Leaders Guide

Year 10

Cycle One

Name:

Tutor Group:



Your timetable

| Lesson | Monday | Tuesday | Wednesday | Thursday | Friday |
|-----------------|----------|----------|-----------|----------|----------|
| 4 | Subject: | Subject: | Subject: | Subject: | Subject: |
| 1 | Room: | Room: | Room: | Room: | Room: |
| | Subject: | Subject: | Subject: | Subject: | Subject: |
| 2 | Room: | Room: | Room: | Room: | Room: |
| | Subject: | Subject: | Subject: | Subject: | Subject: |
| 3 | Room: | Room: | Room: | Room: | Room: |
| | Subject: | Subject: | Subject: | Subject: | Subject: |
| 4 | Room: | Room: | Room: | Room: | Room: |
| | Subject: | Subject: | Subject: | Subject: | Subject: |
| 5 | Room: | Room: | Room: | Room: | Room: |
| After School | | | | | |

^{*}Remember...Champions Hour runs Monday – Thursday everyday afterschool between 3:10-4:10pm, along with a range of different extracurricular clubs. Leader points awarded for attendance at these*

Leaders Calendar

| Week | Monday | Tuesday | Wednesday | Thursday | Friday |
|------|----------------------------|--|-----------------------------|--|----------------------------|
| | 4 th September | 5 th September | 6 th September | 7 th September | 8 th September |
| 1 | Y7/ Y12 Induction | | Speak like a leader launch! | | |
| | 11 th September | 12 th September | 13 th September | 14 th September | 15 th September |
| 2 | | Why not try a new extra- curricular club? | | Open evening | |
| | 18 th September | 19 th September | 20 th September | 21st September | 22 nd September |
| 3 | | | | | |
| | 25 th September | 26 th September | 27 th September | 28 th September | 29 th September |
| 4 | | | | Pastoral evening conference: - Meet your child's tutor - Guest speakers - Parent workshops | |
| | 2 nd October | 3 rd October | 4 th October | 5 th October | 6 th October |
| 5 | | | | | |
| | 9 th October | 10 th October | 11 th October | 12 th October | 13 th October |
| 6 | | | | Performing Arts Trip - Message in a Bottle | |

Leaders Calendar

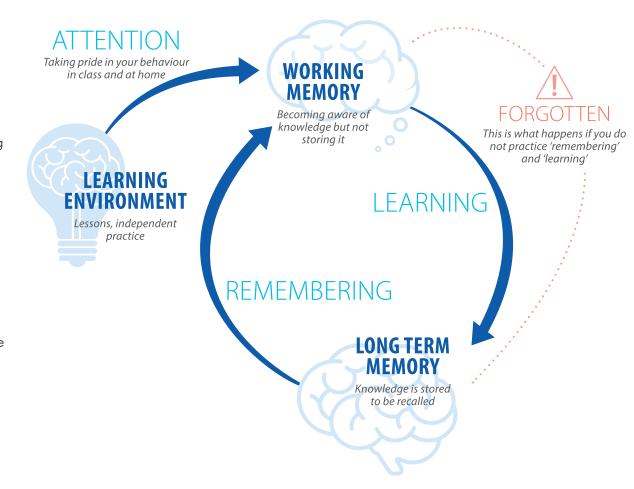
| Week | Monday | Tuesday | Wednesday | Thursday | Friday |
|------|---------------------------|---------------------------|---------------------------|---|---------------------------|
| | 16 th October | 17 th October | 18 th October | 19 th October | 20 th October |
| 7 | | | Societies launch! | Performing Arts Trip - Edward Scissorhands | |
| | 30 th October | 31st October | 1 st November | 2 nd November | 3 rd November |
| 8 | | | | Prepare to Perfom Y11, Y12 & Y13 | |
| | 6 th November | 7 th November | 8 th November | 9 th November | 10 th November |
| 9 | INSET | | | | |
| | | | Year 11 and 13 Mocks | | |
| 4.0 | 13 th November | 14 th November | 15 th November | 16 th November | 17 th November |
| 10 | | | | | |
| | | | Assessment Week | | |
| 4.4 | 20 th November | 21st November | 22 nd November | 23 rd November | 24 th November |
| - 11 | | | | | |
| | | | Assessment Week | | |
| | 27 th November | 28 th November | 29 th November | 30 th November | 1 st December |
| 12 | | | | | |
| | | · | Super Learning Week | | |
| | 4 th December | 5 th December | 6 th December | 7 th December | 8 th December |
| 13 | | | School Production | School Production | |
| | | | | | |

The Bourne End Academy Curriculum Intent

Teachers at Bourne End Academy prepare students to become successful leaders of the future global economy. In order to achieve this we have developed challenging, **knowledge intensive** curriculums which are delivered through structured, disciplined working environments in which every student receives high-quality teaching and achieves his or her full potential.

