

# Welcome to the Year 10 Parent Information Evening



# KS4 Pastoral Team



Mrs L Ward  
Pastoral Lead



Mrs C Lee  
KS4 Manager



Mrs O Wood  
Yr10 Manager



Miss S Barrass  
Yr11 Manager

- When you email [info@guiseleyschool.org.uk](mailto:info@guiseleyschool.org.uk), your email is forwarded onto all 4 of us.



# 1. Check and sign your child's planner

- The planner is a record of their homework, stamps and negative comments.
- The notes section on the weekly planner page is also the quickest method of communicating with your child's form tutor and teachers.
- You need to sign your child's planner **and** reading log at the end of each week.

| Achievement and Behaviour |                         |            |                                   |  |  |
|---------------------------|-------------------------|------------|-----------------------------------|--|--|
| House Points              | Total House Points      | ATL 4 Week | Total ATL 4                       |  |  |
| Achievement Stamps        |                         |            |                                   |  |  |
|                           |                         |            |                                   |  |  |
| Code                      | Subject and Information | Date       | Initial                           |  |  |
|                           |                         |            |                                   |  |  |
|                           |                         |            |                                   |  |  |
|                           |                         |            |                                   |  |  |
| Notes                     |                         |            |                                   |  |  |
|                           |                         |            |                                   |  |  |
| Cumulative Attendance     |                         |            | Guiseley School Attendance Target |  |  |
|                           |                         |            | 96%                               |  |  |
| Parent/Carer signature:   |                         |            | Form Tutor signature:             |  |  |

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# 2. Support the 'at home' routines

## Guiseley Routines

1. At home, we:
  - Make time to complete homework
  - Pack our bag the night before, completing an equipment, planner and book check
  - Prepare our full uniform ready for the next day
  - Set our alarm to allow enough time to get ready in the morning
  - Get a good night's sleep.

2. Before school and during breaks we have:
  - Gone to the toilet if we need to
  - Filled up our water bottles
  - Checked our uniform is correct
  - Seen pastoral staff during break and lunch – not at the end.

### 3. A Great Guiseley Lesson:

#### a) At the start, we:

- Are punctual
- Are met by our teachers who greet us and check our uniforms
- Sit where we are asked to sit
- Open our planners on the correct week and put equipment on the desk
- Engage in
- Answer the

#### b) Throughout

- Contribute
- Listen actively
- Ask questions
- Take pride in
- Allow teachers to
- Push ourselves
- Don't give up
- We follow the

#### c) At the end of

- Check our
- Help to tidy
- Stand quietly
- Leave in a

### 4. Around school

- Wear uniform
- Do as we are asked
- Eat and drink
- Do not chew gum
- Walk around
- Respect the
- Always obey
- Keep all equipment
- Respect the

## 1. At home, we:

- Make time to complete homework
- Pack our bag the night before, completing an equipment, planner and book check
- Prepare our full uniform ready for the next day
- Set our alarm to allow enough time to get ready in the morning
- Get a good night's sleep.



# 3. Support the 'at home' routines

## *Being Guiseley...*

Being Guiseley means wearing your uniform with pride and ensuring your uniform is a reflection of you. Teacher's will ask you if your tie, blazer or shirt is 'Guiseley'... this is what they mean:

### **A Guiseley Blazer:**

- ✓ Does not have sleeves rolled up

### **A Guiseley Tie:**

- ✓ covers your shirt buttons
- ✓ Is free from graffiti or tears

### **A Guiseley Shirt:**

- ✓ Is tucked in
- ✓ Has the top button done up

### **Guiseley Shoes:**

- ✓ Are smart, plain and black

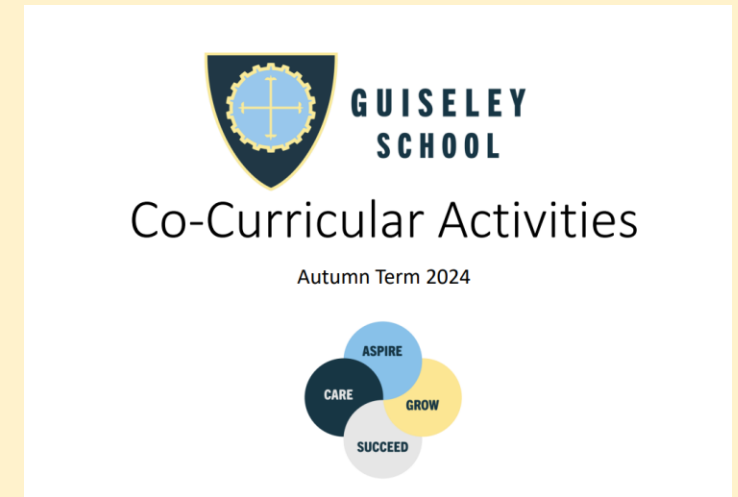
### **A Guiseley Skirt:**

- ✓ Is not rolled up or 'scrunched up' by a hair bobble



# 4. Encourage attendance at co-curricular activities

- You have been emailed a digital copy of our Co-Curricular Activities booklet.
- You can also find a copy on our website.
- Most activities take place from 3-4pm.
- Some activities take place at lunch time.



