



Supporting your child as they prepare for GCSEs in English, Maths and Science

Mr McDonald	Head of Year 11
Mrs Clough	Head of English
Mrs Johnston	Head of Maths
Dr Jankowski	Head of Science





Year 11 – Pastoral Guidance & Wellbeing

Mr McDonald, Head of Year 11



Support offered in school:

Huge amounts of support are given to all Year 11 students daily in various different ways:

- Assembly/Form Time
- Form Tutors & Head of Year
- Subject staff
- Intervention
- Parental communication

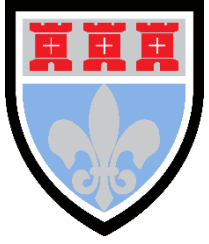


10 Top Tips for Revision Wellbeing

- **Rest**
- **Food**
- **Hydration**
- **Sleep**
- **Environment**

- **Organisation**
- **SMART targets**
- **Punctuality**
- **Extra-curricular activities**
- **Communication**

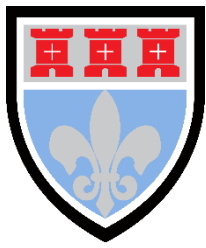




English Language and Literature

Mrs A Clough, Head of English





GCSE Examinations in English

- Students' results are measured by their achievement in 4 examinations. There is no coursework or controlled assessment.
- In English Literature, examinations are closed book.

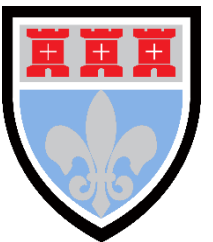
What does this mean for my child?

- Exam technique and timings are very important.
- Students' knowledge of the texts they have studied must be thorough and detailed.

English Language	
Paper 1	50%
Paper 2	50%
English Literature	
Paper 1	40%
Paper 2	60%

How can I support my child with exam technique?

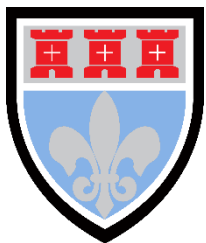
- Your children have been given clear guidance on which order to answer the questions in and how long to spend on each question. This is available in the following locations:
 - Homework booklets.
 - S-drive.
 - Referred to regularly in lessons.
- Answering Q5 first in Language will help them gain marks.
- Talk to your child about the format of the exam. Do they know the order and the timings?
- “Walk through” mock examinations have helped hone exam technique.
- Regular timed practice will help students to gain confidence.



How can I support my child in English Language?

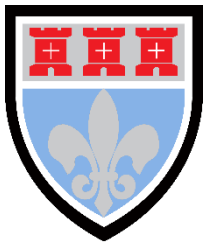
- Do your children know their **language toolkit**?
- Can they identify these techniques in the things they read?
- Can they discuss their effect?

adverb	adjective	pronoun	Modal verbs
imperative	simile	metaphor	Verb
abstract noun	onomatopoeia	personification	anecdote
rhetorical question	emotive language	hyperbole	statistics
pun	pathetic fallacy	repetition	alliteration



How can I support my child in English Language?


- “Everyday” non – fiction and fiction texts can be used as reading practice.



Why has Malala used the repetition of the emotive adjective “heartbroken”?

What is the effect of this anecdote?

What is the effect of these adjectives?

 **Malala Fund**
Just now · 🌐

Malala Yousafzai's statement on President Trump's latest executive order on refugees:

"I am **heartbroken** that today President Trump is closing the door on children, mothers and fathers fleeing violence and war. I am **heartbroken** that America is turning its back on a proud history of welcoming refugees and immigrants — the people who helped build your country, ready to work hard in exchange for a fair chance at a new life.

I am **heartbroken** that Syrian refugee children, who have suffered through six years of war by no fault of their own, are singled-out for discrimination.

I am **heartbroken** for girls like **my friend Zaynab**, who fled wars in three countries — Somalia, Yemen and Egypt — before she was even 17. Two years ago she received a visa to come to the United States. She learned English, graduated high school and is now in college studying to be a human rights lawyer.

Zaynab was separated from her **little** sister when she fled unrest in Egypt. Today her hope of being reunited with her **precious** sister dims.

In this time of uncertainty and unrest around the world, I ask President Trump not to turn his back on the world's most defenseless children and families."

HOW DOES MALALA USE LANGUAGE TO TRY AND PERSUADE THE READERS OF HER BLOG?

How can I support my child in English Language

How can I support my child in writing?

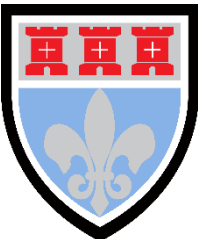
- Encourage your child to learn and **practise spelling complex and ambitious examples of vocabulary** to use in their exam.
- Encourage your child to focus on their **written accuracy** and to proofread their written work.
- Encourage them to **plan** before attempting any writing question so that they organise their ideas effectively.
- Focus particular on writing **excellent opening and closing paragraphs**.
- Encourage and remind your child about **time management**.
- Encourage your child to think about the **audience, purpose and form** of the piece of work they are writing.
- Encourage your child to use a variety of **sentence lengths and sentence forms**. A good way of doing this is to ask your child to count the words of each sentence they have written and note the amount in the margin.
- Ask your child to show you their writing. Ask them why they have used certain techniques and structures.

This sentence has five words. Here are five more words.
Five-word sentences are fine. But several together become monotonous. Listen to what is happening. The writing is getting boring. The sound of it drones. It's like a stuck record. The ear demands some variety.

Now listen. I vary the sentence length, and I create music. Music. The writing sings. It has a pleasant rhythm, a lilt, a harmony. I use short sentences. And I use sentences of medium length. And sometimes when I am certain the reader is rested, I will engage him with a sentence of considerable length, a sentence that burns with energy and builds with all the impetus of a crescendo, the roll of the drums, the crash of the cymbals—sounds that say listen to this, it is important.

So write with a combination of short, medium, and long sentences. Create a sound that pleases the reader's ear. Don't just write words. Write music.

—Gary Provost



How can I support my child in English Literature?

“Look the [redacted]
flower, but be the
[redacted] under it”.

Are there no [redacted]
Are there no
[redacted]?

Can your child remember key quotations from:

Macbeth

A Christmas Carol

An Inspector Calls **OR** DNA

Poetry Anthology – Love and Relationships **OR** Power and Conflict.



How can I support my child in English Literature?

“Look the innocent
flower, but be the
serpent under it”.

Are there no prisons?
Are there no
workhouses?

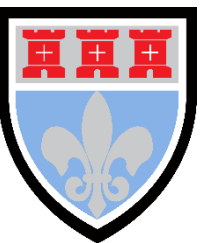
Can your child remember key quotations from:

Macbeth

A Christmas Carol

An Inspector Calls **OR** DNA

Poetry Anthology – Love and Relationships **OR** Power and Conflict.



How can I support my child in English Literature?

