

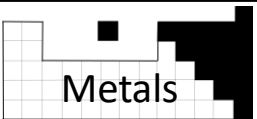


# Welcome

Supporting your child in GCSE science-  
Parents Workshop

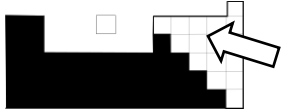


## Key points to learn

1. Chemical symbol	An abbreviated name for every element. Maximum of two letters always starts with a capital letter
2 Reactivity	How easily an element will react
3. Group	Columns in the Periodic Table. Elements in the same group have similar properties
	Tells you how many electrons that atom has in its outer shell
4. Period	Rows in the periodic table
	Tells you how many electron shells that atom has
5. Mass number	Number of <sup>4 Neutrons + 3 Protons</sup> neutrons + protons $\Rightarrow 7$ <b>Li</b>
6. Atomic number	Number of protons $\Rightarrow 3$ <b>Li</b> <sub>3 Protons</sub>
7. Ion	Atom where number of protons is not equal to electrons (+ve or -ve)
8. Mendeleev	Scientist who placed elements in proton number order and left gaps for undiscovered elements
9. Metals	Have delocalised (free) electrons that can move
	Atoms lose electrons and become positive (+ve) ions
	



## Key points to learn

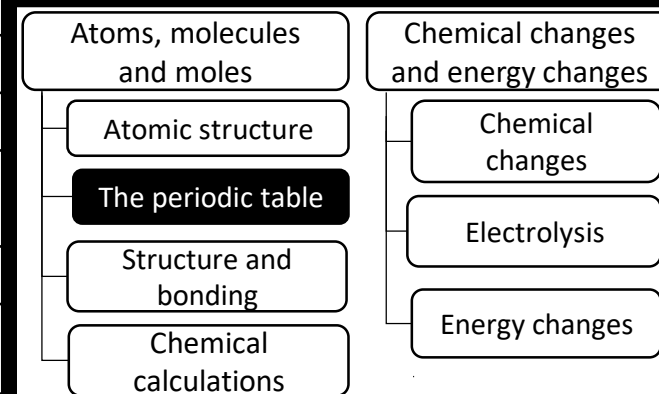
10. Non-metals	Have electrons that cannot move
	Nearly always gain electrons and become (negative -ve) ions
	
11. Group 0 Noble gases	He, Ne, Ar, Kr, Xe, Rn
	Unreactive: full outer shell
	Boiling point increases as you go down the group
12. Group 1 Alkali metals	Li, Na, K, Rb, Cs, Fr
	Very reactive: only one electron in their outer shell
	Reactivity increases as you go down the group
13. Group 7 Halogens	F, Cl, Br, I
	Melting and boiling point increase as you go down group
	Reactivity decreases as you go down the group
	A more reactive halogen will displace a less reactive one

## Trilogy : The Periodic Table

Part of: Atomic structure and the periodic table

## Knowledge Organiser

### Big picture (Chemistry Paper 1)



### Background

The periodic table is amazing because it allows us to predict and explain the properties of elements even before they are discovered.

### Maths skills

Losing -ve charge makes you more +ve.  
Gaining -ve charge makes you more -ve.

### Additional information

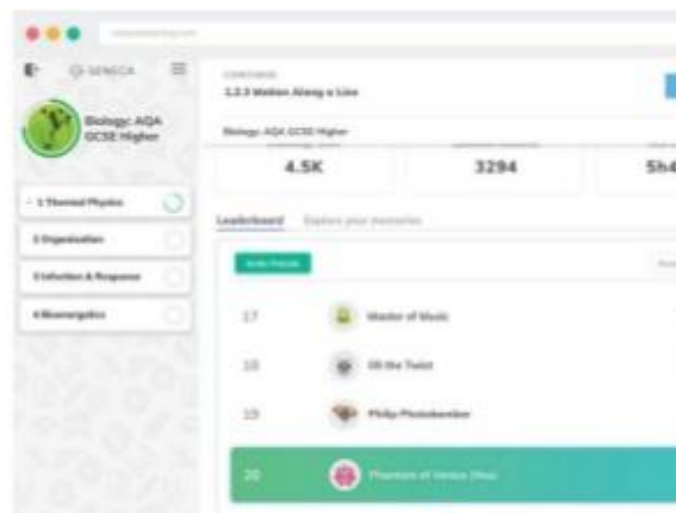
Remember  
Electron  
energy levels

Where electrons are found.  
The shells can each hold this many electrons maximum: 2,8,8