| Geography          |            |          |      |      |       |       |
|--------------------|------------|----------|------|------|-------|-------|
| Staff initials     | Staff name | Activity | Year | Day  | Time  | Where |
| RBO LMN<br>PDR JAM | Geog Staff | GEOGSOC  | ALL  | WEDS | 3-4PM | F106  |

| History        |            |                                     |      |       |            |       |
|----------------|------------|-------------------------------------|------|-------|------------|-------|
| Staff initials | Staff name | Activity                            | Year | Day   | Time       | Where |
| JG             | Mr Gracey  | The Guiseley Union Debating Society | All  | Weds  | 3.10PM-4PM | F107  |
| OWR            | Mr Walker  | Guiseley Historical Society         | KS3  | Thurs | 3.10PM-4PM | F112  |

| MFL            |                        |                                    |                             |  |                        |                        |
|----------------|------------------------|------------------------------------|-----------------------------|--|------------------------|------------------------|
| Staff initials | Staff name             | Activity                           | Year                        | Day  | Time                   | Where                  |
| SHN            | Mrs Harrison           | Duolingo League                    | Year 7-13                   | Online   | Whenever               | At home                |
| SDA            | Ms Davies              | Year 8 MFL Spelling Bee - German   | Year 8                      | Ongoing through Term1 and 2                            |                        | F004                   |
| SGE            | Mrs George             | Year 8 MFL Spelling Bee - Spanish  | Year 8                      | Ongoing through Term1 and 2                            |                        | F005                   |
| STS            | Mr Thomas<br>+MFL Dept | GCHQ National language competition | Year 9<br>(Potentially 7-8) | All week Monday 18<br>November - Friday 22<br>November | Lunch and after school | F block computer rooms |

# Attendance



# Attendance nudge...

**Raise your child's attendance, - Raise their Chances!**



**What does good attendance mean?**

**As a birthday treat Dennis has gone shopping, he's in Year 10 and has 90% attendance**

**Is this good?**





# Attendance nudge...

**90% attendance in one school year = 4 whole weeks of lessons missed!**

**Research (DfES) strongly suggests there is a direct relationship between attendance to school & achievement**



The table below shows the direct relationship between levels of attendance and levels of achievement:

| Attendance Group | Average Grade (Attainment) | Average Score (Value Added) |
|------------------|----------------------------|-----------------------------|
| 95% +            | 6.1                        | +0.9                        |
| 90 – 95%         | 5.2                        | +0.4                        |
| 80 – 90%         | 4.0                        | -0.3                        |
| < 80%            | 3.0                        | -1.5                        |

So while the relationship between attendance and performance is clear, the reasons may be less obvious. Where students have higher levels of absence they might find:

- They have **missed crucial knowledge** or skills that have been taught
- The next part of the **curriculum makes less sense**, or they find it harder to learn
- They have **less opportunity to practise** what has been taught



# Attendance nudge...

**90% attendance = 4 whole weeks of lessons missed!**



**What impact might this have on Dennis?**

**Research suggests that 17 missed school days a year = GCSE grade DROP in achievement. (DfES)**

**So, 90% Attendance is not as good as it first seemed**

**The greater the attendance the greater the achievement.**



# What could Dennis' potential earnings look like?

Please help us and your child by ensuring their **attendance remains above 95%** allowing them to achieve their potential



# Careers



# Careers in Year 10

All students will shortly complete a survey regarding their aspirations and 'next steps'.

## During Year 10 students will have the opportunity to ...

- Meet with our external Careers Advisor to produce a personalised Action Plan and/or receive Careers guidance
- Access College / Apprenticeship application support
- Access Careers advice and information via Unifrog & Microsoft Teams
- Access to the Careers Hub via student VLE
- Access mock interview support
- Meet with Guest speakers (VIPs- Very Interesting People)
- Be provided with information regarding College, University trips and open days
- Be provided with CV and interview advice via their fortnightly designated careers lesson

If you or your child require any further information on any of this content/advice please contact Mrs Khan via [info@guiseley.org.uk](mailto:info@guiseley.org.uk)



# Student Expectations



# Attitude to Learning :

**Every lesson matters.....**



|                         | Attitude to Learning Score |
|-------------------------|----------------------------|
| Year 9 2023-24          | 3.64                       |
| Year 10 2024-25 to date | 3.54                       |



# KS3 --> KS4:

## **Culture:**

- Climate for Learning
- Attitude to Learning

## **Organisation:**

- Workload
- Deadlines

## **Support:**

- Accept help
- Communicate if you are struggling





# Curriculum Leaders



# English

*Ms Thompson*



# English Overview

- Students will be entered for 2 GCSEs:
  - ENGLISH LANGUAGE
  - ENGLISH LITERATURE
- Students will sit **2** exams for **each** award.
- There is **no written coursework** element for either course.



# English Literature

Texts Studied:

- A Christmas Carol
- Macbeth
- Power and Conflict Poetry
- An Inspector Calls
- Unseen Poetry

**All students study the same texts.**

Power and Conflict Poetry anthologies are provided by the examination board.

All other texts will be available to buy through the school.



# English Language

- These examinations are '**unseen**', meaning the extracts used are not ones studied in advance.
- For this exam, we teach students the **knowledge and practice the skills** they need to approach an unseen text with confidence.
- This exam tests reading and writing. The more you can encourage your child to **read at home**, the better they will understand how writing is crafted for purpose. Reading a range of fiction and non-fiction texts is essential.



# English Language – Spoken Language Endorsement.

- The Spoken Language Endorsement (SLE) is an endorsed component of the course covering spoken language. This is a **compulsory** element. Students pick a topic of interest and deliver a short presentation to their peers.
- They will be assessed on the **content and organization** of their presentation, **delivery** and **how they respond to questions**.
- The SLE is reported as a **separate grade** (Pass, Merit, Distinction or Not Classified).
- Whilst it does not contribute to the result of the English Language qualification (the grade your child achieves) **it will be on their certificate**.
- The SLE will be assessed at the end of Y10. Please support your child by reassuring and encouraging them with this part of the course.



# English Groupings

- Students are grouped on academic performance – this involved reviewing assessments and performance throughout Y9.
- Following each assessment cycle, groupings will be reviewed to consider whether individual students need to be moved. Should we believe a move is in the best interest of the child, we will communicate this to you.
- All groups study the same texts and schemes with suitable differentiation and challenge in terms of delivery. We help all students aspire to achieve their very best no matter what group they are in.