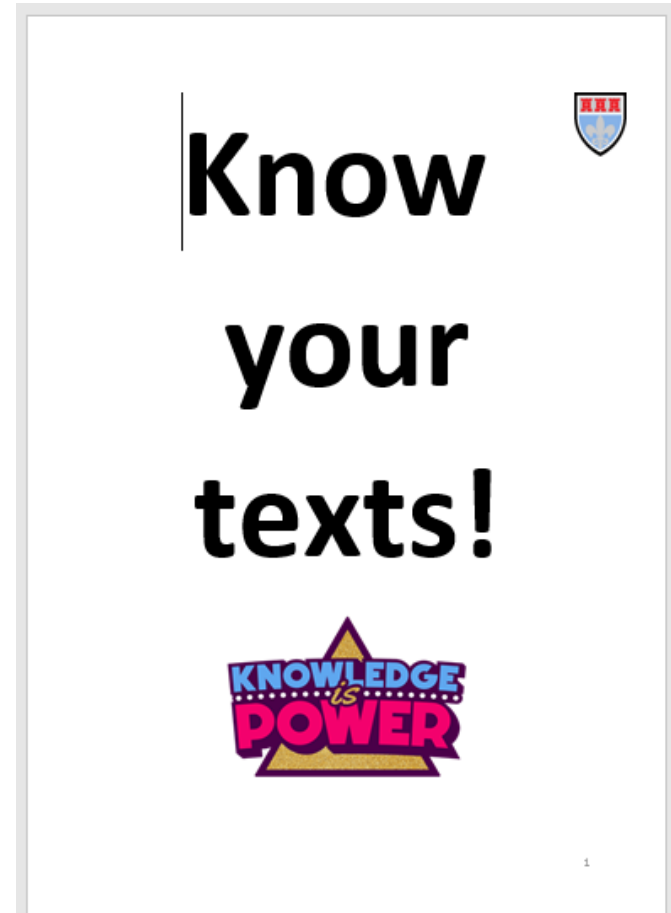
Knowledge quizzes on the text.

Quick listing:

List 5 significant facts about Jacobean society which relate to themes in Macbeth.

List all of the interactions Eva has with the Birling family in An Inspector Calls.

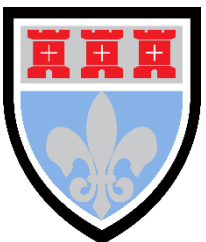
Write down 3 key events in DNA



**Know
your
texts!**

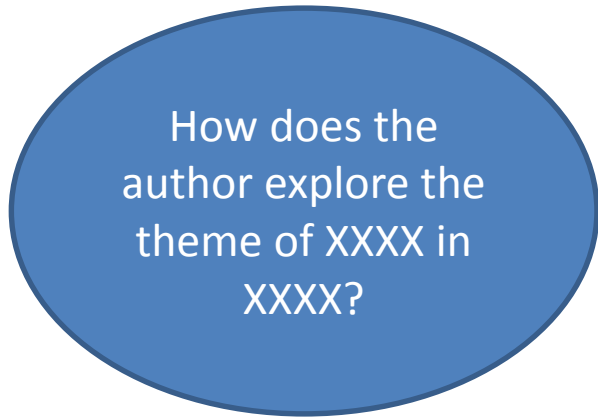
**KNOWLEDGE
vs
POWER**

1

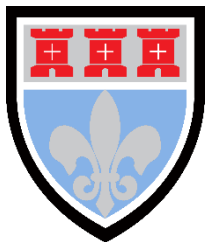
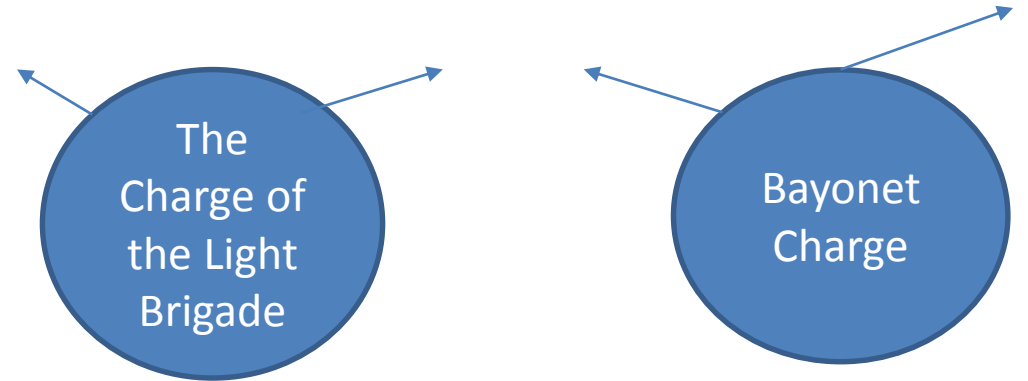


How can I support my child in English Literature?

Essay Planning for DNA/An Inspector Calls



Essay Planning for Poetry Comparison



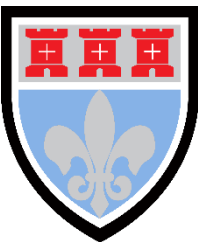
How can I support my child in English Literature

The screenshot shows the YouTube channel for 'mrbruff'. The channel banner features a profile picture of a man with sunglasses, the name 'MR BRUFF' in large black letters, and the tagline 'BEST SOURCE OF ENGLISH REVISION GUARANTEED'. Below the banner is a navigation menu with 'Home', 'Videos', 'Playlists', 'Channels', 'Discussion', and 'About'. A 'Subscribe' button shows 60,211 subscribers. The 'Created playlists' section is visible, showing several video collections:

- 'Of Mice and Men' Analysis (54 VIDEOS)
- J.B Priestley's 'An Inspector Calls' Analysis (23 VIDEOS)
- Mailbox Monday: 6th February 2017 (95 VIDEOS)
- 'Power and Conflict' Poetry: GCSE (22 VIDEOS)
- William Shakespeare's 'Macbeth' - Detailed Analysis (54 VIDEOS)
- AQA ENG LANGU (43 VIDEOS)
- 'FRANKENSTEIN' (13 VIDEOS)
- JEKYLL AND MDR (13 VIDEOS)
- POETRY WITH (4 VIDEOS)
- GREAT CAT (VIDEOS)

54 videos on **Macbeth**, including key quotations song.