Our bespoke subject curriculums provide students the currency for future success. We position each individual lesson within overarching curriculum concepts, providing direction and purpose to the knowledge being taught at the start of every lesson.

We assess student regularly in every lesson, this is why mini whiteboards are such an essential part of the learning kit! We take a mastery approach to learning which means we move forward with our curriculum once we have seen that students have demonstrated the prior knowledge that needs to be built upon. Every lesson starts with knowledge activation in the form of retrieval.



Remembering: mastering your memory

Learning is what happens when knowledge moves from your **working memory** to your **long-term memory**.

Your working memory is like a desktop on your computer. If the information is not saved, then it will be **forgotten**.

Your long-term memory is like a computer hard drive. Remembering is what happens when you access the information in your long-term memory.

You can take practical steps to improve your ability to learn and remember key information and become the master of your memory.

Our ability to learn and remember is enhanced when we engage in activities that test what we remember.

'The testing effect' is a proven way of enhancing our long-term memory which gives us clear feedback on gaps in our learning. Therefore, regular quizzing is a vital part of our curriculum.

Leaders Guide Year 10 Cycle One DEVELOPING FUTURE LEADERS

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How to self-quiz

Science

1. Natural selection is where organisms change slowly over time (many generations), to become better adapted to their environment. Those organisms that are poorly adapted will die.

2. Darwin's theory is that organisms evolve as a result of natural selection. Evidence for this theory include the fossil record, changes observed in microorganisms, and extinction.

3. **Extinction** is where no more individuals of that species are left anywhere in the world. Factors causing extinction include changes to the environment, destruction of habitats, disease, new predators and competition for resources. Endangered species are species at risk of extinction. Methods of preventing extinction include conservation,

Questions

1. What does Darwin's theory state that organisms evolved as a result of?

Answers

1. Natural selection.

English

- Antonio and Shylock represent two extreme versions of Economic Man; Antonio is benevolent and enjoys the benefits of economic enterprise,
- without being competitive, whereas Shylock, the **antithesis**, is a capitalist predator, conferring good upon no one except himself.

 Shakespeare's use of the poetic form when Antonio describes Shylock can be seen to further discriminate against Shylock as it aligns

Stokespecia's so sed in the potent commitment announce describes stylicity can be seen to diminime destination adjusts stylicity and contained and proceed to fundamisms, capitalist and materialistic alignment.
 Shakespecia's use of violent imagery in Shylicids's penalty of 'a pound of flesh' evidences) shylicity should be prospeciately in Shylicity should be sometiment of the shakespecial stylicity of the shakespecial stylicity of the shakespecial shakespec

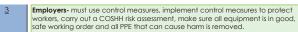
Questions

1. Where does Shakespeare use violent imagery?

Answers

1. Shylock's penalty of 'a pound of flesh'.

Food Technology







Personal Protective Equipment at Work Regulations 1992 (PPER). The requirements are set out in the PPE regulations 1992. In addition, the food safety (General Food Hygiene) Regulations require every person working in a food handling area to wear suitable, clean and (where appropriate) protective clothing

Questions

1. How does PPER link to what we have learned before?

Answers

1. An employer's responsibility to use control measures to protect workers.



Read your Leaders Guide twice. Cover, recite aloud and then check for improvements then do this again.



Use the examples to write **5 questions**. Ensure at least 1 is a **challenge** question.



Cover your Leaders Guide.

Read each question and answer them aloud twice.

If you are unsure of an answer, check your Leaders Guide and then cover again repeating your answer aloud three times.



Without using your Leaders Guide, complete your self-quiz.



Check and correct your self-quiz using green pen.

