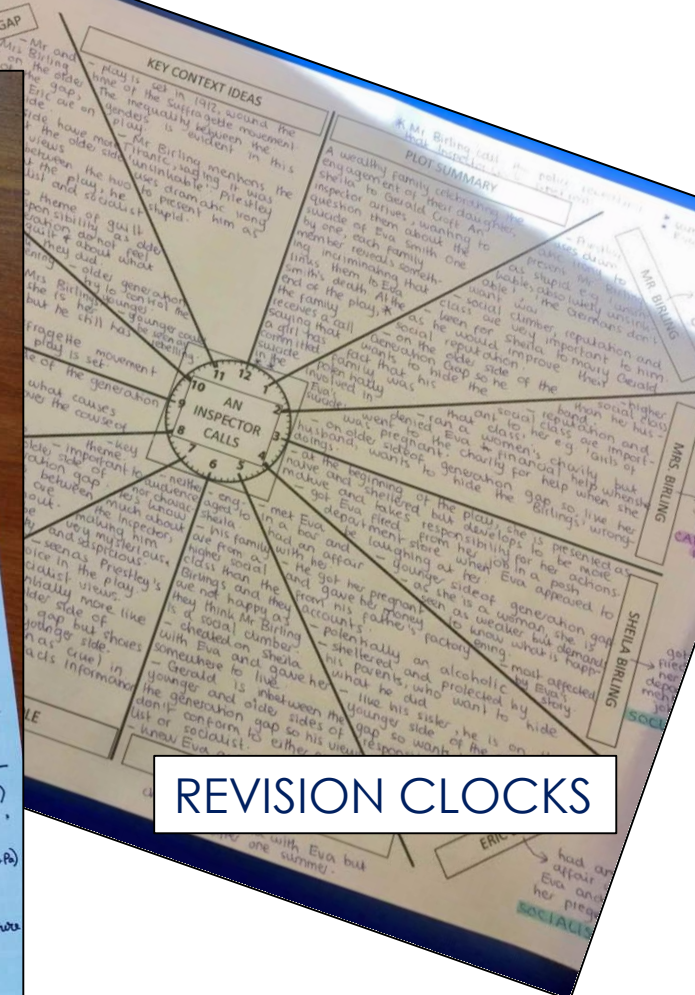
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CORNELL NOTES

REVISION CLOCKS



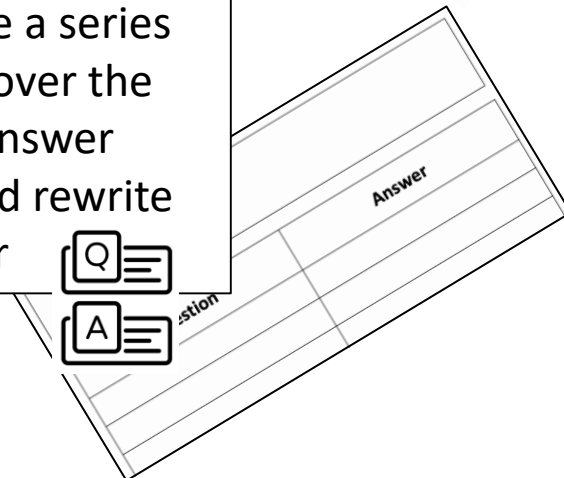
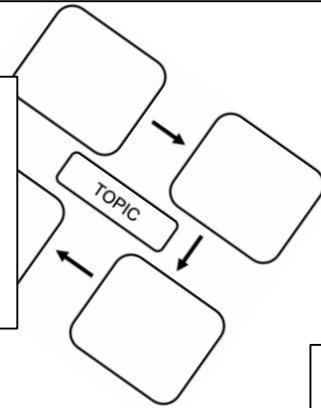
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REVISE (Recall)

Re create your revision clock from memory: Take 2 colours of pen. Spend 5 minutes completing each segment of your clock from memory. Check your notes and take your second pen. Add in additional notes you missed first time around. Combine with Dual coding ideas.

Retrieval Relay Race: Write as much as you can about a topic in box 1, read your notes for 5 mins, add further info on the topic in box 2. Repeat for box 3 and 4.

Question and Answers Create a series of Questions and answers. Cover the answers and write out your answer again. Cover the question and rewrite the question from the answer



This is the process to embed the knowledge into your long term memory. This is a critical part of the revision process.

Re create your mind map from memory: You have 3 lives to recreate your mind map from memory. Each time you are stuck you can refer back to your mind map but you lose a life. After 3 lives you need to start the mind-map from the beginning. There is a video on the website modelling this technique.



BLURT out all that you know on a topic in a set time – 10mins max. Then refer to your revision guide and add to them with a different colour pen. Any areas in a different colour need further revision resources created.