23 videos on **An Inspector Calls**



St Mary's English Department



GCSE English Literature Revision Guide
Macbeth by William Shakespeare

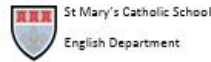


Revision Booklets



GCSE English Language Paper 1
Homework Booklet

Explorations in creative reading and writing



St Mary's Catholic School
English Department

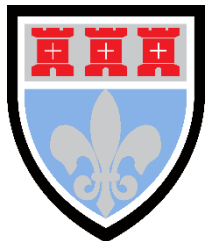
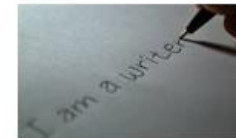
A Christmas Carol:
Revision



Name:



GCSE English
Language
Paper 2
Revision Guide





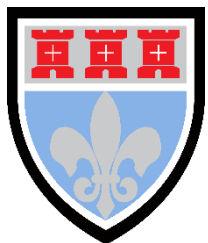
Maths

Mrs Johnston, Head of Maths



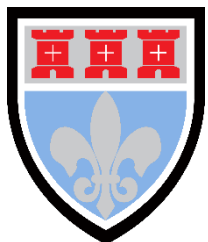
Maths In School

- All students are entered for the OCR GCSE in Maths
- We use the J560 course
- There are two tiers: Foundation and Higher
- Students studying the Higher course can access grades 9 – 3 whilst students studying the Foundation course can access grades 5 – 1
- The students need to complete **three** papers at the end of the course, each paper is worth $\frac{1}{3}$ of their final grade
- For two of the papers, students can use a calculator, the other paper is completed without a calculator



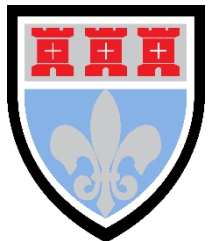
Maths In School

- We have now finished teaching the course.
- Each class is now revising and the content of lessons is identified from analysing mock exams and covering the key issues arising from each session
- Homework is set weekly and alternates between written booklets and Hegarty Maths
- Written homework consists of worksheets that aim to consolidate the key skills by repetition



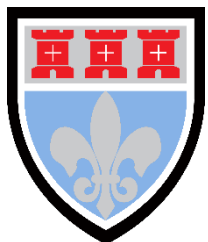
Mock Exams

- Your child's mock exam result will be compared to their target grade in order for us to assess how much progress is being made. Any student who fails to make an appropriate amount of progress will be asked to complete the paper again as extra homework, following a feedback session on the paper during school.
- These students will also be asked to attend an after school study support session with their class teacher.
- After each exam students will reflect on areas they have answered well, and key areas they need to work on during their own independent revision.



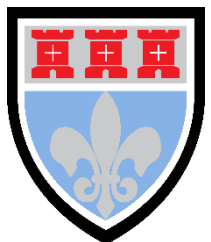
Additional Support

- Maths Clinic is available for all students and advertised to them frequently in the department
- It is held on Tuesdays at 3:10pm – 4:10pm in FO6 and Thursday lunchtimes at 12:15pm – 12:45pm in FO6
- Additional GCSE study support sessions have now started weekly after school



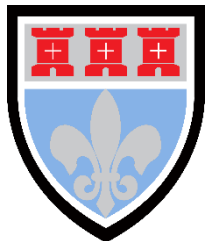
Additional Support

- Identified students who would benefit from further support have now started extra revision sessions during registration and the Pastoral Programme
 - Each registration session focusses on a different skill (students should complete work for extra practise at home)
 - Friday P1 – topic-based booklet, practising and applying skills with exam questions.



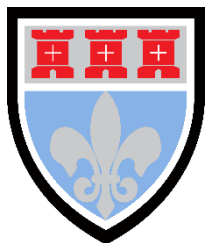
Parental Support

- It is important that students have a complete set of equipment including a pen, pencil, ruler, compass, protractor and a scientific calculator when attending lessons and completing exams.
- It is essential that they are able to practise using their own calculator in lessons and as such that they are familiar with the required functions.
- Students can buy any equipment that they require from the school library.



Parental Support

- Independent Revision
 - Homework – completed on time, with maximum effort
 - Additional revision – 15-30 minutes every day
 - ❖ Hegarty Maths
 - ❖ Revision apps
 - ❖ Revision websites
 - ❖ Follow Maths teachers on twitter
 - ❖ Printable revision materials available on student portal
 - ❖ Additional written support materials available tonight



Access to revision materials at home

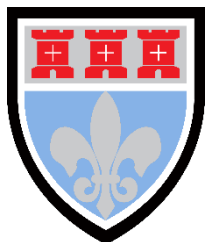
- All students have received instructions on how to access a wealth of resources using a portal to access the school system.
- The maths folder contains many past papers (with mark schemes), revision worksheets, and an extensive set of revision notes that pupils can use to aid their revision.

Year 9	07/05/2010 10:25	File folder
Year 10	19/10/2011 10:32	File folder
Year 11	15/12/2015 09:39	File folder

PE	25/10/2010 15:21	File folder
RE	10/11/2014 10:55	File folder
Revision	12/01/2017 16:22	File folder
Science	25/10/2010 15:21	File folder
SENCO	25/10/2010 15:22	File folder

Foundation	15/12/2015 09:17	File folder
Higher	15/12/2015 09:17	File folder

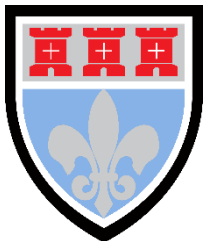
Course outlines and specifications	11/01/2017 15:09	File folder
Key Dates	13/12/2016 08:21	File folder
Past Papers, Mark Schemes and Graded Booklets	27/02/2017 12:23	File folder
Revision Guides and Information Booklets	09/12/2016 09:43	File folder
Revision Tasks	13/02/2017 10:58	File folder
Self Assessment Tools	15/12/2015 09:16	File folder
Templates for Revision	15/12/2015 09:16	File folder
Vocabulary	15/12/2015 09:17	File folder



Hegarty Maths

- Students login to <https://hegartymaths.com/> using their individual user information and password

The image displays two overlapping screenshots of the Hegarty Maths website. The top screenshot shows the homepage with the text "Built to make independent learners" and buttons for "Watch demo video" and "Register interest". The bottom screenshot shows the login page with the heading "Enter your details" and the text "Logging into St Mary's Catholic School. Not your school?". The login form includes fields for "First name", "Last name", and a date selector (1, January, 2016), followed by a "Next" button.

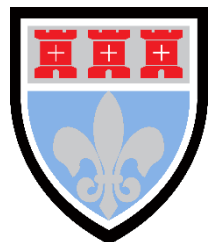


Hegarty Maths

The search bar at the top can be used to find different topic areas on the site

When a student logs in, this is their front page:

The screenshot shows the user interface of the Hegarty Maths website. At the top, there is a navigation bar with the logo, a 'Choose lesson' button, a search bar labeled 'Search HegartyMaths', and several utility buttons: 'Fix Up 5', 'My tasks 2', a notification bell, and 'My scores'. Below the navigation bar, a greeting 'Hi there' is followed by a message: 'Here is how you have been working on HegartyMaths this year! Remember to always work hard and never give up.' To the right of this message is a date selector set to 'This year'. A callout box points to the 'My tasks 2' button, stating 'Tasks set by the class teacher are highlighted at the top'. The main dashboard area contains six circular icons with corresponding data: a clock icon for '2.7 hrs', a video camera icon for '1.1 hrs', a star icon for '0.0 hrs', a speedometer icon for '3.8 hrs', a question mark icon for '193', and a checkmark icon for '150'. On the right side, there is a 'Skill performance summary' section featuring a donut chart. The chart is mostly blue, representing 'Not done' skills, with a small green slice for '100%', a small orange slice for '70-99%', and a small red slice for '0-69%'. The center of the donut chart contains the text '652 Skills'. A legend below the chart identifies the colors: green for 100%, orange for 70-99%, red for 0-69%, and blue for Not done.