Examples of questions

1. What is the definition of a poem?

2. Where does deposition mainly occur?

3. Who is Traci Bautista?

4. When did Elizabeth I become queen?

5. How are elements grouped together?

6. Why do we use third angle projection?

7. List sources of protein.

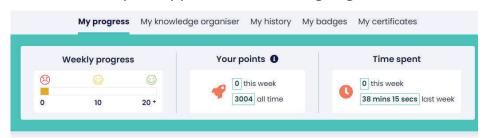
8. Define the literary term antithesis.

More challenging questions

| 1. How are and similar? |
|--|
| 2. What is the main concept of? |
| 3. What are the strengths and weaknesses of? |
| 4. Compare and |
| 5. How does link with what we have learned before |
| 6. What are some possible solutions to? |
| 7. Do you agree or disagree with this statement: ? |
| 8. What do you still not understand about? |



https://app.bedrocklearning.org/



- Bedrock Vocabulary is an online programme that helps you learn new vocabulary relevant to all your subjects.
- It will help you learn the tricky sort of language you might come across in textbooks, lessons or exams.
- Each topic consists of six 15-20 minute lessons, plus a pre- and post-test to track your progress.
- You are expected to complete 3 lessons a week
- 1 hour total.



unifrog

https://www.unifrog.org/sign-in

- Explore how your interests lead to different education and training pathways.
- See what steps need to be ticked off to stand the best chance of application success.
- Study expert guides explaining how to navigate each step in the application process.

One-stop-shop for destinations

| Pathways | Opportunities | Applications | |
|------------------|--------------------------|--------------------------|--------------------|
| PERSONALITY QUIZ | USA UNIVERSITIES | ACTIVITIES | PLANNING |
| INTERESTS QUIZ | CANADA UNIVERSITIES | COMPETENCIES | MESSAGING |
| CAREERS | UK UNIVERSITIES | COMMON APP ESSAY | TEACHING RESOURCES |
| SUBJECTS | IRELAND UNIVERSITIES | PERSONAL STATEMENTS | INTERACTIONS |
| GOALS | EU UNIVERSITIES | STUDENT LETTERS & ESSAYS | DESTINATIONS |
| кnow-ноw | AUSTRALASIA UNIVERSITIES | TEACHER LETTERS | USAGE CHARTS |
| Moocs | ASIA UNIVERSITIES | RECOMMENDATIONS | DOWNLOADS |
| | MIDDLE EAST UNIVERSITIES | REFERENCES | |
| | APPRENTICESHIPS | CV / RESUME | |
| | COLLEGE & 6TH FORM | LOCKER | |
| | OXBRIDGE | DOCUMENT SUBMISSION | |

My logins

| | Platform | Username | Password | | Platform | | Password |
|-------------|--|--------------------------------------|------------------------|--|--|--|----------|
| 0 | https://outlook.live.com My email address is: | | | b. | Sparx https://www.sparxmaths.uk/ | | |
| ij | TEAMS https://www.microsoft.com/engb/microsoft-teams/log-in | | | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | Seneca https://app.senecalearning.com/ login | | |
| ClassCharts | ClassChart https://www.classcharts.com | Pupil code: Download the ClassChall | rts app on your phone! | unifrog | Unifrog https://www.unifrog.org/sign-in | | |
| 7 | Bedrock https://app.bedrocklearning.org/ | | | | | | |

Links to all our online platforms can be found at https://bourneendacademy.e-act.org.uk/

Student safeguarding curriculum

To become a successful **future leader** students, you need to be able to make informed safe choices.

All students will take part in a weekly safeguarding session which will follow the schedule below, although it

is subject to change depending on the needs of each year group.