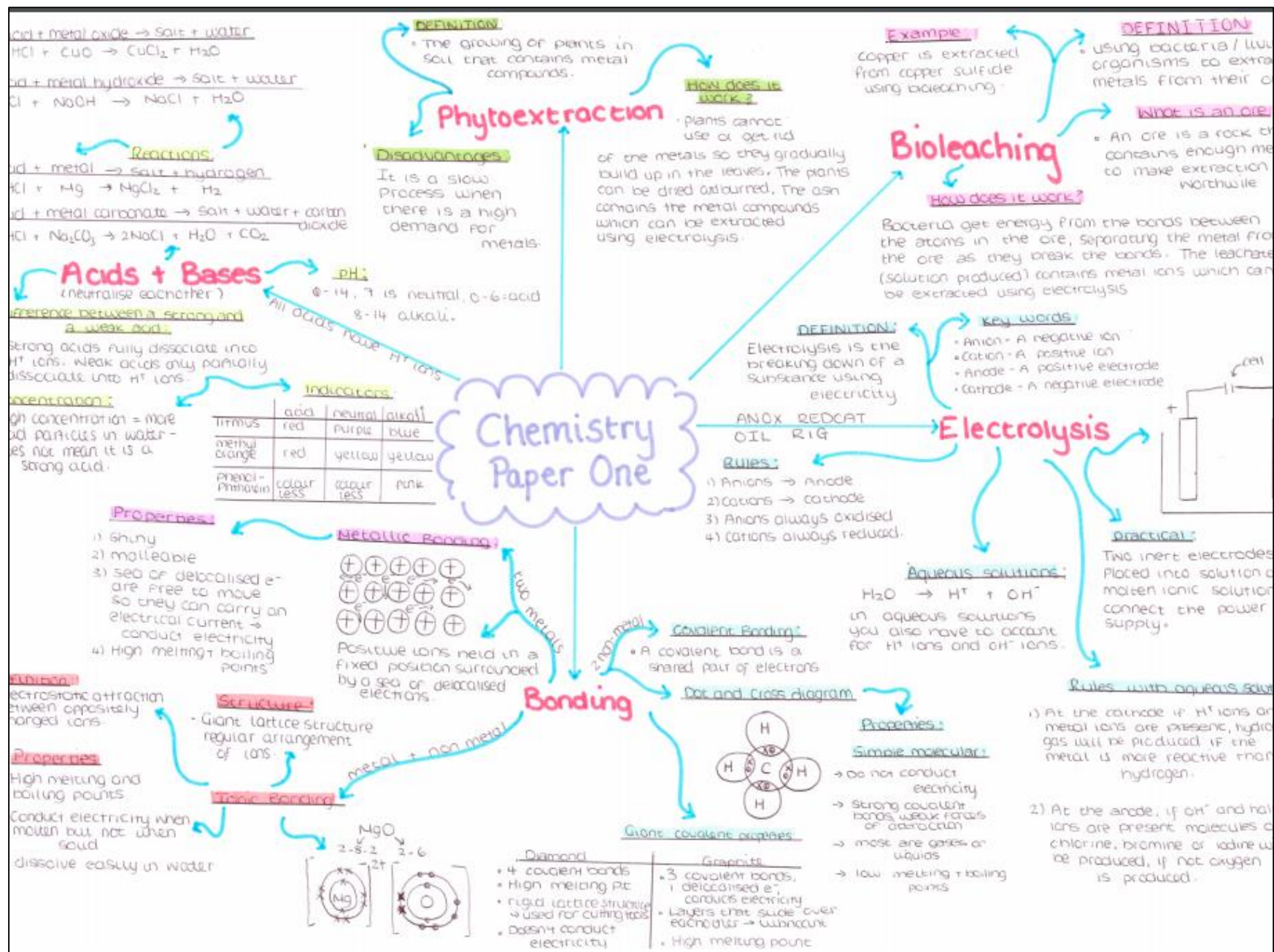
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MIND MAPS

Re create your mind map from memory:

You have three lives to recreate your mind map from memory. Each time you're stuck you can refer back to your mind map but you lose a life. After three lives you need to start the mind map from the beginning.



