

English Language & English Literature

Maths

Combined Science Trilogy

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Topics In English Literature

Paper 1 – Shakespeare and post – 1914

Literature

- Section A - Macbeth (5 acts)
- Section B - An Inspector Calls (3 Acts)

Paper 2: 19th- century Novel and Poetry since 1789

- Section A : A Christmas Carol (5 Staves)
- Section B 1: Conflict Poetry anthology (15 poems)
- Section B1- Unseen poetry

Topics in English Language

- Language paper 1:
Section A - Exploring creative writing
Section B – writing
- Language paper 2:
Section A –Writers' viewpoints and perspective
Section B -writing

Strands in Maths

1. Number

- Calculating with decimals
- Negative numbers
- Rounding & calculators
- Using approximations, Types of numbers
- Fractions and Percentages
- Surds
- changing recurring decimals to fractions compound measures and upper and lower bounds

2. Algebra

- Solving equations
- Inequalities, Formulae
- Finding the nth term of a sequence
- Graphs
- Expanding and factorizing quadratic equations
- Quadratics,
- Simultaneous equations
- Graphs
- Rearranging formulae

3. Ratio, proportion and rates of change

- Converting units
- ratio
- Compound measures
- Direct and inverse proportion
- Compound interest and financial mathematics

4. Geometry and measures:

- Angles in shapes
- Transformations,
- Areas & volumes
- Pythagoras and trigonometry
- Constructions,
- Transformations
- Angles in polygons
- Circle theorems
- Volume
- Vectors.

5. Probability :

- Relative frequency and listing outcomes
- Probability trees and Venn diagrams to solve probability problems

6. Statistics:

- Stem and leaf
- Scatter graphs
- Types of charts,
- Collecting data& representing data
- Collecting and representing data
- Histograms
- cumulative frequency and box plots
- Stratified sampling

Topics In Biology:

- Cell structure
- Cell division
- Transport in cells
- Animal tissues, organs
- and organ systems
- Plant tissues, organs
- and organ systems
- Infection and response
- Photosynthesis
- Respiration

Topics In Chemistry

- Atomic structure and the periodic table
- Bonding, structure and the properties of matter
- Quantitative Chemistry
- Chemical changes
- Energy changes
- Formula and equations

Topics In Physics:

- Energy
- Electricity
- Particle model of nature
- Atomic structure

Topics In Biology 2:

- Homeostasis and the human nervous system
- Hormonal coordination in humans
- Reproduction
- Variation
- The development of understanding of genetics and evolution
- Classification of living organisms
- Adaptations, interdependence and competition
- Organisation of an ecosystem
- Biodiversity and the effect of human interaction on ecosystem

Topics In Chemistry 2:

- The rate and extent of chemical change
- Organic chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using the Earth's resources

Topics In Physics 2:

- Forces
- Observing and recording motion
- Waves
- Magnetism and electromagnetism

R.E

Geography

History

ICT

Urdu

French

Topics - R.E

Christianity Topics:

- Christian Beliefs
- Living the Christian Life
- Marriage and family
- Matters of Life and Death

Islam Topics:

- Muslim Beliefs
- Living the Muslim Life
- Crime and Punishment
- Peace and Conflict

Topics - Geography:

- Volcanoes (How and case studies)
- Earthquakes (How and case studies)
- Hurricanes (How and case studies)
- Global air circulation
- Climate change
- Food webs
- Food chains
- Tropical Rainforests
- Hot deserts
- Plant adoptions
- Fluvial Processes
- Depositional Processes
- Transportation Processes
- Erosional landforms (coast and river)
- Depositional landforms (coast and river)
- Hard engineering (coast and river)
- Soft engineering (coast and river)
- Urban world
- Rio Case study
- Bristol Case study
- Salford Quays
- Sustainability
- Development gap
- Demographic Transition Model
- Lagos Case study
- Food in the UK / Water in the UK / Energy in the UK
- Global food supply / Insecurity / Indus Basin Case study
- Human Fieldwork (why, how, when, improvements)
- Physical Fieldwork (why, how, when, improvements)

Topics - History:

- **Paper 1 –**
- World War 1 Germany 1894-1933
- **Paper 2 –**
- Health and Medicine, The Norman Conquest + Durham Cathedral

Topics - ICT

Audience and Accessibility

- Disabilities
- Collaborative working
- Informal and formal writing
- Informal working

The Purpose and Advantage of IT Applications

- Word Processing
- Spreadsheets
- Multimedia Presentations
- Audio Editing
- Video Editing
- Bitmap Graphics Editors
- Vector Graphics Editors
- Other Document Formats
- Web Browsers
- email Software
- File Names and Types