| Сус | cle 1 | Сус | :le 2 | Сус | :le 3 |
|---------------------------------|--|--|-------------------------------------|---|--|
| What is a safeguarding culture? | Malicious communication and cyber bullying | Knife crime (serious youth violence) | Self-efficacy and self-reflection | Scenario based a pplication (based on all topi cs covered last cycle) | Honor based abuse (inc FGM) |
| Staying safe online | United against bullying | Knife crime (impact of social media) | Domestic Violence and abuse 1 | Bank holiday | Serious Youth Violence |
| Anti-Bullying | Sexual violence and harassment | Online Safety and Expectations | Domestic Violence and abuse 2 | Mental Health awareness week and Child Crimina I Exploitation (CCE) | Mental health and wellbeing |
| British Values | Substance misuse (caffeine and energy drinks) | Healthy v unhealthy relationships | Radicalisation (online safety) | Child Criminal Exploitation (CSE) | Scenario based application (base d on all topics covered this cycle) |
| Mental wellbeing | Substance misuse (alcohol and smoking/e cigarettes) | Childrens mental Health week/safer internet day | Personal Wellbeing | Extremism | Scenario based application (base d on all topics covered this cycle) |
| Mental Health | Inset day | Fears and Anxieties (Signs, Symptoms and support) | Inset day | Peer on Peer/Chil d on Child abuse | Inse† day |

READY RESPECT SAFE SAFEGUARDING INFORMATION

If you need to talk to someone about your wellbeing or safety or you are worried about another student, please speak to your pastoral team or any of the teachers below.

We are here to support you.

Ms. K Leavy Designated Safeguarding Lead

Office: T floor, main building (English corridor)

Ms. A Rogerson Deputy Designated Safeguarding Lead

Ms. J Walker Designated Safeguarding Staff
Office: W Block outside office

Ms. T Latter Designated Safeguarding Staff
Office: Sixth Form



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Ms. I Slade Designated Safeguarding Staff
Office: T Floor (Pastoral office)

Ms. E Lee Designated Safeguarding Staff
Office: N Block (Pastoral office)



Circle Control

Mr. O Walters EACT Regional Safeguarding Lead

Tuesday: Positivity Day

Being positive and celebrating success is a tool we can use to improve our mood and our mental health. It is also proven that being positive increases your productivity, supports you in feeling more optimistic and can help motivate you to achieve more.

| Week | Leader Points total from previous week | Something I am proud of from last week is |
|---------|--|---|
| Example | 10 | l attended netball club after school. |
| Example | 10 | I completed all my homework on time. |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

| Week | Leader Points total from previous week | Something I am proud of from last week is |
|------|--|---|
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |

Wednesday: News and Current Affairs

The news plays a vital part within our society. It informs us about events that are happening which can have a direct impact on an individual. There are different types of news:

- Local This can allow a community to engage in decisions for their local area.
- **National** This can allow people to gain a sense of a national perspective and understand what is happening in other cities or towns the same country.
- **International** Knowing what is happening in other countries gives people a perspective of each other's ways of life and cultural differences.

| Week | True or False |
|------|----------------|
| 1 | 1. 2. 3. |
| 2 | 1. 2. 3. |
| 3 | 1. 2. 3. |
| 4 | 1. 2. 3. |

| Week | True or False |
|------|----------------|
| 5 | 1. 2. 3. |
| 6 | 1. 2. 3. |
| 7 | 1. 2. 3. |
| 8 | 1. 2. 3. |

| Week | True or False |
|------|----------------|
| 9 | 1. 2. 3. |
| 10 | 1. 2. 3. |
| 11 | 1. 2. 3. |
| 12 | 1. 2. 3. |
| 13 | 1. 2. 3. |

Thursday: Spellings

Spelling is important to improve our communication, literacy and has a direct impact on employment opportunities.

| Week | Spelling |
|------|----------|
| | 1. 4. |
| | 2. 5. |
| | 3. |
| | 1. 4. |
| 2 | 2. 5. |
| | 3. |
| | 1. 4. |
| 3 | 2. 5. |
| | 3. |
| | 1. 4. |
| 4 | 2. 5. |
| | 3. |
| | 1. 4. |
| 5 | 2. 5. |
| | 3. |
| | 1. 4. |
| 6 | 2. 5. |
| | 3. |

| Week | Spelling |
|------|----------|
| _ | 1. 4. |
| 7 | 2. 5. |
| | 3. |
| | 1. 4. |
| 8 | 2. 5. |
| | 3. |
| | 1. 4. |
| 9 | 2. 5. |
| | 3. |
| | 1. 4. |
| 10 | 2. 5. |
| | 3. |
| 4.4 | 1. 4. |
| 11 | 2. 5. |
| | 3. |
| 4.0 | 1. 4. |
| 12 | 2. 5. |
| | 3. |
| 4.0 | 1. 4. |
| 13 | 2. 5. |
| | 3. |

Friday: Attendance Matters

Good attendance is an essential component to become a successful leader. "Leadership is an action, not a position", Donald McGannon.