# English Revision



Supporting your child with English revision at home:

- Ask your child what they have been studying / reading. This can be in class or independently. Get them to explain plot, characters and express their opinions on texts.
- Watch versions of the literature texts together. If this is done with an understanding it is NOT a replacement of reading the text, it can help stimulate discussions about the text.
- Have students read a range of non-fiction texts e.g. newspapers, articles, blogs etc.
- Monitor online revision.
- Encourage students to access knowledge organisers on Teams.
- Purchase revision guides and workbooks to help guide revision at home.





# Why is reading so important in Year 10?

- It improves **all academic results** (not just English)
- It helps students **understand and access difficult texts** inside and outside school
- It **widens vocabulary**
- It helps **mental wellbeing**
- It improves **sleep patterns**



# How do we help Year 10 students become 'readers'?

- A reading book is part of the **school equipment** – students should have one with them every day
- Private reading is part of **form time** so reading habits are built
- Students have lots of **recommendations for books**
- Reading is part of their **homework** (average of 15 minutes a day)
- Students must fill in their **reading log** planner pages each week
- Parents must **sign page 23** of their planners each week to show they have completed their reading homework



# How can you support your child's reading?

- **Talk to them** about what they are reading, both in and out of school
- Build reading **habits and routines** with them
  - Set aside reading time
  - Replace phones at bedtime with books – they will sleep better!
- Encourage **a range** of ways to read:
  - Graphic novels
  - Audiobooks
  - Autobiographies
- Go to our reading webpage for **book recommendations**  
<https://www.guiseleyschool.org.uk/reading>



# Maths

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*Mrs Moore*



# Maths GCSE

The maths GCSE is assessed at the end of Year 11

- Assessment is in the form of 3 exams
- 1 Non-calculator exam
- 2 Calculator exams



# Maths GCSE



- AQA exam board
- Tiered:
  - Foundation tier goes from Grade 1 to 5
  - Higher tier goes from Grade 4 to 9



# Tiers of Entry

Grade 5 on foundation = 79%

Grade 5 on Higher = 38%



# Systems in maths – how we identify gaps and what we do about them (and how you can help!)

- At the end of each unit of work we do a mini assessment
- Students mark these, teachers then collect them in.
- We fill in an analysis grid





**GOTO SUMMARY SHEET**

|             |            |      | Sparx Code                        | M175                               | M175                   | M795                           | M428   | M417                                  | M175                                    | M327  | M521                       |                         |             |
|-------------|------------|------|-----------------------------------|------------------------------------|------------------------|--------------------------------|--|---------------------------------------|---|---|----------------------------|-------------------------|-------------|
|             |            |      | 1                                 | 2                                  | 3                      | 4                              | 5  | 6                                     | 7                                       | 8   | 9                          | 10                      |             |
| Surname     | Forename   | Form | Find output of a function machine | Find inputs for a function machine | Find inverse functions | simplify algebraic expressions | Use function machines to write algebraic expressions | Substitute into algebraic expressions | Use function machines with 2 operations | Substitute multiple values into an expression | Identify a linear equation | Use order of operations | Total score |
| ABBOT       | Russ       | 10A  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 18          |
| BELLINGHAM  | Jude       | 10B  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 20          |
| COOR        | Jim        | 10A  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 16          |
| DAVID       | Craig      | 10A  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 18          |
| EASTWOOD    | Clint      | 10B  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 19          |
| FRENCH      | Dawn       | 10D  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 16          |
| GOPHER      | Gorden The | 10B  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 17          |
| HIDDLESTONE | Tom        | 10D  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 19          |
| IMBRUGLIA   | Natalie    | 10A  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         |             |
| JONES       | Tom        | 10D  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 18          |
| KNOWLES     | Beyoncé    | 10D  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 20          |
| LLALANA     | Adam       | 10A  |                                   |                                    |                        |                                |  |                                       |   |   |                            |                         | 19          |
|             |            |      | reds                              | 0                                  | 0                      | 0                              | 3  | 6                                     | 6                                       | 5   | 2                          | 7                       | 12          |

**RETEACH TOPIC**

Lesson = order of operations. Starters = identifying linear equations/algebraic expressions

**MISCONCEPTIONS**

Use of powers in order of operations. Did not recognise linear equations with fractions