Cloud Working

Security and safety when working online

- Passwords
- Backing up data

Strengths and weaknesses of the presentation of information

- QR codes
- Presentations
- Updating information
- Uploading information

Handling and interpreting information in IT contexts

- Free and Open Source Software
- Commercial and proprietary information

Copyright licensing and patent issues

- Open file formats
- Proprietary licenses
- The copyright act

The Flow of Information

- The steps of information flow
- Macros to improve productivity

Costs of IT Solutions

- Free software
- Purchased software

Project Management and Target Setting

- SMART targets

Choosing the Right Tool for the Job

- Considerations when choosing software

Purposes and outcomes in ICT projects

- Describe how you carry out tasks

Acceptable Use Policies

- Security
- Appropriateness
- Time-wasting (productivity)
- Legal
- Good-practice
- Data Protection

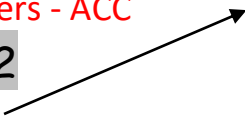
Topics - Urdu:

- **Context 1:** Lifestyle (Health, Relationships and Choices)
- **Context 2:** Leisure (Free time and the media)
- **Context 3:** Home and Environment (Home and Local Area, Environment)
- **Context 4:** Work and Education (School and Future Plans, Current and Future jobs)

Topics – French

- Family, friends and relationships
- Technology in Everyday Life
- Free time activities
- Customs and festivals
- Home, town, neighbourhood and region
- Social Issues
- Global Issues
- My studies, Life at School
- Education Post-16, Jobs, career choices and ambitions

	<u>Monday</u> (2 -2 1/2 hours evening)	<u>Tuesday</u> (2 -2 1/2 hours evening)	<u>Wednesday</u> (2 -2 1/2 hours evening)	<u>Thursday</u> (2 -2 1/2 hours evening)	<u>Friday</u> (2 -2 1/2 hours evening)	<u>Saturday</u> (3-4 hours)	<u>Sunday</u> (3-4 hours)
Week 1 16/11 Focus: AIC	5-6.15 7-8.15 revision cards AIC – themes (KEY QUOTES). Use revision booklets Read first half Act 1 An Inspector Calls	5-6.15 7-8.15 – Revision cards – AIC – themes & characters (KEY QUOTES). Use revision booklets Read second half Act 1 - AIC	5-6.15 Test yourself on key quotes on characters without looking at notes 7-8.15 – Revision cards –AIC – Act 1 & 2 summary/ dramatic devices/ language – Use GCSE Bitesize Read first half Act 2 - AIC	5-6.15 Test yourself on key quotes - language without looking at notes 7-8.15 Revision cards – AIC – Act 3 Summary/ dramatic devices/ language (KEY QUOTES). Use Bitesize Read second half Act 2 - AIC	5-6.15 Test yourself on key quotes without looking at notes 7-8.15 Revision cards – rehearse memorising quotes/ make memory posters AIC Read first half - Act 3 AIC	10-11 Test yourself on key quotes without looking at notes – mind-map 12-2 Improve mock answer – rewriting answer using teacher feedback 3-4 Read second half –Act 3 - AICC	10-11 12-2 3-4 Attempt sample Exam question/ create a Plan/ key quotes
Week 2 23/11 Focus ACC	5-6.15 7-8.15 Read Stave 1 - A Christmas Carol – jotting down key quotes –opening (structure)	5-6.15 Revision cards- key characters/ quotes 7-8.15 Read Stave 2 - A Christmas Carol – jotting down key quotes opening chapters (structure)	5-6.15 Revision cards- key themes/ quotes/ opening 7-8.15 Read Stave 3 - A Christmas Carol	5-6.15 Revision cards- Structure & language/ quotes 7-8.15 Read Stave 4 - A Christmas Carol	5-6.15 Revision cards- Structure & language/ quotes 7-8.15 Read Stave 5 - A Christmas Carol	10-11 Revision cards- context AIC 12-2 3-4 Revision cards – rehearse memorising quotes/ make memory posters - ACC	10-11 12-2 Audit mock exam question on AIC – rewrite – using teacher feedback 3-4
Week 3 Focus 30/11	5-6.15 7-8.15	5-6.15 7-8.15	5-6.15 7-8.15	5-6.15 7-8.15	5-6.15 7-8.15	10-11 12-2 3-4	10-11 12-2 3-4
Week 4 07/12 Focus	5-6.15 7-8.15	5-6.15 7-8.15	5-6.15 7-8.15	5-6.15 7-8.15	5-6.15 7-8.15	10-11 12-2 3-4	10-11 12-2 3-4