- There is a strong and significant relationship between a student's grades and their attendance at school.
- By keeping attendance above 98%, you will be demonstrating the professional standards that you will be held to in the world of work.
- We want all students to access the whole curriculum. Students who
 are absent from lessons are losing the opportunity to gain essential
 knowledge needed to progress to the next stage of study.

| Week | My weekly attendance Percentage % | Comparison to previous week Include ↑ or ↓ |
|------|--------------------------------------|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

| Week | My weekly attendance Percentage % | Comparison to previous week Include ↑ or ↓ |
|------|------------------------------------|---|
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |

Year 10 English Leadership Guide

Careers linked to these topics can include things like being a journalist, politician, police officer because when you read literature you examine and evaluate sources, you review the historical context identifying relevant issues for the time the text when was written and then make comparisons to society today.

| Week/ Topic | I will need to know | So that I can |
|----------------|---|--|
| 1 | Macbeth was performed in the Jacobean era. The Jacobeans were pious people who followed the Great Chain of Being. They believed in the Divine Right of Kings, as did King James I. The play is heavily based on the Gunpowder Plot (a failed assassination attempt to kill King James I). Jacobean women lived in a patriarchal society and were expected to be meek, submissive and subservient. Jacobeans were superstitious and believed in the existence of witches (supernatural). | Understand and appreciate the significance of how and why Shakespeare presented attitudes to relationships, witchcraft and power in the way that he did. Define a tragedy and identify which events feature at the exposition, rising action, falling action and denouement. Explain why Shakespeare crafted his characters to represent relevant contextual issues for the Jacobean era and be able to outline what impact he wanted each character to have on the audience at the time and then relevance today. |
| 2 | Assessment objective one links to how I respond to the question and how I demonstrate my understanding to the examiner. Assessment objective two focuses on my identification of and analysis of a writer's methods and the effects that these achieve. Assessment objective three links to social historical context and what intent the writer has for raising this issue with the audience at the time. A patriarchal society is a male dominated society. Lady Macbeth is presented to be different from other Jacobean women of the era as she attempts to subvert this. As a soldier Macbeth was expected to be valiant in the face of danger and follow the gender expectations of the time to be masculine. | To be able to identify what dramatic staging techniques Shakespeare has used in order to create an inauspicious and foreboding atmosphere at the start of the play. To be able to recognise what elements are needed within an extended response and how to incorporate these within an examination style response. To be able to explain how Macbeth and Lady Macbeth's relationship attempted to subvert the Jacobean patriarchal society and why it is significant that Macbeth is established at the start as brave and noble. |
| 3 | Aristotle identified several characteristics that a tragic hero would possess. Each tragic hero would have a hamartia, a fatal flaw, and for Macbeth this was his ambition. That a foil in literature is created by the writer to present a character contrast. In Macbeth, Banquo is Macbeth's foil. Shakespeare wanted to send a message to King James I to be careful who he trusted, especially after the gunpowder plot. Duncan had trusted Macbeth, and this led to his death. | To appreciate how Shakespeare hints at Macbeth's fatal flaw and why this was relevant to an audience after the Gunpowder plot. To explain Shakespeare's intent in creating Banquo and Macbeth to be a foil to each other and what the significance of this is. To identify why the supernatural, great chain of being and original sin would have impacted the Jacobean audience. |
| 4 | That every response to an exam question will need a focused introduction. Every paragraph should start with a topic sentence that links to the question. As part of my response, I should ensure that I follow the 'What?, How?, Why?' approach. That a soliloquy is a speech delivered by a character to the audience. The soliloquy will provide valuable character insight regarding their thoughts and feelings. | Follow the success criteria given and self-assess my response against GCSE criteria. Explain the impact of Shakespeare's use of these methods to establish Macbeth and Lacy Macbeth as cunning individuals driven by ambition. |
| 5 | The act of King Duncan's regicide was not shown on stage due to how this would have been received by Jacobeans. The act of regicide would have upset the natural order and caused shock. It would have also have been considered poor taste to show the King's murder. How Lady Macbeth uses emasculation in order to manipulate Macbeth into committing a heinous crime. She exerts control over him through the language she uses and what she accuses him to be 'a coward' | Appreciate that Shakespeare was writing to please King James, thus showing the death of a King was not acceptable. Identify why Macbeth does as his wife says and is desperate to show his strength, courage as masculinity. Identify that the murder of the King Duncan is regicide (an act of treason) and that due to religious beliefs God's representative on earth has been killed, condemning the murder to hell – this is why Macbeth can 'no longer sleep' or say 'amen' |