# What you can do.....

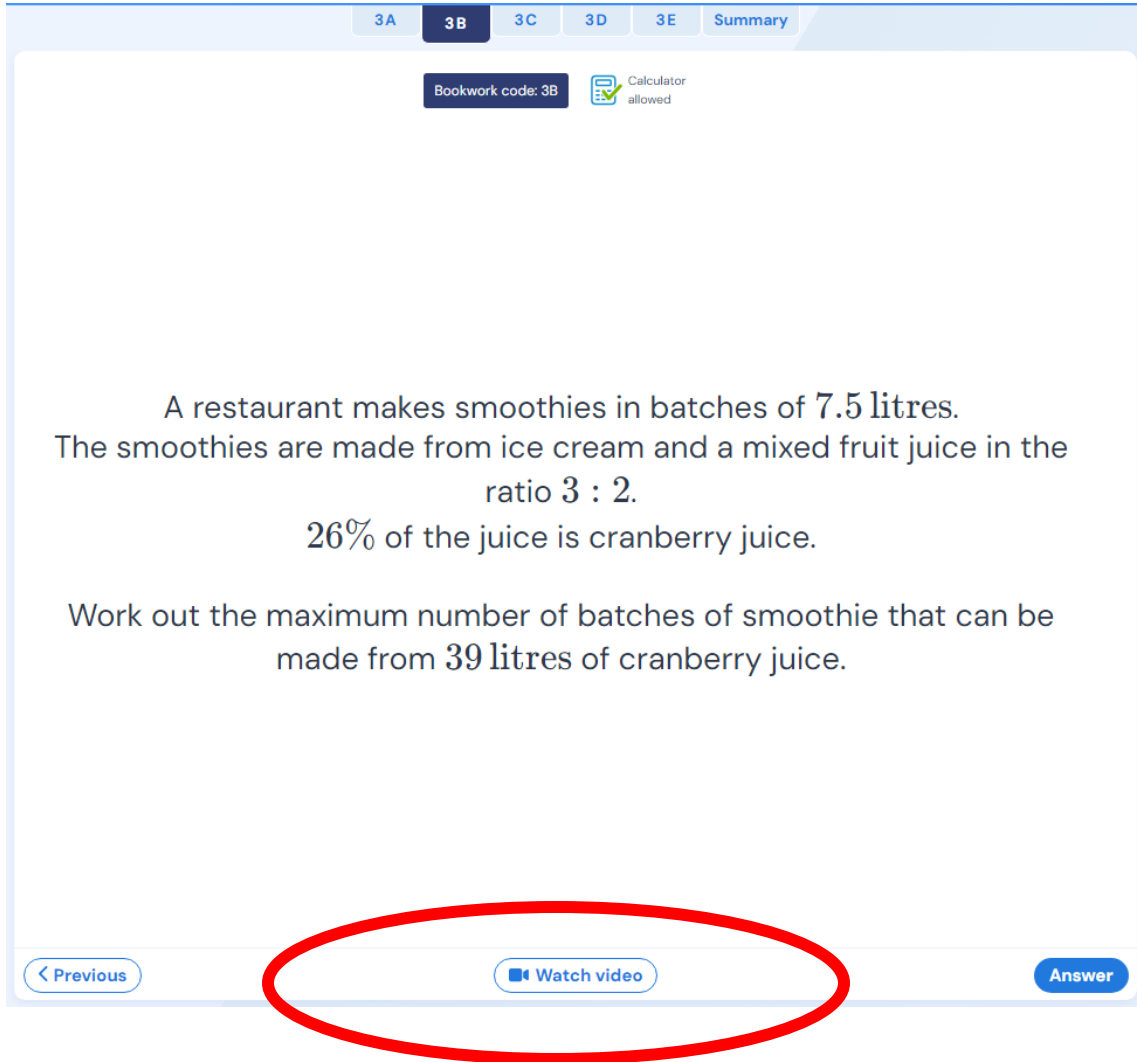
Algebraic notation mini a

Name.....

| M175                              | M175                               | M175                   | M795                           |
|-----------------------------------|------------------------------------|------------------------|--------------------------------|
| 1                                 | 2                                  | 3                      | 4                              |
| Find output of a function machine | Find inputs for a function machine | Find inverse functions | simplify algebraic expressions |

The screenshot shows the Sparx Maths interface. At the top, it says 'Sparx Maths' and '170 XP Clare Moore'. Below this, there's a star icon labeled 'Compulsory' and a greeting 'Hey Clare,'. A message states: 'This is your personalised Compulsory homework. You need to answer every question correctly to complete it.' On the right, a green circle shows '1/1'. Below the message, a task 'Introducing Sparx Maths' is marked as 'Completed' with a green checkmark. On the left side of the interface, there are icons for 'XP Boost' (lightning bolt), 'Target' (crown), and 'Independent Learning' (lightbulb), with the latter being circled in red.

# What if students get stuck?



The screenshot shows a digital learning interface. At the top, there are navigation tabs labeled 3A, 3B, 3C, 3D, 3E, and Summary. Below these, there is a 'Bookwork code: 3B' and a 'Calculator allowed' icon. The main content area contains the following text:

A restaurant makes smoothies in batches of 7.5 litres.  
The smoothies are made from ice cream and a mixed fruit juice in the ratio 3 : 2.  
26% of the juice is cranberry juice.

Work out the maximum number of batches of smoothie that can be made from 39 litres of cranberry juice.

At the bottom of the interface, there are three buttons: '< Previous', 'Watch video', and 'Answer'. The 'Watch video' button is circled in red.

If students get stuck on a question, they can click 'watch video'. This then shows a 1 minute video showing someone answering this particular question. Students should watch this, make notes and then try the question again.

We have also linked this to revision and gap analysis of the big assessments.

The revision list contains the topics that students will be tested on in their next assessment. Next to each topic is the Sparx Independent Learning Task Code

| Topic  | Sparx Independent Learning Task Code |
|--|--------------------------------------|
| Function machines with letters and numbers               | M175 and M428                        |
| Sequences - Term-to-term rules for numerical sequences   | M381                                 |
| Sequences - Term-to-term rules for sequences of patterns | M241                                 |
| Substituting into expressions with one operation         | M417                                 |
| Substituting into expressions with multiple operations   | M327                                 |
| Simplifying expressions containing a single variable     | M795                                 |

The Sparx independent learning task code tells you which video and tasks correspond to this particular question on the Sparx learning platform.



# After the assessment.....

The front cover of all our big assessments contains the topic that each question tests and the Sparx independent learning code for this topic.

Instead of their usual homework students will be asked to take their assessments home and complete the independent learning that is relevant to them. We will plan re-teach lessons based on the class data in a manner similar to the mini assessments.

| Question   | Sparx Independent Task Code |
|--|-----------------------------|
| Question 1. Sequences - Term-to-term rules for numerical sequences | M381                        |
| Question 2. Integer place value                                    | M704                        |
| Question 3: Finding fractions of shapes                            | M158                        |
| Question 4. Use of number lines                                    | M763                        |
| Question 5. Function machines with numbers                         | M175                        |
| Question 6. Solving equations with one step                        | M707                        |
| Question 7. Converting between fractions, decimals and percentages | M264                        |
| Question 8: Term-to-term rules for numerical sequences             | M381                        |
| Question 9: Rounding integers                                      | M111                        |
| Question 10: Simplifying expressions containing a single variable  | M795                        |
| Question 11: Calculating the median                                | M934                        |
| Question 12: Rounding integers using significant figures           | M994                        |
| Question 13. Use of number lines                                   | M763                        |