Hegarty Maths

Clicking on my scores brings up a list of all previously attempted tasks

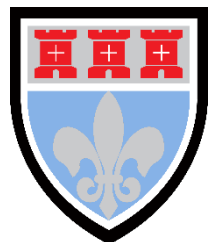
The screenshot shows the 'My scores' page on the Hegarty Maths website. The top navigation bar includes the logo, 'Choose lesson', 'Search HegartyMaths', 'Fix Up 5', 'My tasks 2', and 'My scores'. Below the navigation, there is a filter dropdown set to 'All Scores' and a pagination indicator '1 - 10 of 16'. The main content is a table of tasks with columns for Lesson, Score, video icon, clock icon, chat icon, megaphone icon, and Assessment taken.

Lesson	Score	Video	Time	Chat	Megaphone	Assessment taken
198 - Linear sequences (nth term)	80% (3)	1.00x	6mins	0	0/0	18:20 Wed 24th Jan 18
197 - Linear sequences (term-to-term rule)	100% (2)	0.00x	1min	0	0/0	17:50 Wed 24th Jan 18
66 - Add or subtract fractions (different denominator)	90% (2)	1.00x	14mins			
85 - Find percentages of amounts 2 (using 10% non-calc)	100% (1)	0.00x	5mins	0	0/0	14:40 Sun 7th Jan 18

Scores can be filtered to identify areas to prioritise for revision

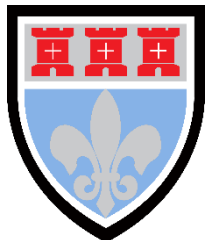
This screenshot shows the 'My scores' page with the 'Red scores' filter applied. The top navigation bar is identical to the previous screenshot. The filter dropdown is now set to 'Red scores', and the pagination indicator shows '1 - 1 of 1'. A dropdown menu is open, showing the filter options: 'Red scores', 'Amber scores', 'Green scores', and 'All Scores'. The table below shows a single task with a red score bar.

Lesson	Score	Video	Time	Chat	Megaphone	Assessment taken
30 - Prime factorisation 2	0% (1)	1.13x	22mins	0	0/1	17:29 Thu 21st Sep 17



Hegarty Maths

The screenshot displays the Hegarty Maths website interface. At the top, there is a navigation bar with the logo, a 'Choose lesson' button, a search bar, and several utility icons: 'Fix Up 5', 'My tasks 2', a notification bell, and 'My scores'. Below the navigation bar, the breadcrumb trail reads 'Number > Properties of positive integers'. The main content area features a yellow header for 'Prime number factorisation 2' with a list of prime numbers: 2, 3, 5, 7, 11, 13, 17, 19. To the right, the title '30 - Prime factorisation 2' is displayed. A blue overlay window is positioned in front, showing a quiz interface. The breadcrumb trail for the quiz is 'Number > Properties of positive integers > 30 - Prime factorisation 2 > Quiz'. A progress bar at the top of the quiz shows 10 questions, with question 1 selected. The question text is: 'Write 81 as a product of primes. Use index notation where appropriate.' Below the question is an input field. On the right side of the quiz window, there is a menu with options: 'Do not use a calculator', 'Watch video' (circled in red), 'Report a mistake to HegartyMaths', 'Quit assessment', and 'On-screen keypad' (set to OFF). At the bottom right of the quiz window are two buttons: a green 'Check' button and a grey 'Skip' button.



Hegarty Maths

The screenshot shows the Hegarty Maths website interface. At the top, there is a navigation bar with the logo, a 'Choose lesson' button, a search bar, and user-specific options like 'Fix Up 5', 'My tasks 2', and 'My scores'. The main content area is titled 'Number > Properties of positive integers' and features a video player for '30 - Prime factorisation 2'. The video player shows a progress bar at 09:58 and a 'Continue quiz' button. Below the video, there is a 'Building blocks' section with two question preview cards. The first card, '29 - Prime factorisation 1', shows a question 'Write 33 as a product of primes.' and indicates it is completed with a score of 100%. The second card, '28 - Prime numbers', shows a question 'What is the sixth prime number?' and indicates it is a new lesson.

hegartymaths Choose lesson Search HegartyMaths Fix Up 5 My tasks 2 My scores

Number > Properties of positive integers

Prime number factorisation 2
2, 3, 5, 7, 11, 13, 17, 19,...

30 - Prime factorisation 2
Learn how to write a number as a product of its primes using prime
view assessment

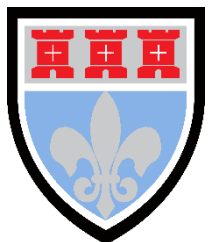
09:58 Continue quiz

Spotted a mistake in this video?

Building blocks

Question preview
Number > Properties of positive integers
29 - Prime factorisation 1
Write 33 as a product of primes.
Last learned 12:29 Thu 21st Sep 17 Video watched 1.02x Completed in 9mins
Your score 100% View HegartyMaths avg 80% Feedback 0 (0 new)

Question preview
Number > Properties of positive integers
28 - Prime numbers
What is the sixth prime number?
Video watched 0.00x
Your score New lesson HegartyMaths avg 84%



Hegarty Maths

Fix Up 5 is an excellent tool for a quick fire practise of key skills

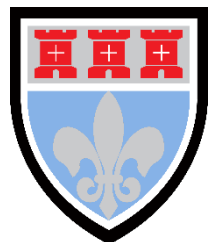
The screenshot shows the Hegarty Maths dashboard. At the top, there is a navigation bar with the logo, a 'Choose lesson' button, a search bar, and a 'Fix Up 5' button highlighted by a blue arrow. Other navigation items include 'My tasks' (with a red notification badge '2'), a bell icon, and 'My scores'. The main content area starts with a 'Hi there' greeting and a message about the user's progress this year. Below this are six statistics represented by icons: a clock for 2.7 hrs, a video camera for 1.1 hrs, a star for 0.0 hrs, a speedometer for 3.8 hrs, a question mark for 193, and a checkmark for 150. To the right is a 'Skill performance summary' donut chart showing 652 skills. The chart is mostly blue ('Not done'), with small segments for 100% (green), 70-99% (orange), and 0-69% (red).