# Free A-Level, GCSE & KS3 Homework and Revision





<p>Write a poem or song which summarises the topic.</p> <p><i>Make it informative but catchy and remember to include key terms...</i></p>	<p>Make a revision board game for the topic.</p> <p><i>To be played by at least two people. Include questions, answers and rules.</i></p>	<p>Summarise the entire topic in five words and one picture.</p> <p><i>Explain each key term or idea in a drawing. Then combine each into one large picture that you can interpret.</i></p>
<p>Create a leaflet which summarises the topic we have studied recently.</p> <p><i>Use key terms, make it informative and eye catching...</i></p>	<p>Create a factsheet summarising the topic, but also add additional research and facts.</p> <p><i>Use correct terminology and find extra relevant facts (no copy/paste)</i></p>	<p>Create a comic strip to explain to summarise the topic.</p> <p><i>Use pictures and key words to explain the topic in a clear way...</i></p>
<p>Create a newspaper report or live news presentation for the topic.</p> <p><i>Include images, data, and quotes.</i></p>	<p>Create a diagram ranking all the key ideas in this topic by you confidence in them.</p> <p><i>Use images and words to order sequences.</i></p>	<p>Design a model to summarise learning.</p> <p><i>Suggest limitations of your model.</i></p>
<p>Create a poster summarising the topic.</p> <p><i>Use key terms, make it informative and eye catching.</i></p>	<p>Create revision flashcards for the topic.</p> <p><i>Make at least 15. Key term on one side and information on the back.</i></p>	<p>Create 10-15 quiz questions about the topic.</p> <p><i>Write the questions with correct answers separate to test a peer.</i></p>
<p>Create a mind map summarising the topic.</p> <p><i>Use key terms, make it informative and eye catching.</i></p>	<p>Identify and list the key terms we've used in the topic.</p> <p><i>Write a glossary to help you to learn spellings.</i></p>	<p>Make a Facebook profile page summarising the topic.</p> <p><i>No more than two A4 pages; use #'s for key words.</i></p>



# Ultimate 5-step recall revision

*Persuade your brain it's worth keeping by using different cognitive skills*



## 1. Chunk it up

No more than 5 things to learn at a time.

## 2. Write each out 5 times

Try making flash-cards; mind-maps; or use look-cover-copy

## 3. Draw a simple cartoon style picture for each

Perhaps turn the words into pictures

## 4. Say it out loud 5 times

Teach someone else or do it to a mirror. As much from memory as possible

## 5. Relate each to you/your life/your experiences



Precision in Revision

## SCIENCE



### 1. Knowledge

- a) Use the [hardcopy Knowledge Organisers](#) as flashcards. Test yourself, get others to test you and test others. Try transforming the information into a mind map or revision poster.
- b) Use [Memrise](#) to learn key facts on Edexcel Science using online quizzes.
- c) Use [Quizlet](#) to learn key facts and print ready-made flashcards.

### 2. Topic Practice

- a) [Seneca Learning](#): Open a free account then choose a topic to learn/revise each topic. The colour wheel gives you an indication of progress made.
- b) [BBC Bitesize](#): Follow links for your correct course (Combined Science or Separate Sciences Edexcel). First go through the Revise section, then complete the Test Section and finally, spend a few minutes recording the key information shared.
- c) [Primrose Kitten Science](#) and [Free Science Lessons](#) on YouTube: Watch a video right through once trying to concentrate on the most important points. Then watch it again recording the keywords onto a sheet of paper. Finally, using the keywords try and write/draw what you can remember from the video.

### 3. Exam Practice: Remember CUB for longer questions

Circle command word;  
Underline key points and marks;  
Bullet points drawn before you answer

- a) Complete [past papers](#). Use the mark schemes available to mark and correct.
- b) [Mini-walking talking mock](#). Watch the video, have a go at answering the question then see how the examiner would attempt it. The Edexcel videos are useful here as well.
- c) Open [this document](#) with links to exam questions sorted by exam topic and by Foundation and Higher Tier. Read the question carefully, have a go at answering then check the mark scheme to see how you did.