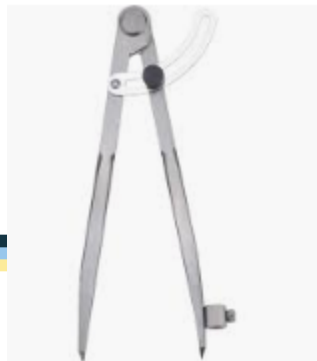
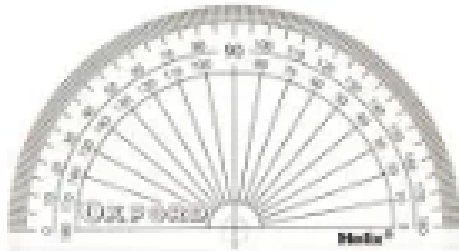
# Equipment:

Make sure students have the correct equipment for lessons

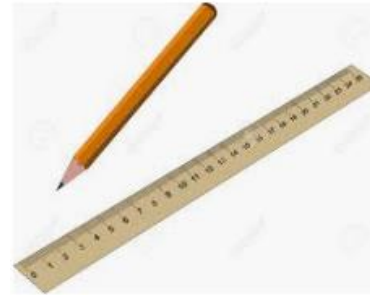
Scientific calculator - Casio  
Calculator



Protractor and compass



Pencil and ruler



# SCIENCE

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*Andrew Watson*



# 6 Science Exams

## Combined Science Trilogy

Biology 1 and 2

Chemistry 1 and 2

Physics 1 and 2

Each exam is 1hr 15mins

## Triple Science

Biology 1 and 2

Chemistry 1 and 2

Physics 1 and 2

Each exam is 1hr 45mins

All students follow the Combined pathway until Spring-bank in Year 10, we will then select appropriate students to move to the Triple pathway.

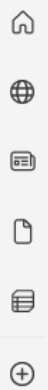




What do I need to know?

How do I know I know?





Welcome to the new Guiseley School VLE.

Access my classes

Useful Links

|                   |                     |                               |                  |                 |
|-------------------|---------------------|-------------------------------|------------------|-----------------|
| School Website    | Email               | Google Search                 | INSIGHT          | Print Dashboard |
| Library Catalogue | Year 11/13 Revision | NGRT/CAT Tests                | MindMate         | Hegarty Maths   |
| Educake           | Unifrog             | Sixth Form Careers Newsletter | Sixth Form Wi-Fi |                 |

Good afternoon J Dunn

- OneDrive
- My Classes
- Subjects
- My Assignments

Homework Schedules

Subjects



Subjects →

# Subjects → Science →

SharePoint Search in SharePoint J Dunn

GUISELEY SCHOOL Access Training Resources Week 39

## Subjects [See all](#)

|                            |                      |                                   |                       |
|----------------------------|----------------------|-----------------------------------|-----------------------|
| A Art                      | RS Religious Studies | B Biology                         | I IT                  |
| DP Digital Photography     | S Science            | M Mathematics                     | E English             |
| CS Computer Science        | P Psychology         | C Chemistry                       | H History             |
| IT Information Technology  | G Geography          | D Drama                           | PE Physical Education |
| B Business                 | BB Business BTEC     | EB Economics and Business         | C Catering            |
| C Childcare                | C Construction       | CC Core Curriculum Enhancement    | D DESIGN              |
| PD Product Design          | DT Directed Time     | E Employability                   | EL English Language   |
| ER English Resit           | E Enrichment         | EP Extended Project Qualification | F Food                |
| FS Free Study Time         | F French             | FM Further Maths                  | G German              |
| GP Government and Politics | IB IT Btec           | MR Maths Resit                    | M Media               |
| MF Modern Foreign Language | M Music              | N Nurture                         | PB PE BTEC            |
| P Physics                  | SM SEN Mentoring     | S Spanish                         | SS Sports Studies     |
| T Technology               | T Textiles           |                                   |                       |