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Week 5 14/12 <u>Focus</u> Macbeth	<u>5-6.15</u> Revision cards- key characters/ quotes – ACT 1 & 2 – Use GCSE Bitesize <u>7-8.15</u> Read first half Act 1 Macbeth – make notes using revision / guide	<u>5-6.15</u> Revision cards- key characters, themes/ quotes –ACT 1 & 2– use GCSE Bitesize <u>7-8.15</u> Read second half Act 1 Macbeth – make notes using revision booklet/ guide	<u>5-6.15</u> Revision cards- key characters, themes/ quotes –ACT 3 & 4– use GCSE Bitesize <u>7-8.15</u> Read first half Act 2 -Macbeth – make notes using revision booklet/ guide on key events	<u>5-6.15</u> <u>Revision cards- key characters, themes/ quotes –ACT 3 & 4– use GCSE Bitesize</u> <u>7-8.15</u> Read second half Act 2 - Macbeth – make notes using revision booklet/ guide – key dramatic events	<u>5-6.15</u> <u>Attempt practice paper</u> –use tips from blue pen work – mock paper <u>7-8.15</u> Read first half Act 3 - Macbeth – make notes using revision booklet/ guide	10-11 Revision cards – <u>rehearse memorising</u> quotes/ make memory posters - ACC 12-2 3-4 Read second half Act 3 -Macbeth – make notes using revision booklet/ guide –key dramatic events 	10-11 Read first half Act 4 -Macbeth – make notes using revision booklet/ guide 12-2 Read second half Act 4 -Macbeth – make notes using revision booklet/ guide 3-4 - <u>answer Question: How does Shakespeare present the theme of power in the play?</u>
Week 6 21/12 Holidays <u>Focus</u> Language	<u>5-6.15</u> Practise section B paper 2 <u>7-8.15</u> Read first half Act 5 - Macbeth – make notes using revision booklet/ guide	<u>5-6.15</u> practise section B paper 2 <u>7-8.15</u> Read second half Act 5 - Macbeth – make notes using revision booklet/ guide	<u>5-6.15</u> practise section B paper 2 <u>structure</u> <u>7-8.15</u> re-write <u>story paper 1 section B</u>	<u>5-6.15</u> Section B paper 1 story editing on laptop <u>7-8.15</u> <u>Mind map – REHEARSE WRITING OUT SECTION B PAPER 2 ARTICLE BY HEART</u>	<u>5-6.15</u> Section B paper 1 story editing on laptop <u>7-8.15</u> Test yourself on all quotes so far – use phone to record	10-11 Revisit act 5 Macbeth 12-2 Test yourself on all quotes so far – use phone to record 3-4 ensure all posters and brainstorms for all poems complete –Use computer if you want	10-11 Work on section B story paper 1 – 12-2 3-4
Week 7 28/12 <u>Focus</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>6.15</u> <u>7-8.15</u>	<u>6.15</u> <u>7-8.15</u>	<u>6.15</u> <u>7-8.15</u>	<u>6.15</u> <u>7-8.15</u>	<u>6.15</u> <u>7-8.15</u>
Week 8 04/1/21 <u>Focus</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	10-11 12-2	10-11 12-2