Year 10 English Leadership Guide

| Week/ Topic | I will need to know | So that I can |
|----------------|---|--|
| 6 | 1. That the central themes are F.A.S.T: FEAR (VS BRAVERY), AMBITION (VS ACCEPTANCE), SUPERNATURAL (VS RELIGION)TRUTH (VS DECEIT) 2. That duplicity is when you have a deceitful side and could display a public and private character. Macbeth and Lady Macbeth both act in a duplicitous way in the way they plot and then murder Duncan. 3. How Macbeth is a shadow of the noble, valiant and loyal subject he was at the start. He is now a man driven by his desire for power and is losing control. | Identify the significance of these themes for a Jacobean audience and comment on their intent in delivering a message to society. Identify how Macbeth and Lady Macbeth's duplicity will lead to them becoming paranoid and how this is demonstrated in the play. Explain how Macbeth has been transformed by his desire for power (fatal flaw) which has led to him committing crimes. He is a shadow of the 'noble' and loyal soldier he once was. |
| 7 | That morality is the ability to understand the difference between right and wrong. Shakespeare presents Duncan as a respected and much-loved King as he held the crown legitimately. Macbeth usurped the crown and is presented as a tyrannical leader. To read the question and underline the key word. To position where the extract is from and identify points from elsewhere in the play to support. My response will require a focused introduction. Every paragraph should start with a topic sentence that links to the question. Within my response, I should follow the 'What?, How?, Why?' approach. That redemption is the act of being saved from sin, error, or evil and how Shakespeare sends a message to the Jacobean audience through Macbeth's downfall. | Explain how Shakespeare represented Duncan as honourable and respected leader yet due to his lack of morality, Macbeth is a tyrant. Independently recall the stages needed to be covered within an exam response where you need to: address the focus of the question, support points with textual evidence and analysis whilst showing an appreciation of context and writer's intent. Demonstrate that Shakespeare has made it evident, due to his choices, that there will be no redemption for Macbeth. |
| 8 | That PTSD stands for Post Traumatic Stress Disorder and how Macbeth exhibit signs of this – inability to sleep, paranoia, flashbacks and distress. That a tyrant is a leader who rules by fear and violence. That a semantic field is a collection of words that can be linked through theme. A writer uses a semantic field to emphasise connections for the audience/reader throughout a text. Within Macbeth there is a semantic field of blood/violence and the supernatural to link to the central themes. | To be able to identify and recognise how Macbeth and Lady Macbeth are shown to exhibit signs of suffering from PTSD and to reflect upon why Shakespeare has presented their actions to have these consequences. Recognise what a tyrannical rule includes and to be able to explain how this impacted those under Macbeth's rule. By learning about context of past and present leaders who have been a tyrant I can incorporate contextual knowledge. Identify the semantic fields that Shakespeare uses and comment on the impact. |
| 9 | That foreshadowing is a hint for the audience about a future event whereas dramatic irony is when the audience know more than the characters. In making an evaluation I will need to consider all evidence before adopting a position where I use evidence to justify my viewpoint. That guilt is when you have committed a specified offence. Both Macbeth and Lady Macbeth's guilty actions return to impact them. Shakespeare uses the downfall of Macbeth and Lady Macbeth's transformation to show the audience that actions have consequences. | Explain where foreshadowing and dramatic irony has been used and comment on the effect of this on the audience. Develop an independent response that reflects my stance in reply to a statement about a character's qualities. Consider why Shakespeare demonstrates how for both Lady Macbeth and Macbeth actions have consequences. |
| 10 | That Machiavellian means to be cunning and sly with a desire for power. That Macbeth is lured into a false confidence by the witches and how this is Shakespeare's way of demonstrating to a Jacobean audience what happened to those who became involved with the supernatural. | To evaluate how Machiavellian Macbeth was. To reflect on why Macbeth was crafted by Shakespeare to be a tragic hero and to comment on writer's intent. Make connections across the play thematically and identify reoccurring images. |
| 11 | Leader's Prep: To prepare for your upcoming assessment, you should self quiz on knowledge from weeks 1-10. Revising for assessments keeps you on the path to leadership. | Final Assessment: 45 mins - You will have one extract from the play and will have to answer one essay question. Focus on the extract and the play as a whole. |