Subjects → Science → Year 10 →


### Student Resources





# Subjects → Science → Year 10 →

Year 11 


 Name 

 <sup>1</sup>1. Course Overview

 <sup>2</sup>2. Y11 Knowledge Organisers

 <sup>3</sup>3. Past Paper Questions

 <sup>4</sup>4. Useful Websites and Revision

 <sup>5</sup>5. Science Unit Resources



# Science Curriculum 2024/2025

Intent Statement

Rationale

Spiral Curriculum

Science Curriculum Map



GUISELEY  
SCHOOL

|    | Term 1   | Term 2  | Term 3  | Term 4  | Term 5   | Term 6  |
|----|--|---|---|---|--|---|
| 10 | <b>Curriculum Topics:</b><br><br>Matter and Energy<br><br>Ecology  | <b>Curriculum Topics:</b><br><br>Resources<br><br>Organisation<br>(Cell Division and<br>Transport)  | <b>Curriculum Topics:</b><br><br>Bonding and Structure<br><br>Disease   | <b>Curriculum Topics:</b><br><br>Chemical Changes<br><br>Inheritance & Variation  | <b>Curriculum Topics:</b><br><br>Organic Chemistry<br><br>Radioactivity  | <b>Curriculum Topics:</b><br><br>Chemical Analysis<br><br>Forces  |
|    | <b>Links with previous topics:</b><br><br>Conservation of Energy.<br>& Forms of energy<br>(Energy)<br><br>Yr8 Plants and<br>Ecosystems<br><br>Sustainability<br><br>Science Investigations | <b>Links with previous topics:</b><br><br>Sustainability and<br>Resources<br><br>Yr8 Respiration<br>Yr7 Digestion<br><br>Respiration,<br>Photosynthesis<br><br>Science Investigations | <b>Links with previous topics:</b><br><br>Atoms structure from<br>Yr9 Atoms.<br><br>Conservation of Mass,<br>concentration, Y9 Rates)<br>periodic table (Atoms)<br><br>Yr10 Disease<br><br>Science Investigations | <b>Links with previous topics:</b><br><br>Conservation of Mass,<br>concentration, Y9 Rates)<br>Atom structure and<br>periodic table (Atoms)<br><br>Genes Yr 8<br>Yr 9 Cells<br><br>Science Investigations | <b>Links with previous topics:</b><br><br>Conservation of Mass,<br>Yr10 Bonding and<br>structure<br><br>Atom structure and<br>periodic table (Atoms)<br>Yr 10 Energy<br><br>Science Investigations | <b>Links with previous topics:</b><br><br>Atom structure and<br>periodic table (Atoms)<br><br>Yr10 Energy<br>Yr7 and 8 Forces<br><br>Science Investigations |
|    | <b>Assessments:</b><br><br>Continuous assessment<br>in class including<br>Science Investigation<br>Assessments.<br>Unit tests.   | <b>Assessments:</b><br><br>Assessments in class<br>including Science<br>Investigation<br>Assessments.<br>Unit tests.  | <b>Assessments:</b><br><br>Continuous assessment<br>in class including<br>Science Investigation<br>Assessments.<br>Unit tests.  | <b>Assessments:</b><br><br>Continuous assessment<br>in class including<br>Science Investigation<br>Assessments.<br>Unit tests.  | <b>Assessments:</b><br><br>Continuous assessment<br>in class including<br>Science Investigation<br>Assessments.<br>Unit tests.   | <b>Assessments:</b><br><br>Continuous assessments<br>in class including<br>Science Investigation<br>Assessments.<br>Unit tests.<br>End of year Assessment   |

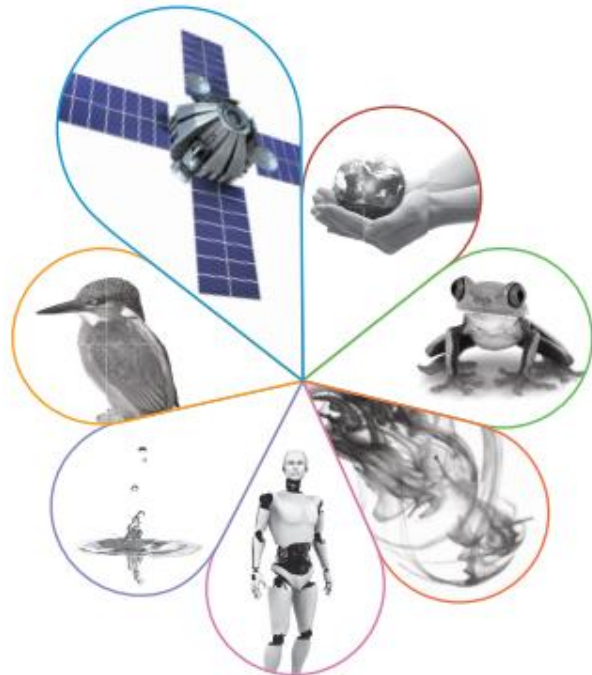
# GCSE PHYSICS

(8463)

## Specification

For teaching from September 2016 onwards  
For exams in 2018 onwards

Version 1.1 30 September 2019



# Specification at a glance

This qualification is linear. Linear means that students will sit all their exams at the end of the course.

## Subject content

- 1. Energy
- 2. Electricity
- 3. Particle model of matter
- 4. Atomic structure
- 5. Forces
- 6. Waves
- 7. Magnetism and electromagnetism
- 8. Space physics (physics only)





Threshold Concepts in Energy



Energy is always conserved



Work is done when energy is transferred

km

Measurement Prefixes



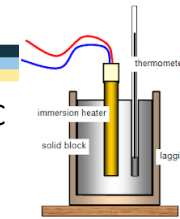
Efficiency

| Key Words     | Definitions  |
|---------------|--|
| Energy stores | Energy that can be stored for use later e.g. Kinetic, chemical, internal (thermal), gravitational potential, elastic potential, magnetic, electrostatic, nuclear |
| System        | An object or group of objects  |
| Useful Energy | The energy we want to get out of a device e.g. for a car it would be kinetic energy  |
| Dissipate     | Waste e.g. heat energy is dissipated from a light bulb as we only want light energy to be usefully transferred.  |
| Lubricant     | A method of enabling moving parts to move across each other without dissipating as much heat energy e.g. oil, WD40   |
| Streamlining  | The design of a machine to create less air resistance.   |
| Radiation     | Electromagnetic waves  |
| Conduction    | The method of heat transfer in a solid   |
| Insulator     | A poor conductor   |

The Law of Conservation of Energy

Energy can be transferred usefully, stored or dissipated, but cannot be created or destroyed

| Energy                         | Definition   | Formula  |
|--------------------------------|--|--|
| Kinetic Energy                 | Energy stored by a moving object   | $KE = \frac{1}{2} \times \text{mass} \times (\text{speed})^2$<br>$KE = \frac{1}{2} mv^2$   |
| Elastic Potential Energy       | Energy stored by a stretched or squashed elastic object.                     | $EPE = \frac{1}{2} \times \text{spring constant} \times \text{extention}^2$<br>$EPE = \frac{1}{2} ke^2$<br>[GIVEN IN EXAM]                                       |
| Gravitational Potential Energy | Energy gained by an object raised above the ground.                          | $GPE = \text{mass} \times \text{gravitational field strength} \times \text{height}$<br>$GPE = mgh$   |
| Work Done                      | Work is done whenever a force moves an object.<br>Work done = energy changed | $WD = \text{Force} \times \text{distance moved (in the direction of the force)}$<br>$WD = Fs$  |
| Power                          | The rate of changing energy (or doing work)                                  | $\text{Power} = \frac{\text{Energy Changed}}{\text{time}}$<br>$\text{Power} = \frac{\text{work Done}}{\text{time}}$<br>$P = \frac{E}{t} = \frac{WD}{t}$          |
| Efficiency                     | A measure of the useful energy transferred.                                  | $\text{Efficiency} = \frac{\text{Useful Energy Transferred}}{\text{Total Energy Supplied}} \times 100$   |
| Specific Heat Capacity         | The energy needed to raise a 1kg of a substance by 1°C                       | $\text{Change in thermal energy} = \text{mass} \times \text{specific heat capacity} \times \text{temperature change}$<br>$E = mc\Delta\theta$<br>[GIVEN IN EXAM] |