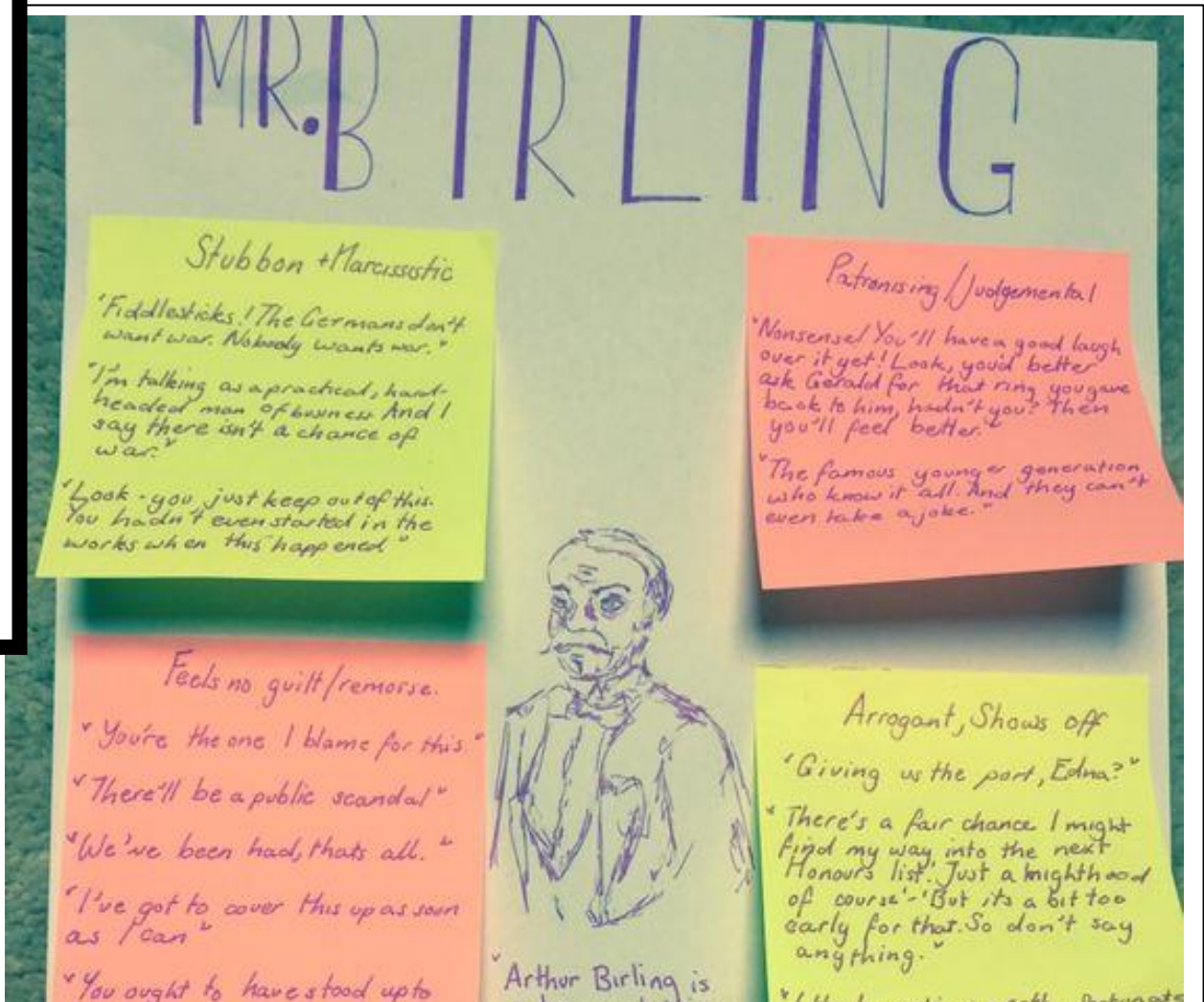
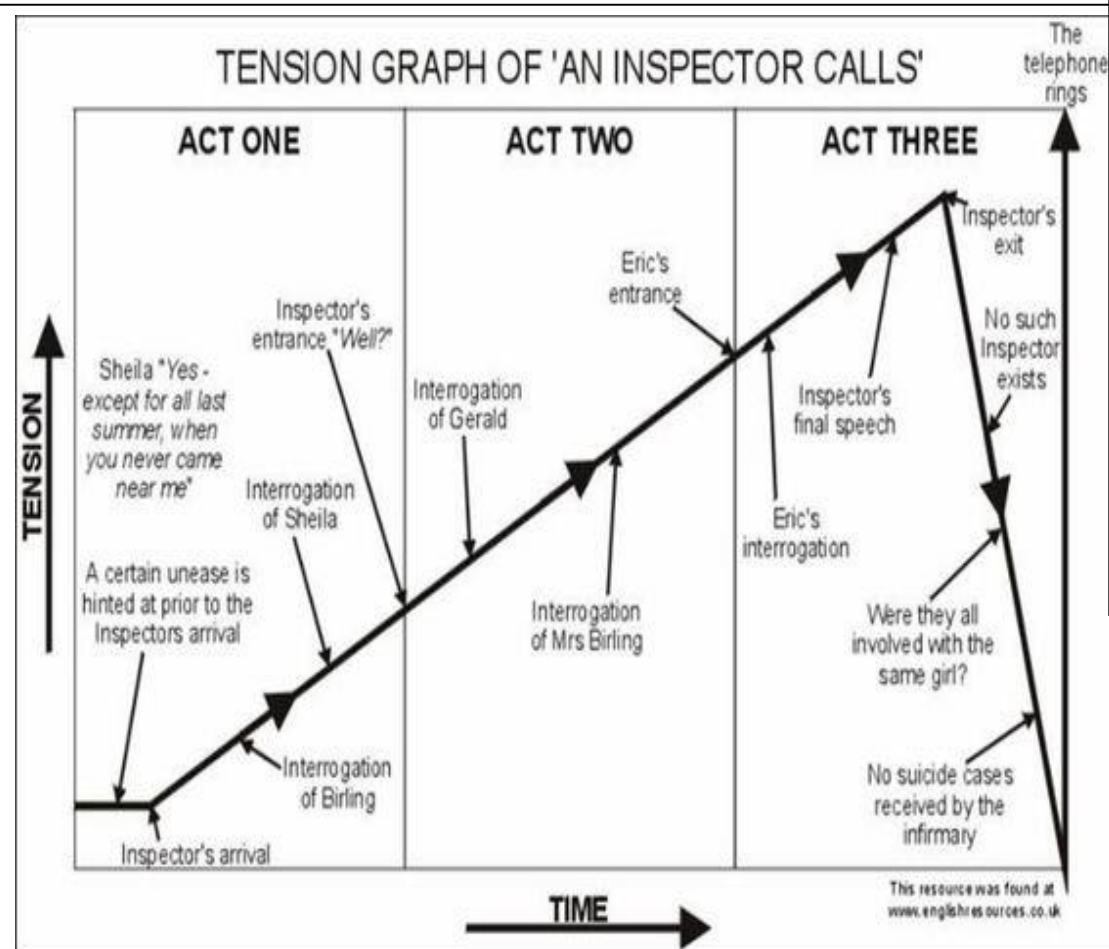
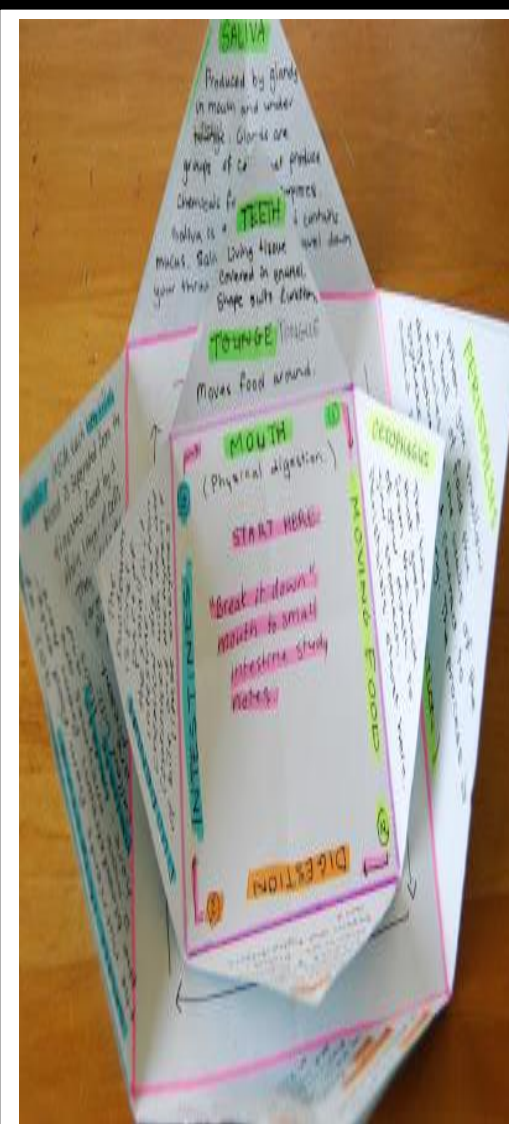
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<u>Week 9</u> 11/1 Half Term	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	10-11 12-2 3-4	10-11 12-2 3-4
<u>Week 10</u> 18/1	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	10-11 12-2 3-4	10-11 12-2 3-4
<u>Week 11</u> 25/1	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	<u>5-6.15</u> <u>7-8.15</u>	10-11 12-2 3-4	10-11 12-2 3-4
Week 12 1/2	<u>5-6.15</u>	<u>5-6.15</u>	<u>5-6.15</u>	<u>5-6.15</u>	<u>5-6.15</u>	10-11 12-2	10-11 12-2