Year 10F Maths Leadership Guide

Careers linked to these topics can include things like being an Architect. Being an Architect is a role in which geometry, algebra, and trigonometry are crucial. Architects apply these skills to plan their blueprints or initial sketch designs. They are problem solvers, with a high attention to detail and aspire to push boundaries with great pride in their work. They lead from the front when managing constructions teams and their margin for error is tiny.

| Week/ Topic | Topic Covered | I will be able to: | Sparx Code So that I can: |
|----------------|--|---|------------------------------|
| | Assessment | There will be a unit assessment at the end of every topic outlined below | |
| 1 | Ratio (Part 1) | Simplify two or three-part ratios Write two-part ratios in the form 1:n or n:1 Write ratios as fractions and as percentages Divide quantities into two or more parts in a given ratio | U687 U577 U176 |
| 2 | Ratio (Part 2) | Use ratios to find one quantity when the other is known Combine ratios Solve questions where the ratio changes Solve ratio questions where only a difference between two parts is given | U865 U921 U676 |
| 3 | Proportion | Use a ratio to convert between measures and currencies Scale ingredients for recipes up or down Solve 'tagging' problems which estimate population sizes Use a proportionality constant, 'k', to solve direct proportion problems algebraically | U610 U640 U407 |
| 4 | Surds | Memorise the first 15 square numbers Simplify surds by listing factors and selecting the highest square factor Add, subtract, multiply and divide surds Expand single and double brackets which include surds | U872 U499 U338 U633 |
| 5 | Pythagoras' Theorem | Memorise and use Pythagoras' theorem to find any side of a right-angled triangle Use Pythagoras theorem to solve questions in context Justify if a triangle is right-angled by using Pythagoras' theorem Calculate the length of a line segment AB given a pair of points (point A and B) | U385 |
| 6 | Trigonometry in right-angled triangles | Understand, use and recall the trigonometric ratios sine, cosine and tan, and apply them to find lengths and angles in 2D and 3D configurations Apply the trigonometric ratios to solve 2D problems in context Know the exact values of sin θ & cos θ for θ = 0°, 30°, 45°, 60° & 90°; and tan θ for θ = 0°, 30°, 45° & 60° | U605 U283 U545 U627 |

Year 10F Maths Leadership Guide

| Week/ Topic | Topic Covered | I will be able to: | Sparx Code |
|----------------|--|--|--------------------------------------|
| 7 | Solving Simultaneous Equations | Find the exact solutions of two linear simultaneous equations in two unknowns using elimination Find the exact solutions of two linear simultaneous equations in two unknowns using elimination and requiring rearrangement Set up and solve simultaneous equations modelling a real life situation and know how to interpret the solution in the context of the problem | U760 U137 |
| 8 | Standard Form | Convert large and small numbers between ordinary and standard form Add, subtract, multiply and divide numbers in standard form Order numbers in standard form Use a calculator to perform calculations using standard form | U330 U161 U534 U264 U290 |
| 9 | Estimation | Estimate calculations by rounding to 1 significant figure Understand what leads to over or under estimates for the real answer Estimate calculations when a square or cubed root is involved in an estimation | U731 U965 U225 |
| 10 | Accuracy & Bounds | Use inequality notation to specify an error interval due to truncation or rounding Calculate the upper and lower bounds of numbers given to varying degrees of accuracy Calculate the upper and lower bounds of an expression or calculation involving the four operations and real-life situations Round calculations to a suitable degree of accuracy by considering what the upper and lower bound both round to | U657 U587 U108 U301 |
| 11 | Leader's Prep: To prepare for your upcoming assessment, you should complete all the Sparx quizzes as outlined above for each topic | Final Assessment: DCP1 DCP assessment will cover the topics taught in cycle 1 DCP assessment will be 50 minutes and be out of 50 marks | |