# How do I learn it?

Revision Guides and  
cards

Trilogy (Combined)

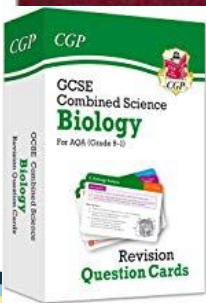
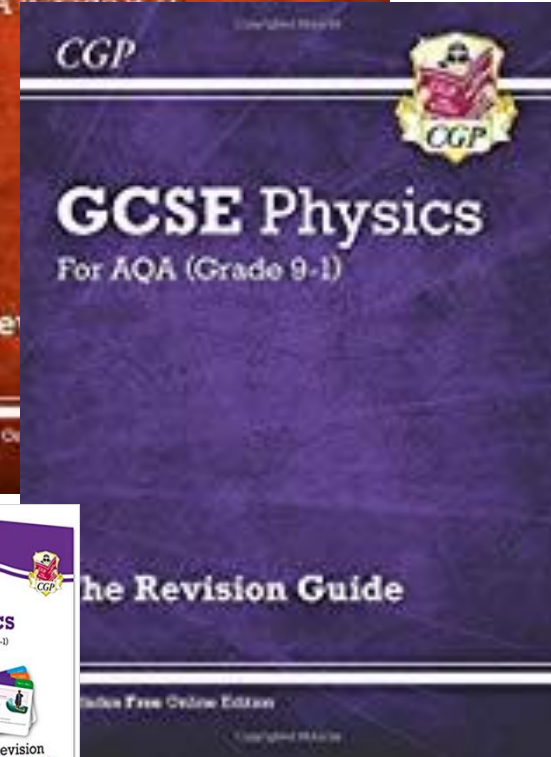
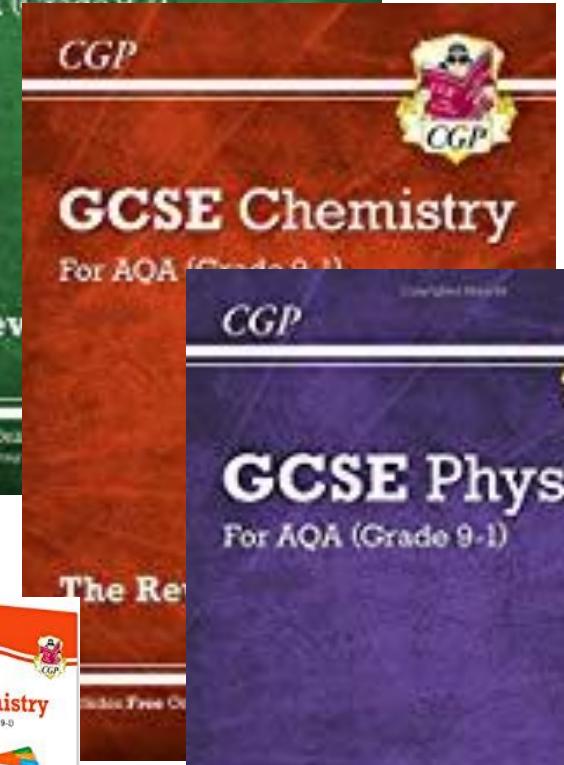
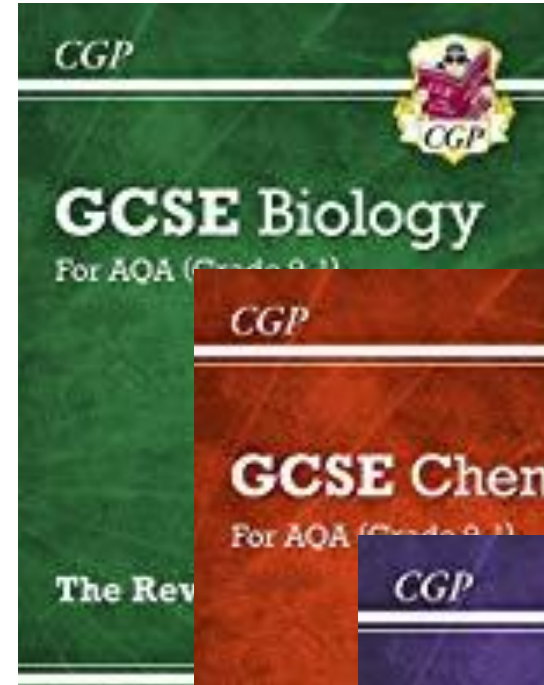
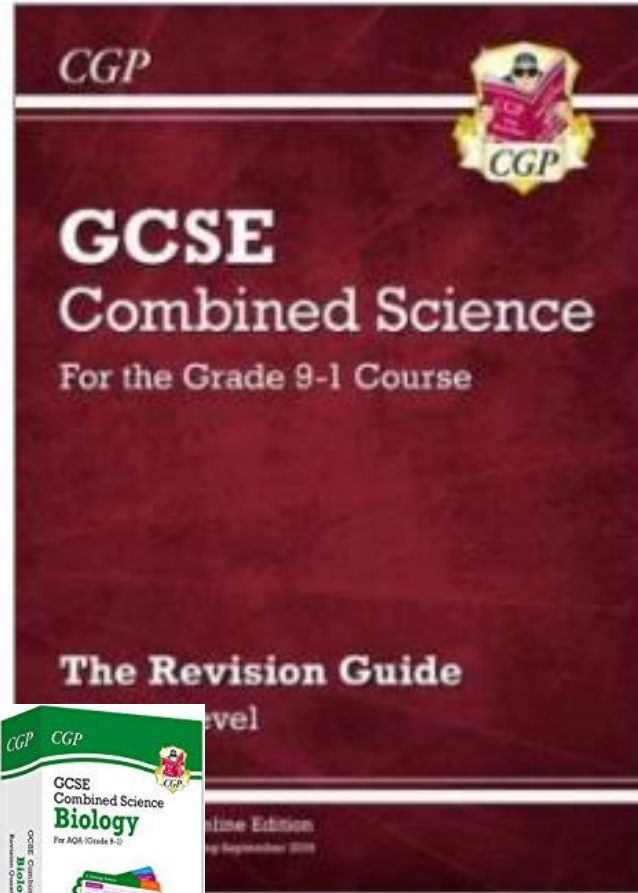
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| SUBJECT | COMPLETED             | TITLE              | FORMAT | CLASS    | DATE       |                          |     |
|---------|-----------------------|--------------------|--------|----------|------------|--------------------------|-----|
| SCIENCE | <a href="#">3/15</a>  | Week 2 Energy      |        | 10r/Sc4b | 2024-09-16 | <input type="checkbox"/> | ... |
| SCIENCE | <a href="#">9/31</a>  | Week 2 Homeostasis |        | 11r/Sc1  | 2024-09-16 | <input type="checkbox"/> | ... |
| SCIENCE | <a href="#">8/32</a>  | Week 2 Waves       |        | 9x/Sc1b  | 2024-09-16 | <input type="checkbox"/> | ... |
| SCIENCE | <a href="#">8/15</a>  | Week 1 Energy      |        | 10r/Sc4b | 2024-09-09 | <input type="checkbox"/> | ... |
| SCIENCE | <a href="#">23/31</a> | Week 1 Homeostasis |        | 11r/Sc1  | 2024-09-09 | <input type="checkbox"/> | ... |
| SCIENCE | <a href="#">25/32</a> | Week 1 Waves       |        | 9x/Sc1b  | 2024-09-09 | <input type="checkbox"/> | ... |