Icon	Value
Clock	2.7 hrs
Video Camera	1.1 hrs
Star	0.0 hrs
Speedometer	3.8 hrs
Question Mark	193
Checkmark	150

Skill performance summary

652 Skills

- 100% (Green)
- 70-99% (Orange)
- 0-69% (Red)
- Not done (Blue)



Hegarty Maths

Fix Up 5 chooses 5 questions students have previously got incorrect and has the appropriate video available without searching

The screenshot displays the 'Fix Up 5' feature on the Hegarty Maths platform. The top navigation bar contains the logo, 'Choose lesson', 'Search HegartyMaths', 'Fix Up 5', 'My tasks 2', and 'My scores'. The main heading is 'Fix Up 5'. A table shows 'No Fix Up 5 attempts to show'. A circular gauge displays '0 Questions fixed up this year in 0.0hrs'. Below, a quiz question asks to write 125 as a product of primes. The interface includes a progress bar, a question box, and 'Check' and 'Skip' buttons.

Fix Up 5 no.	Score	Date completed
No Fix Up 5 attempts to show		

2 of 5

Write 125 as a product of primes.
Use index notation where appropriate.

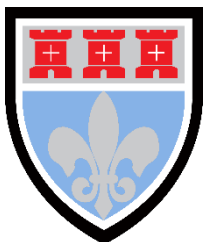
Do not use a calculator

Watch video

On-screen keypad OFF

Check

Skip



Additional revision support

- www.corbettmaths.com
 - Videos, worksheets (including solutions), practise papers
 - 5-a-day



Name: _____

Exam Style Questions

Expanding Brackets

Ensure you have: Pencil, pen, ruler, protractor, p
You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin ans
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Revision for this topic

www.corbettmaths.com/contents

Video 13

5-a-day Foundation


8th March Corbettmaths

Colour	Red	Blue	White
Probability	0.1		0.25

There are three colours on a spinner.
Find the missing probability

Connor bought a computer.
He paid a deposit of £120 and made 30 monthly payments of £12.
How much was the total cost?

A car salesman records information about the cars he is selling.

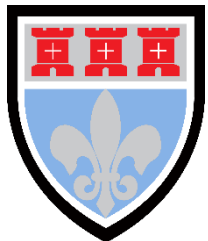


Here is a list of words.
Qualitative Continuous Discrete
The length of each car is data

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature	-4	1	-6	1	-2

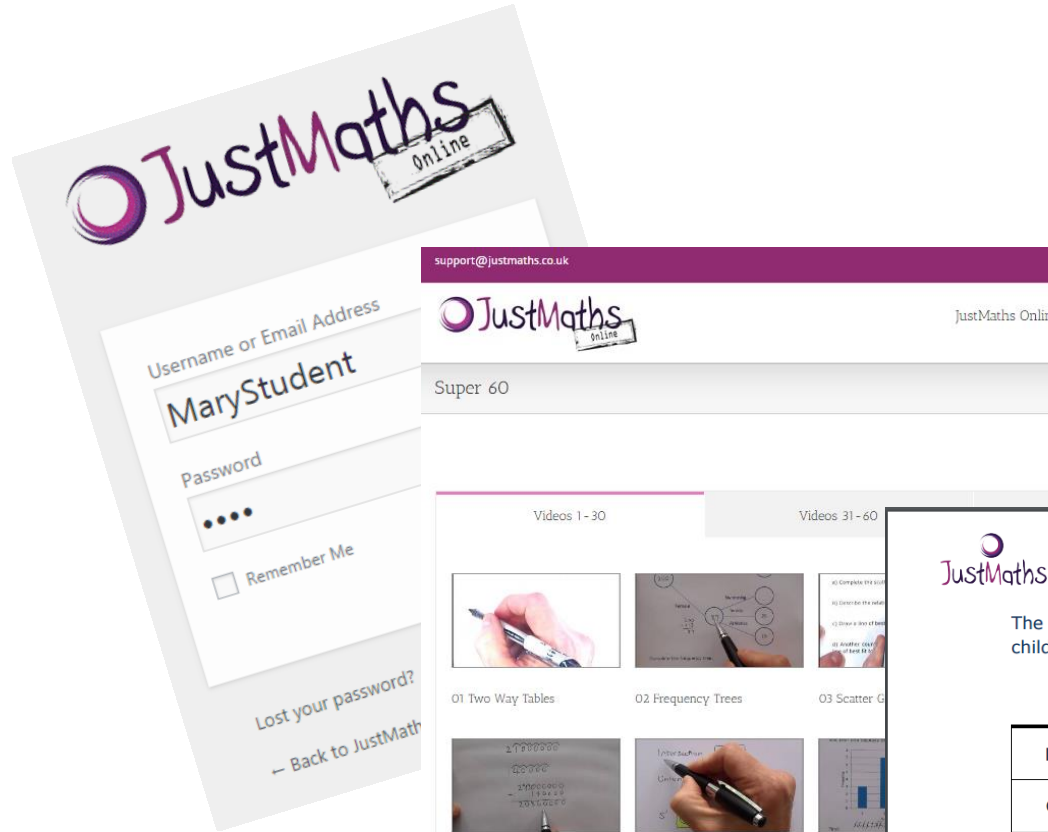
What is the range of the temperatures?

A piece of carpet is 320cm long.
Mr Jones cuts it into three pieces in the ratio 1 : 2 : 5



Additional revision support

- online.justmaths.co.uk Login: *MaryStudent*; Password: *Mary*
 - More videos and worksheets, additional exam practise and techniques



JustMaths

The two-way table gives some information about how 100 children travelled to school one day.

	Walk	Car	Other	Total
Boy	15		14	54
Girl		8	16	
Total	37			100

(a) Complete the two-way table.

(3)

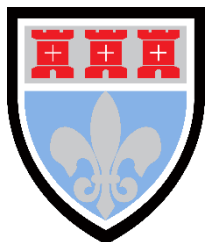
JustMaths

The two-way table gives some information about how 100 children travelled to school one day.