Year 10H Maths Leadership Guide

Careers linked to these topics can include things like being an Architect. Being an Architect is a role in which geometry, algebra, and trigonometry are crucial. Architects apply these skills to plan their blueprints or initial sketch designs. They are problem solvers, with a high attention to detail and aspire to push boundaries with great pride in their work. They lead from the front when managing constructions teams and their margin for error is tiny.

| Week/ Topic | Topic Covered | I will be able to: | Sparx Code So that I can: |
|----------------|--|---|--|
| | Assessment | There will be a unit assessment at the end of every topic outlined below | |
| 1 | Ratio | Simplify two or three-part ratios including writing two-part ratios in the form 1:n or n:1 Divide quantities into two or more parts in a given ratio and use ratios to find one quantity when the other is known. Combine ratios and solve questions where the ratio changes Apply ratio to real-life scenarios such as 'tagging', recipes and currency conversion | U921 U687 U577 U865 U610 |
| 2 | Proportion | Use a proportionality constant to solve direct and inverse proportion problems algebraically including for the square or the cube of one quantity Identify direct proportion from a table of values, by comparing ratios of values, for direct, x² and x³ relationships Recognise and interpret graphs showing direct and inverse proportion | U238 U640 U407 U138 |
| 3 | Surds | Simplify surds by listing factors and selecting the highest square factor Add, subtract, multiply and divide surds Expand single and double brackets which include surds Rationalise the denominator of fractions with both single surds and multiple-terms on the denominators | U872 U281 U499 U707 U338 U633 |
| 4 | Pythagoras' Theorem | Memorise and use Pythagoras' theorem to find any side of a right-angled triangle Use Pythagoras theorem to solve questions in context Justify if a triangle is right-angled by using Pythagoras' theorem Calculate the length of a line segment AB given a pair of points (point A and B) | U385 |
| 5 | Trigonometry in right-angled triangles | Understand, use and recall the trigonometric ratios sine, cosine and tan, and apply them to find lengths and angles in 2D and 3D configurations Know the exact values of sin θ & cos θ for θ = 0°, 30°, 45°, 60° & 90°; and tan θ for θ = 0°, 30°, 45° & 60° Solve problems using SOH CAH TOA and bearings | U605 U283 U545 U627 U164 |
| 6 | Further Trigonometry: Non- right-angled triangles | Memorise and use 'Area = 1/2 ab sin C' to calculate the sides or angles of any triangle Memorise and use the sine and cosine rules to find missing angles and sides in any triangle Find areas of triangles withing sectors Use Pythagoras' theorem and trig relationships to solve problems in 3D configurations | U170 U952 U591 U592 |

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| Week/ Topic | Topic Covered | I will be able to: | Sparx Code |
|----------------|--|--|--|
| 7 | Standard Form | Convert large and small numbers between ordinary and standard form Add, subtract, multiply and divide numbers in standard form Order numbers in standard form Use a calculator to perform calculations using standard form | U330 U161 U534 U264 U290 |
| 8 | Solving Simultaneous Equations | Find the exact solutions of two linear simultaneous equations in two unknowns using elimination Set up and solve simultaneous equations modelling a real life situation and know how to interpret the solution in the context of the problem Solve sets of linear and quadratic simultaneous equations graphically Find the exact solutions of linear and quadratic simultaneous equations | U760 U757 U547 U836 U875 U137 |
| 9 | Estimation | Estimate calculations by rounding to 1 significant figure Understand what leads to over or under estimates for the real answer Estimate calculations when a square or cubed root is involved in an estimation | U731 U965 U225 |
| 10 | Accuracy & Bounds | Use inequality notation to specify an error interval due to truncation or rounding Calculate the upper and lower bounds of numbers given to varying degrees of accuracy Calculate the upper and lower bounds of an expression or calculation involving the four operations and real-life situations Round calculations to a suitable degree of accuracy by considering what the upper and lower bound both round to | U657 U587 U108 U301 |
| 11 | Leader's Prep: To prepare for your upcoming assessment, you should complete all the Sparx quizzes as outlined above for each topic | Final Assessment: DCP1 DCP assessment will cover the topics taught in cycle 1 DCP assessment will be 50 minutes and be out of 50 marks | |

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