	<u>7-8.15</u>	<u>7-8.15</u>	<u>7-8.15</u>	<u>7-8.15</u>	<u>7-8.15</u>	3-4	3-4
	<u>Monday</u> (2 -2 1/2 hours evening)	<u>Tuesday</u> (2 -2 1/2 hours evening)	<u>Wednesday</u> (2 -2 1/2 hours evening)	<u>Thursday</u> (2 -2 1/2 hours evening)	<u>Friday</u> (2 -2 1/2 hours evening)	<u>Saturday</u> (3-4 hours)	<u>Saturday</u> (3-4 hours)
Week 13 8/2	<u>5-6.15</u>	<u>5-6.15</u>	<u>5-6.15</u>	<u>5-6.15</u>	<u>5-6.15</u>	10-11	10-11
	<u>7-8.15</u>	<u>7-8.15</u>	<u>7-8.15</u>	<u>7-8.15</u>	<u>7-8.15</u>	12-2	12-2
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Revision Tips

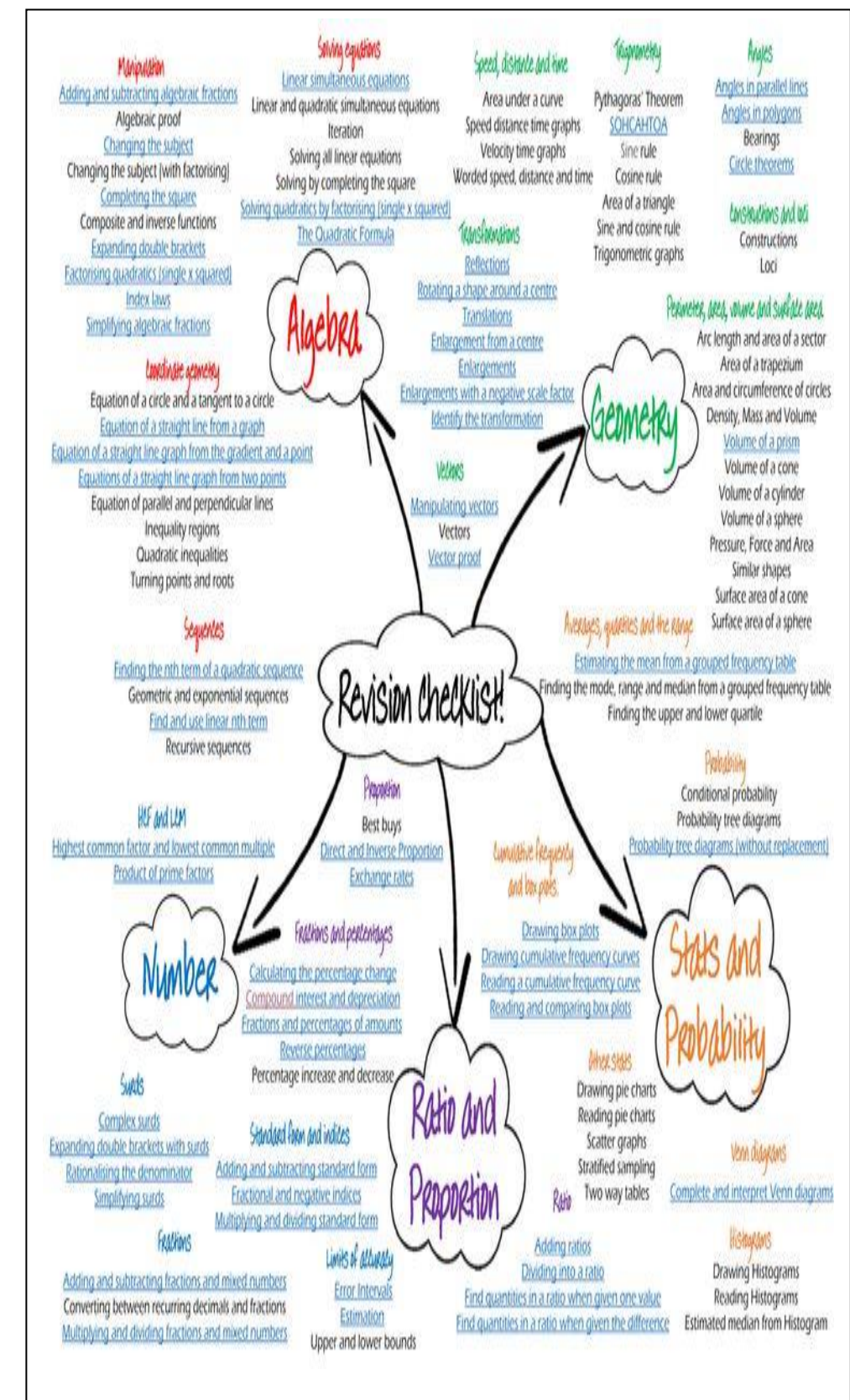