Revision Clocks

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FLASH CARDS

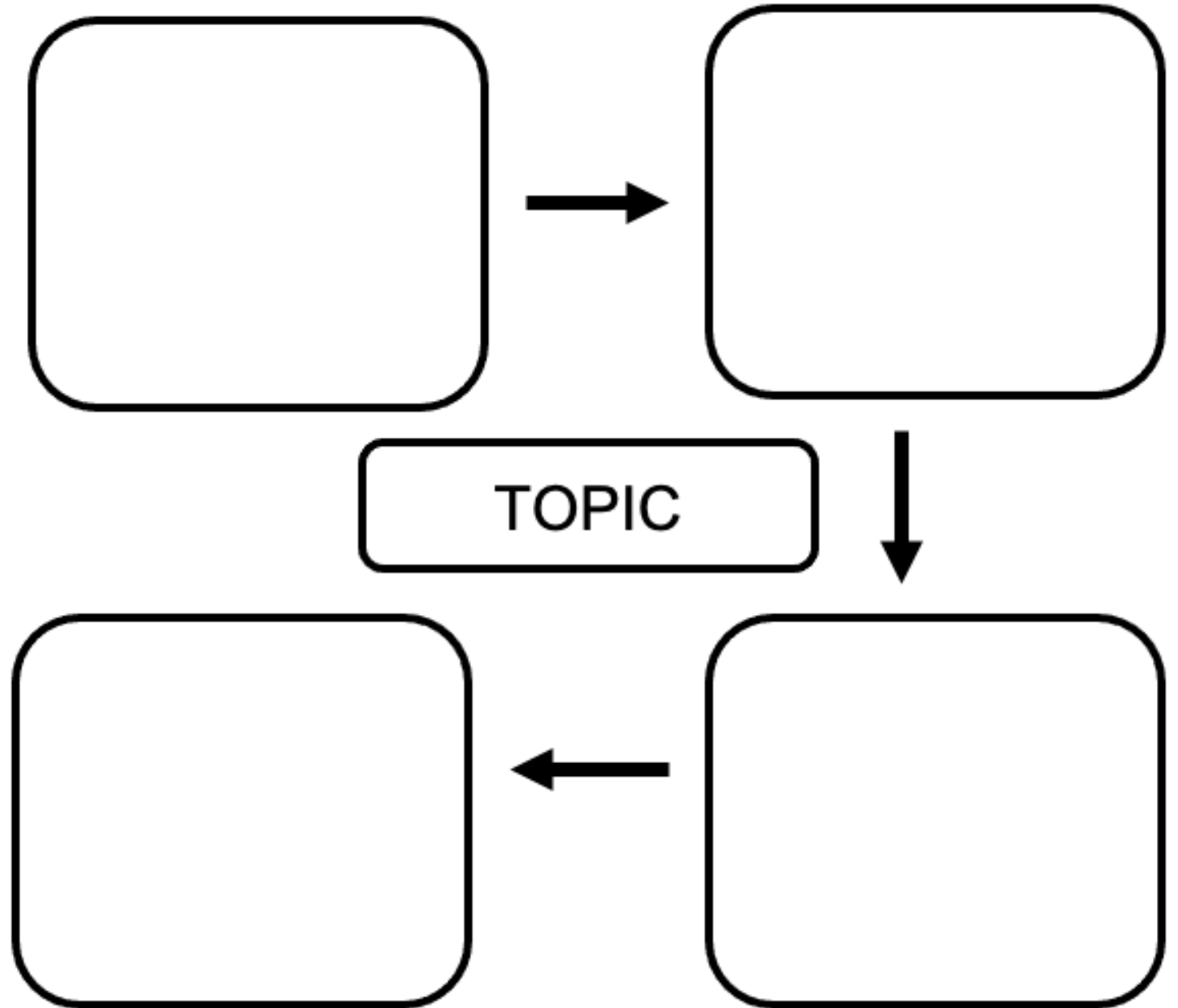
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What are the 2 biological methods of extracting metals?

From low grade ores or waste produced when metals extracted.

RETRIEVAL RELAY RACE

Write as much as you can about a topic in box 1, read your notes for five minutes, add further information on the topic in box 2. Repeat for boxes 3 and 4.





QUESTIONS AND ANSWERS

TOPIC:

Question	Answer

Questions and Answers:
Create a series of questions and answers. Cover the answers and write out your answer again. Cover the question and rewrite the question from the answer.

TEST YOURSELF

- **Reduce anxiety by demystifying the whole thing.**
- **It is the best preparation** – You are answering actual exam questions and reviewing the actual perfect answers. Questions often repeat year-on-year and mark schemes do not change.
- **Apply your knowledge.**
- **Work on your time management.**
- **ANALYSE:** do something with the information.
- **Highlights the gaps in your knowledge - revise, re-test etc**

Test Yourself

Completing practice questions is the best way to consolidate knowledge and identify your gaps



Visit the exam board website and download past papers. Watch the video to see how to do this



Complete the questions under timed conditions. General rule is 1 mark = 1 minute. Do this for 15 minutes – 20 minutes



Mark your answers



Those questions you have not answered well need to be revised in the remaining session time



After revising go back to the questions and redo in a different colour



Repeat

TEST YOURSELF - FOUR METHODS

Visit exam board websites and download papers and mark schemes:

- **Method 1** – Topic by Topic
- **Method 2** - Do the paper, mark, revise what you don't know
- **Method 3** – Do the paper with your revision guides, mark, then redo without guides in a later session
- **Method 4** – Target extended questions / mark / revise / redo.

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Repeat

TEST YOURSELF – EXAM QUESTIONS



Completing practice questions is the best way to apply the knowledge you have learned. This embeds your understanding further. You also become familiar with repeat questions and specific vocabulary that you will need to use.