	Walk	Car	Other	Total
Boy	15	25	14	54
Girl	22	8	16	46
Total	37	33	30	100

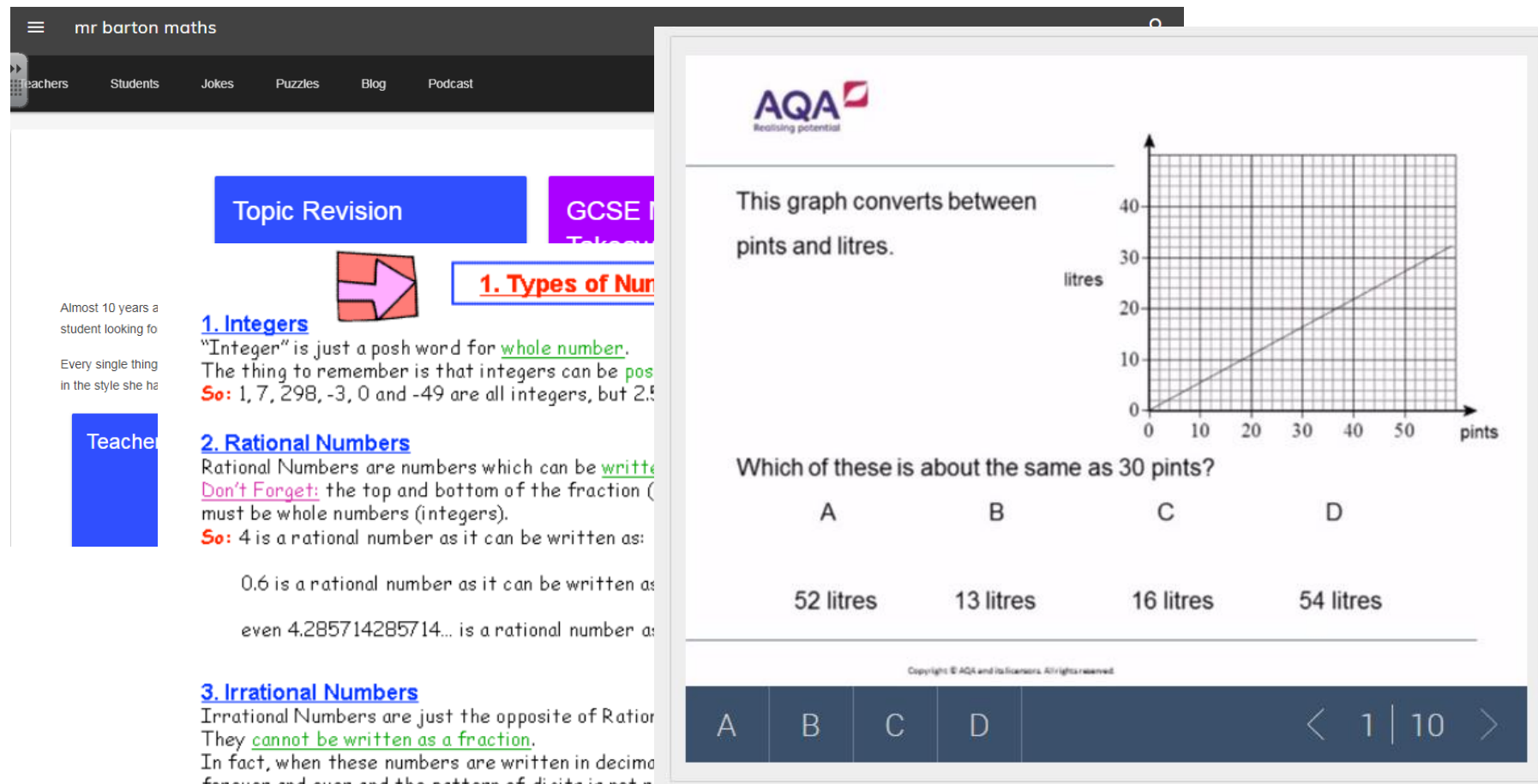
(a) Complete the two-way table.

(3)



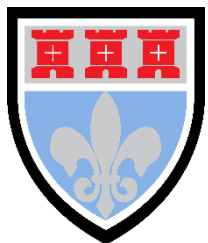
Additional revision support

- <http://www.mrbartonmaths.com/>
 - Revision notes, videos, topic based question booklets, interactive quizzes



The image shows a screenshot of the mrbartonmaths.com website. The top navigation bar includes 'Teachers', 'Students', 'Jokes', 'Puzzles', 'Blog', and 'Podcast'. The main content area features a 'Topic Revision' section with a blue arrow pointing to '1. Types of Numbers'. Below this, there are three sections: '1. Integers', '2. Rational Numbers', and '3. Irrational Numbers'. The '1. Integers' section explains that 'Integer' is a posh word for 'whole number' and lists examples like 1, 7, 298, -3, 0, and -49. The '2. Rational Numbers' section states that rational numbers can be written as fractions and gives the example 4. The '3. Irrational Numbers' section is partially visible.

Overlaid on the right side of the screenshot is a quiz interface from AQA. It features the AQA logo and the text 'This graph converts between pints and litres.' Below this is a line graph with 'pints' on the x-axis (0 to 60) and 'litres' on the y-axis (0 to 40). A straight line starts at the origin (0,0) and passes through points (10, 5), (20, 10), (30, 15), (40, 20), (50, 25), and (60, 30). The question asks 'Which of these is about the same as 30 pints?' with four options: A (52 litres), B (13 litres), C (16 litres), and D (54 litres). The quiz interface also includes a copyright notice and a navigation bar with buttons for A, B, C, D, and page navigation symbols.



Additional revision support

- <http://www.mathsgenie.co.uk/>
 - Revision notes, videos, topic based question booklets, old style exam papers

Maths Genie

Mean from Frequency Tables

FREQUENCY TABLES

Materials required for examination: Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser. Tracing paper may be used.

Items included with question papers: Nil

Instructions
Use black ink or ball-point pen. Fill in the boxes at the top of this page with your name and centre number. Answer all questions. Show your working in the spaces provided. Calculators may be used.

Information
The marks for each question are shown in brackets. Spend on each question. Questions labelled with an asterisk (*) are more difficult. Questions marked with an asterisk will be assessed – you should take particular care of spelling, punctuation and grammar, as well as the clarity of expression.

Advice
Read each question carefully before you start to answer it. Keep an eye on the time. Try to answer every question. Check your answers if you have time at the end.

1. Amanda collected 20 leaves and wrote down their lengths, in cm.
Here are her results.
5 6 5 2 4 5 8 7 5 4
7 6 4 3 5 7 6 4 8 5

(a) Complete the frequency table to show Amanda's results.

Length in cm	Tally	Frequency
2		
3		
4		
5		
6		
7		
8		

(b) Write down the modal length
.....cm (1)

(c) Work out the range.
.....cm (1)

(4 marks)

2. Rosie had 10 boxes of drawing pins. She counted the number of drawing pins in each box. The table gives information about her results.

Number of drawing pins	Frequency
29	2
58	1

(4 marks)

1. Amanda collected 20 leaves and wrote down their lengths, in cm.
Here are her results.
x
x x

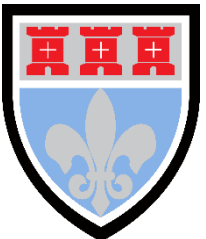
(a) Complete the frequency table to show Amanda's results.