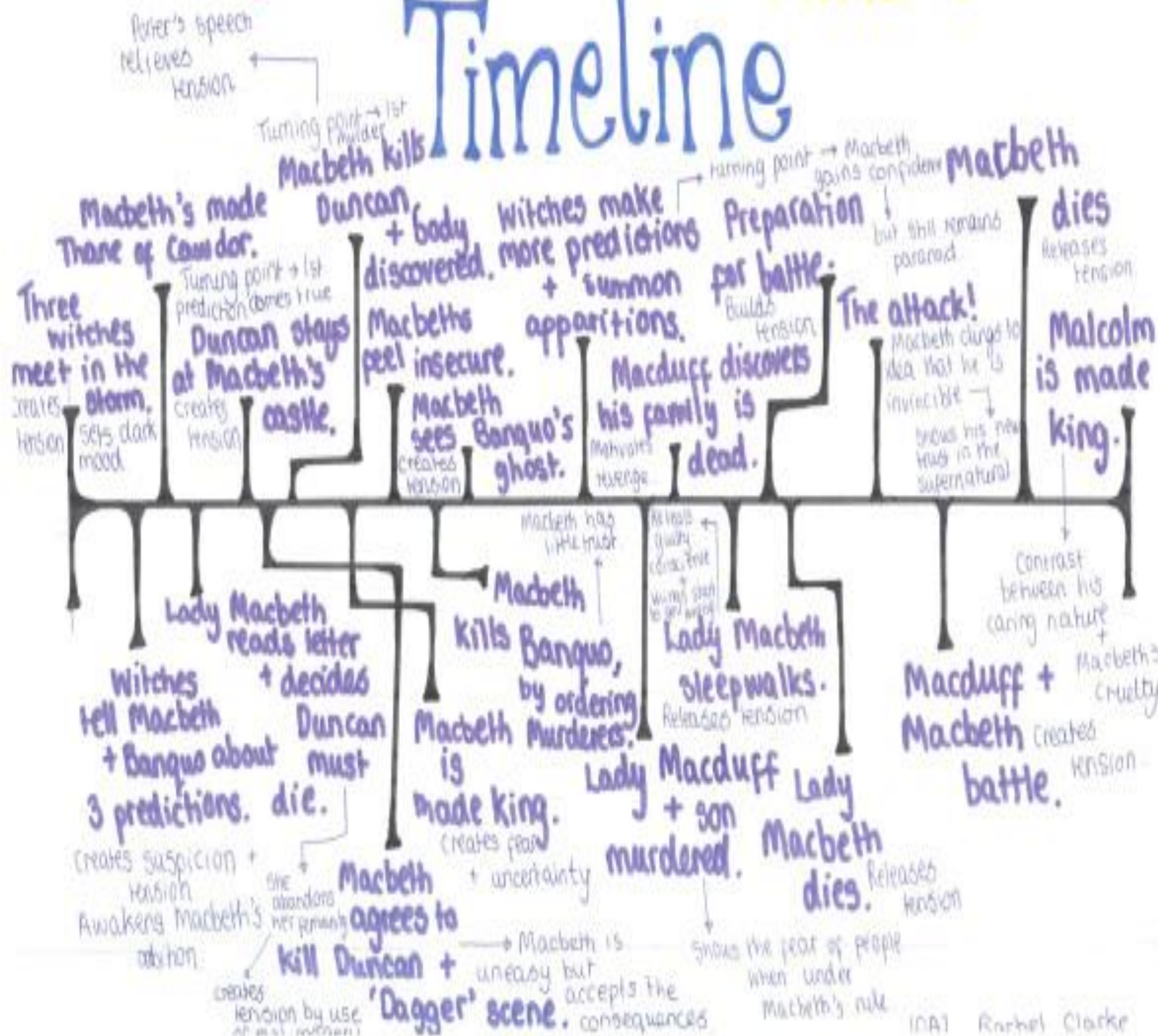
ADDING and as well as moreover furthermore in addition too on top of that another point is	SEQUENCING first, firstly, first of all second, secondly.. third next meanwhile now subsequently	ILLUSTRATING for example such as for instance in the case of as shown by illustrated by take... one example is
COMPARING similarly likewise as with like equally in the same way	QUALIFYING but however although unless except apart from as long as if	CONTRASTING whereas alternatively unlike on the other hand conversely having said that nevertheless however