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Current

+ CREATE CUSTOM CLASS

| SUBJECT   | TITLE            | TYPE   |     |
|-----------|------------------|--------|-----|
| SCIENCE   | All Trilogy (F)  | SCHOOL | ... |
| SCIENCE   | All Trilogy (H)  | SCHOOL | ... |
| BIOLOGY   | Biology Triple   | SCHOOL | ... |
| CHEMISTRY | Chemistry Triple | SCHOOL | ... |

| CLASS      | SUBJECT    | YEAR    | TYPE   |     |
|------------|------------|---------|--------|-----|
| DEMO CLASS | OTHER      | YEAR 7  | DEMO   | ... |
| 12A/Ph     | PHYSICS    | YEAR 12 | SCHOOL | ... |
| 13C/Ph     | PHYSICS    | YEAR 13 | SCHOOL | ... |
| 12B/Ps     | PSYCHOLOGY | YEAR 12 | SCHOOL | ... |



# Cognito



Upgrade to Pro

653 XP



AW

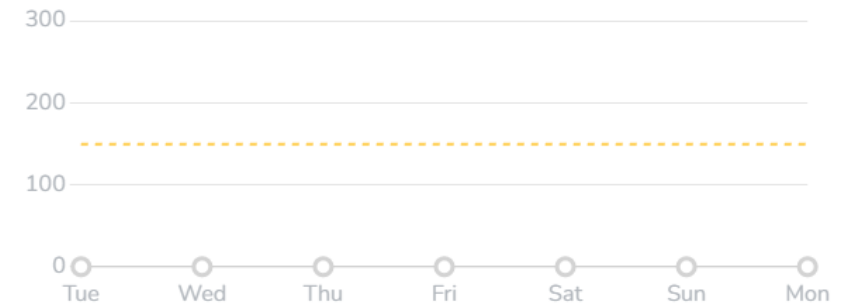
Andrew Watson

Daily Goal 150 XP



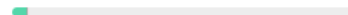
Current Streak: 0 days

Daily Goal Tracker



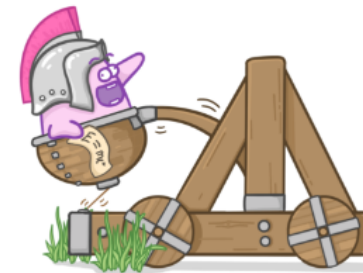
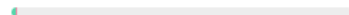
Biology

GCSE Biology - AQA Foundation Combined [\[change\]](#)



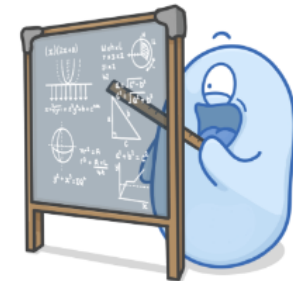
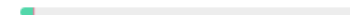
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Physics

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Maths

No Course Selected [\[select\]](#)





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### Combined Science: Trilogy 2021

|                             | Not viewed                       | Started               | Completed             |       |             |
|-----------------------------|----------------------------------|-----------------------|-----------------------|-------|-------------|
| November 21 Biology Paper 1 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paper | Mark Scheme |
| November 21 Biology Paper 2 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paper | Mark Scheme |
| November 21 Chemistry 1     | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paper | Mark Scheme |
| November 21 Chemistry 2     | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paper | Mark Scheme |
| November 21 Physics Paper 1 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paper | Mark Scheme |
| November 21 Physics Paper 2 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | Paper | Mark Scheme |



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Which of these is a characteristic that humans have selectively bred for?

1/1

Which of the following characteristics do humans selectively breed for in plants?  
(Select all that apply)

0/2

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