Length in cm	Tally	Frequency
2		
3		1
4		1
5		3
6		4
7		3
8		1

(b) Write down the modal length
.....cm (1)

(c) Work out the range.
.....cm (1)

(4 marks)



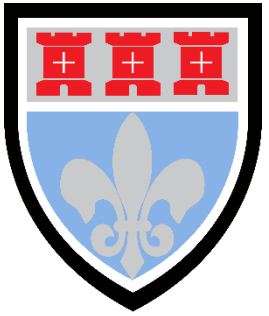


Science

Dr Jankowski, Head of Science



Science



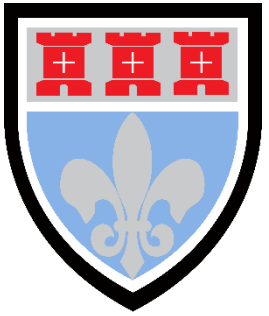
- Students are entered for **EITHER:**

AQA Combined Science or Triple Science



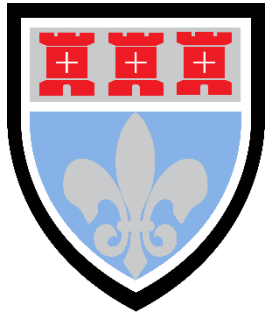
- 2 exam papers in EACH SCIENCE SECTION
- **NO Controlled Assessed Unit**

TRIPLE SCIENCE



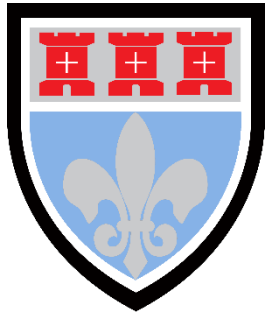
- P1 [50% grade]
- P2 [50% grade]

Combined Science



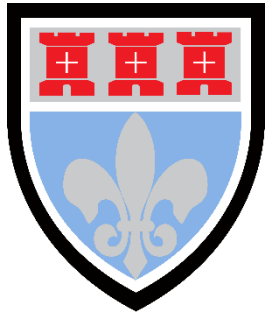
- 6 papers in total
- 2 Biology [33% grade]
- 2 Physics [33% grade]
- 2 Chemistry [33% grade]
- 2 GCSE grades e.g. 6, 6 or 7, 8

Additional Support



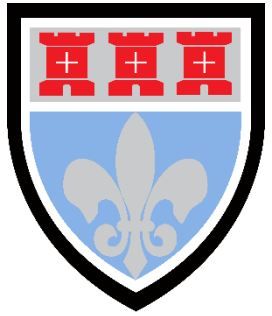
- ALL Science classes – revision
- Support available after school via study support programme
- Tutor intervention – small groups
- Purchase a CGP Revision Guide
[STRONGLY RECOMMENDED]

Parental Support



- Independent Revision
 - Additional revision– every day
 - Revision timetable
 - Revision apps
 - Revision websites
 - Printable revision materials available on student portal

Access to revision materials at home



- School portal
- Past papers and mark schemes
- Revision tasks - test yourself
quizzes
- Placemats for revision

Revision	09/01/2018 15:49	File folder
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Final Exams Summer 2018	10/01/2018 12:35	File folder
Mocks Feb 2018	09/01/2018 15:50	File folder
Mocks Nov 2017	12/01/2018 10:33	File folder

Science - Biology	19/09/2017 14:00	File folder
Science - Chemistry	19/02/2018 16:58	File folder
Science - Physics	19/09/2017 14:00	File folder

1. Course outlines and Specifications	19/02/2018 16:53	File folder
2. Key dates	19/02/2018 16:57	File folder
4. Past Papers and exam questions	19/02/2018 16:25	File folder
5. Revision guides and information	19/02/2018 16:56	File folder
6. Revision tasks	19/02/2018 16:58	File folder
7. Self assessment tools	19/02/2018 16:58	File folder
8. Templates for revision - placemats	19/02/2018 19:09	File folder

Double - worksheets	19/02/2018 17:02	File folder
Test yourself Questions	19/02/2018 19:34	File folder
Triple - worksheets	19/02/2018 16:30	File folder

Topic 1	19/02/2018 18:49
Topic 2	19/02/2018 19:18
Topic 3	19/02/2018 19:23
Topic 4	19/02/2018 19:28
Topic 5	19/02/2018 19:30
Topic 6	19/02/2018 18:59
Topic 7	19/02/2018 19:01
Topic 8	19/02/2018 19:02
Topic 9	19/02/2018 19:04
Topic 10	19/02/2018 19:06

Double	19/02/2018 16:24	File folder
Full OLD SPEC past papers and marksche...	20/09/2017 14:33	File folder
Triple	19/02/2018 16:39	File folder

Module 1 - atomic structure placemat	20/06/2017 22:03
Module 1 - periodic table placemat	20/06/2017 22:03

Topic 1 exam style questions Higher MS	08/09/2017 07:32	Microsoft Word 9...
Topic 1 exam style questions Higher	08/09/2017 07:30	Microsoft Word 9...

Key Recall Question	Answer
1. What is a particle?	A general word used by scientists to mean small part of matter (something)
2. What is an atom?	The smallest particle that can be recognized as an element. If you break an element into its smaller pieces you can no longer recognize that it is an element.
3. What is an element?	A substance that is composed of only one type of atom.
4. What is a mixture?	Substances which are together (in the same space) but not chemically joined.
5. What is a compound?	Substances in which atoms of two or more elements are chemically combined.
6. What is a molecule?	A word to describe atoms which are chemically joined together. These might be two of the same type of atoms (an element molecule) or two or more different types of atom (a compound molecule)
7. What are the reactants of a chemical reaction?	The substances which react together in a chemical reaction

Module 1 - ATOMIC STRUCTURE

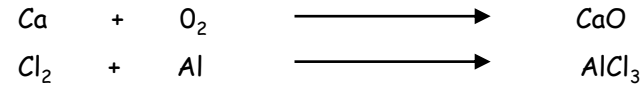
Draw the symbol for sodium include its atomic mass and atomic number (what do they tell us)



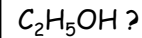
What are the charges and masses of electrons, protons and neutrons

	Charge	Mass
Proton		
Neutron		
Electron		

Balance the following equation:



How many atoms and elements are there in:



Where are electrons and neutrons and protons found in an atom?

Draw the electronic configuration for argon

Why is argon not reactive?

What is an isotope?

How do you calculate the average atomic mass of an isotope. Eg. Chlorine atoms exist as 75% Cl-35 and 25% Cl - 37

Draw and label the plum-pudding model of the atom

What is the definition of an element?

What is the definition of a compound?

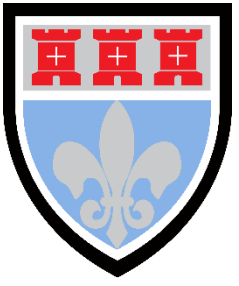
What is the definition of a mixture?

Describe a method to separate insoluble solids from a liquid eg. Sand from water.

Draw a diagram to show how you would separate the dyes in coloured inks

Draw a diagram to show how you would separate sugar from water

Describe how ideas about the structure of the atom changed over time and compare today's nuclear model to the plum pudding model.



Use of exam papers and mark schemes

- Revise a unit exam in chemistry/biology/physics
- Answer a past paper question with aid of notes
- Mark using mark scheme
- Evaluate performance – %?

OR

- Revise a unit exam in chemistry/biology/physics
- Answer a past paper question **WITHOUT** aid of notes
- Mark using mark scheme
- Evaluate performance – %?

4 - 6 mark questions!