Macbeth

KEY DRAMATIC MOMENTS

Timeline



PHOTOSYNTHESIS

A hand-drawn diagram of a chloroplast, an oval-shaped organelle with a double membrane. Inside, there are stacks of green discs called thylakoids, connected by thin lines called lamellae. Some thylakoids are labeled as grana. Small purple oval structures are labeled as starch granules. Small black dots are labeled as ribosomes. The fluid-filled space inside is labeled as stroma. Labels with arrows point to various parts: 'double membrane Evidence for endosymbiosis' points to the outer boundary; 'Stroma has appropriate enzymes and suitable pH' points to the fluid; 'thylakoid has electron transport chain and ATP synthase for photophosphorylation' points to a stack; 'Circular DNA' points to a small circular structure; 'Starch Granule' points to a purple oval; 'lamella connects and separates thylakoid stacks maximizing photosynthetic efficiency' points to the connecting lines; 'granum stacks that increase SA:V ratio. Small volumes quickly accumulate ions' points to a single stack; and 'ribosome' points to a small black dot.

- double membrane Evidence for endosymbiosis
- Stroma has appropriate enzymes and suitable pH
- thylakoid has electron transport chain and ATP synthase for photophosphorylation
- Circular DNA
- Starch Granule
- lamella connects and separates thylakoid stacks maximizing photosynthetic efficiency
- granum stacks that increase SA:V ratio. Small volumes quickly accumulate ions
- ribosome

The diagram illustrates the process of photosynthesis, divided into two main stages:

- Light Dependent Reaction:**
 - Inputs: light energy, water, and chlorophyll.
 - Outputs: oxygen (labeled "diffuses out of chloroplast") and chemical energy (carried by e^-).
 - Chemical energy is used to produce NADPH and ATP.
- Light Independent Reaction:**
 - Inputs: carbon dioxide (labeled "diffuses into chloroplast") and the products from the light-dependent reaction (NADPH and ATP).
 - Process: Carbon dioxide is fixed into organic compounds.

LIGHT DEPENDENT:

- in the absence of light, this stage cannot proceed, hence
 - this stage traps light energy and converts it to chemical form of ATP and NADPH.
 - chlorophyll captures light energy and this is used to split water into hydrogen ions, oxygen atoms and electrons.
 - the oxygen atoms combine to form O_2 , which diffuses out of the chloroplast.
 - the electrons are accepted by the coenzyme NADP $^{+}$ to form NADPH.
 - the chemical energy originally inputted into the splitting of water is utilised to form ATP.
- inputs: water, NADP $^{+}$, ATP + P $_i$
- outputs: oxygen, NADPH, ATP
- site: thylakoid membrane of chloroplast.

LIGHT INDEPENDENT:

- EXPORT OF A PR**

EXPORT OF A PR

- a glucose
- net form
- net loss of

LINK R

- CO_2 is removed
- 2C molecule
- loss of electron
 - inputs
 - output
 - site: m

KREBS C

- acetyl CoA enters
- are formed (per
- electrons are tak
- FAD \rightarrow FADH₂ (
- 1 ATP is formed p
- \rightarrow inputs: 2
- \rightarrow outputs: 4

ENZYMES

- Specificity**
 - 3d structure
 - affect function
 - R-groups a.a.s
 - interact
 - conc. of H^+ ions
 - pH
 - usually best around 7
 - SPECIFIC**
 - protease
- Stomach**
 - different acid
 - pepsin
- Temperature**
 - Temp effect
 - OPTIMUM TEMP (40/37C)
 - VARIES
 - measuring rate
 - graph: 5.4cm³ per minute
- pH**
 - usually best around 7
- Enzyme Structure**
 - 3d structure
 - affect function
 - R-groups a.a.s
 - interact
 - conc. of H^+ ions
 - pH
- Reaction Rate**
 - rate
 - change of successful collision
 - movement & speed
 - J
 - temp
 - H-bonds break
 - vibration
 - enzyme loses shape
 - ineffective
 - Saturated
 - rate
 - change of collision
 - slower
 - substrate
 - J
 - temp
 - broken bonds
 - ease
- Amylase**
 - Iodine
 - measure intensity
 - BLUE/BLACK
 - samples
 - colourless
 - breaks down starch
 - H_2O_2
 - measuring rate
 - max rate
 - 40/37C
 - VARIES
- Why?**
 - STARTS SNIFFLY
 - reaction continues...
 - slows & finally stops.
 - reaction continues...
 - shape
 - on each substrate
 - each enzyme
 - SPECIFIC**
 - held by temporary bonds
 - squeezed
 - SUBSTRATE**
 - HELD BY TEMPORARY BONDS
- Other**
 - count
 - measure gas collected
 - read off graph
 - measured
 - at start
 - v. fast
 - depends on n. of enzymes
 - less & less substrate
 - less & less...
 - reaction continues...
 - slows & finally stops.
 - reaction continues...
 - shape
 - on each substrate
 - each enzyme
 - SPECIFIC**
 - held by temporary bonds
 - squeezed
 - SUBSTRATE**
 - HELD BY TEMPORARY BONDS

<u>Command Word</u>	<u>Definition</u>
Analyse	Separate information into components and identify their characteristics.
Apply	Put into effect in a recognised way.
Calculate	Work out the value of something.
Compare	Identify similarities and or differences.
Complete	Finish a task by adding to given information.
Consider	Review and respond to given information.
Define	Specify the meaning.
Describe	Set out characteristics.
Discuss	Present key points about different ideas or strengths and weaknesses of an idea.
Evaluate	Judge from available evidence.
Explain	Set out purposes or reasons.
Identify	Name or otherwise characterise.
Illustrate	Present clarifying examples.
Interpret	Translate information into recognisable form.
Justify	Support a case with evidence.
Outline	Set out main characteristics.
Suggest	Present a possible case/solution.
State	Express clearly and briefly.