Describe/explain/evaluate

In this question you will be assessed on using good English, organising information clearly and using specialist terms where appropriate.

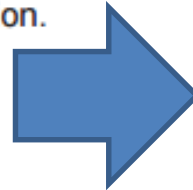
Diffusion is an important process in animals and plants.

The movement of many substances into and out of cells occurs by diffusion.

Describe why diffusion is important to animals and plants.

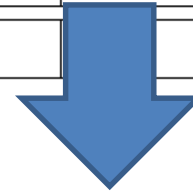
In your answer you should refer to:

- animals
- plants
- examples of the diffusion of named substances.



[6 marks]

<p>examples of points made in the response</p> <p>Importance of diffusion:</p> <ul style="list-style-type: none">• to take in substances for use in cell processes• products from cell processes removed <p>Examples of processes and substances:</p> <ul style="list-style-type: none">• for gas exchange / respiration: O₂ in / CO₂ out• for gas exchange / photosynthesis: CO₂ in / O₂ out• food molecules absorbed: glucose, amino acids, etc• water absorption in the large intestine• water lost from leaves / transpiration• water absorption by roots• mineral ions absorbed by roots	<p>extra information</p> <p>Description of processes might include:</p> <ul style="list-style-type: none">• movement of particles / molecules / ions• through a partially permeable membrane• (movement of substance) down a concentration gradient <p>osmosis: turgor / support / stomatal movements</p>
Total	6



This is really useful for 4-6 mark questions that come up frequently. Summarise the mark scheme to give you a standard answer that you can learn.

In animals oxygen diffuses from the alveoli into the blood. Also glucose diffuses into the blood from the small intestine. Glucose and oxygen are important for respiration. In plants carbon dioxide diffuses from the air into the leaves so it can be used in photosynthesis.

Learn the steps in a process question

Question

Why does heart rate increase

Heart rate and exercise

- Increased heart rate
- More blood
- Carries more oxygen and glucose
- More respiration
- Muscles contract more effectively

Why?

Poor answer

Heart rate increases during exercise so more blood gets to the muscles.

Good answer

Heart rate increases during exercise so more blood gets to the muscles. This carries more oxygen and glucose so respiration can happen allowing muscles to contract.

There are lots of processes you need to know about in Biology/Chemistry/Physics. Make a list of them and bullet point the steps in each process.

Practice Evaluate/Compare questions.

STATINS	ASPIRIN
Statins are only available on prescription from doctors.	Aspirin can be bought over the counter. Treatment with aspirin costs up to £15 per year.
In studies, 30 000 patients were monitored over several years. Statins were found to reduce the rate of non-fatal heart attacks by about 30%.	In a study of 1000 patients, aspirin was found to cause bleeding of the stomach in around 0.5% of patients and there was a slightly increased risk of poor blood clotting at cuts.
Approximately 0.1% of the patients suffered serious muscle damage and 0.01% suffered kidney failure.	There was a slightly increased risk of damage to the blood vessels in the brain in older patients.
Statins reduce blood cholesterol which builds up in the walls of blood vessels. The cost of treating patients with statins can vary between £150 and £500 per year, depending on the type of cardiovascular disease being treated.	Aspirin was found to reduce the risk of non-fatal heart attacks by 31%.

Statins are only available on prescription but aspirin is more widely available as it is available over the counter.

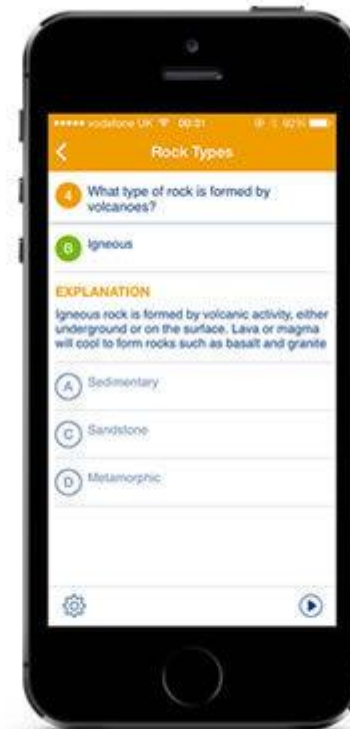
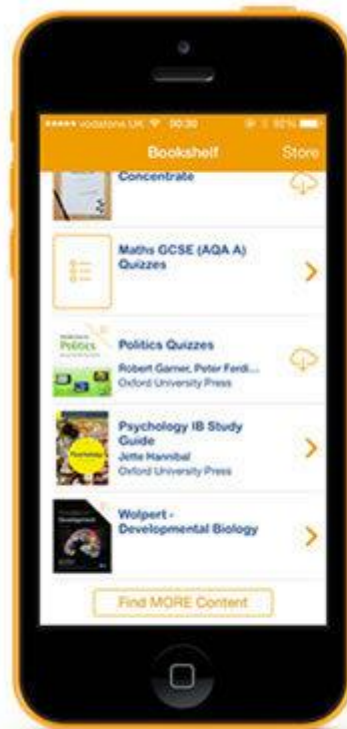
Often a 6 mark question gives you information about 2 things and asks you to compare or evaluate the information. Make sure every sentence compares one with the other.

Statins are much more expensive than aspirin.



Download Gojimo.

Very useful exam board specific app which can be used when they have a few minutes spare.



Useful Websites

BBC Bite Size Doc Brown mygcse science.com

Atoms, elements, compounds, mixtures | Chemistry | AQA | My GCSE Science - Google Chrome

Secure | <https://www.my-gcse-science.com/aqa/chemistry/atoms-elements-compounds-mixtures/>

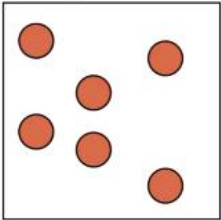
Apps (29) Les Menuires Ski

Atoms and elements

An **atom** is the smallest part of an element that can exist.

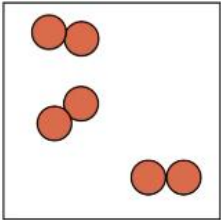
An **element** is a substance that is made from only one type of atom.

Single atoms



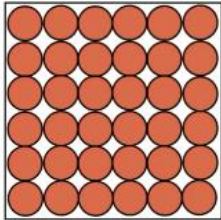
He
Ne
Ar
Kr

molecules



O₂
N₂
Cl₂
H₂

giant structure



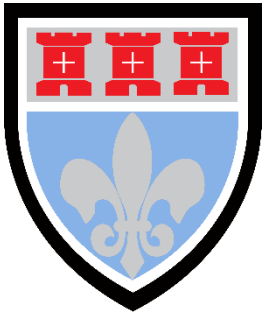
C
Fe
Cu⁺
Na

© my-gcse-science.com

13:05

NEXT →

Thank you



- A range of staff are now available to answer any questions you might have in the atrium.
- There are a range of resources available from each of the departments, for your use and information.
- A copy of these slides will also be available on the school website from tomorrow.