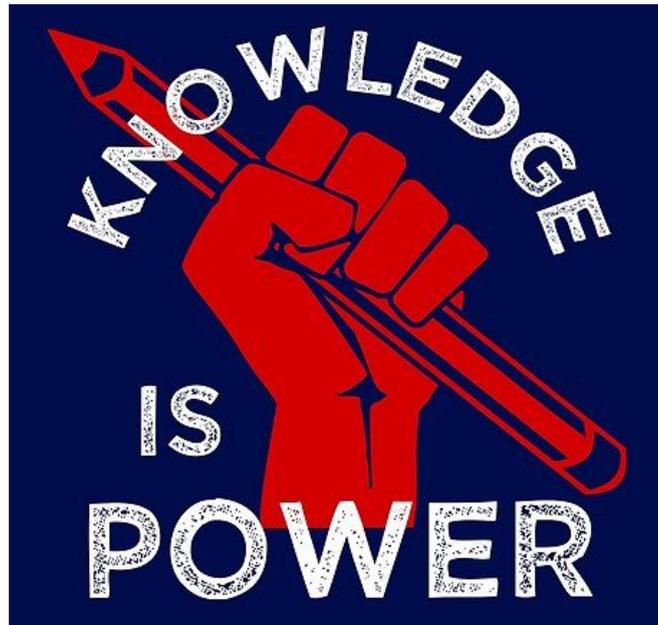




Atlantic Academy Portland
an Aspirations Academy

Year 11 Unit 1

Knowledge Organisers



| | |
|--------------|--|
| Name | |
| Tutor | |

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Self-Quizzing Homework Timetable:

Each evening you will self-quiz using your Subject Knowledge Organiser for 30 minutes. Below you will find information about which Subject Knowledge Organiser you need to self-quiz from on which evening. Each subject has divided their Knowledge Organiser(s) into 9 'segments': these are the 9 pieces of Knowledge Organiser Homework you will complete for the relevant subjects. You have been set a different segment of the Subject Knowledge Organiser to complete each week, clearly labelled on each Knowledge Organiser. Your teacher will test you on this segment of information each week after your Subject Knowledge Organiser Homework, to assess how well you have learnt the information. The 'mark' box allows you to record your score out of 10 from your end of week quiz.

| | Monday | Tuesday | Wednesday | Thursday | | Friday | |
|----------------|------------------------------|---------|-----------|--|--------|-----------|---------------------|
| | | | | <i>Your two options from the four below:</i> | | | |
| | Vocational as directed | English | Science | History | French | Geography | Computer Science |
| Week 1 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 2 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 3 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 4 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 5 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 6 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 7 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 8 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |
| Week 9 Mark | | /10 | /10 | /10 | /10 | /10 | /10 |

Self-Quizzing Expectations and Instructions

It is expected that you complete **one page** of self-quizzing, as a minimum. This should take around **30 minutes**. You should not leave blank lines on the page, including in between pieces of information (if you are self-quizzing diagrams, you can use more than one line to copy the diagram into your practice book). The information you self-quiz should be numbered in your practice book with the same numbers used on the Subject Knowledge Organiser.

Tutors will check your Subject Knowledge Organiser homework the next morning during AM Tutor Time. They will be looking for a **full page of self-quizzing** on the correct numbers of the Subject Knowledge Organiser, as well as for **purple pen ticks/corrections** and **good presentation** (including your **H/W, Title and Date underlined with a ruler**). Your writing needs to be neat and legible. If your tutor feels that any of these elements are not up to standard, your tutor will enter you for a detention that same day.

These are the steps you should follow to complete effective self-quizzing (look, repeatedly say aloud, cover, write, check):

1. Identify the Subject Knowledge Organiser segment for the week.
2. Open up your practice book and on the top line, write 'H/W' in the margin, the Title (the subject you are completing) on the other side of the margin line and the Date on the right hand side (see the model on the next page). Underline all three with a ruler.
3. Place your Subject Knowledge Organiser segment in front of you. Start with the first numbered piece of information within the weekly segment. Read and memorise the piece of information - we recommend saying it aloud. Repeat this process several times, until you are confident enough to use your practice book to write the knowledge point down.
4. Close your Subject Knowledge Organiser or cover up the piece of information, and try to recall the knowledge. On the line directly beneath your H/W, Title and Date, write the correct number from the Subject Knowledge Organiser and the piece of information from memory.
5. Check it and correct any mistakes. Open up your Subject Knowledge Organiser and look at the piece of information – using a purple pen tick the piece of information in your practice book if you have recalled it correctly (word for word). If you have incorrectly recalled or missed any part of the information, use your purple pen to cross the knowledge point.
6. If you recalled the piece of information incorrectly, go back to step 3 and **in purple pen**, repeat the process again for the same piece of information (remember to cover up previous attempts in your practice book as well as the piece of information in your Subject Knowledge Organiser). When you have recalled the information correctly (word for word), tick the attempt and move on to the next piece of information within the weekly segment. You may find that you need to complete a few purple pen attempts before you recall the knowledge point word for word.
7. Repeat the steps above until you have recalled and written down all pieces of information within the weekly segment. If this has not filled one full page of your

practice book, go back to the first piece of information within the weekly segment and repeat the process again, until you have filled an entire page.

Student Self-Quizzing Model

H/W English

17/5/18

- 21) **Stagecraft** - The use of setting/props to convey ideas. The front door bangs everytime a character enters or leaves, this makes the audience wonder who it is. Lighting is used to show emotion, 'pink' is used to show the rose tinted view on life the Birlings have, but turns 'brighter...harder' when the truth comes out. ✓
- 22) **Religious imagery** - The Inspector suggests we have a 'sacred' duty of care towards and should show images of 'fire and blood and anguish' linking to the end of the world in the book of revelation where people were punished for their sins. ✓
- 23) **Social responsibility** - Priestley uses the play to promote social responsibility - the idea that we should try and help those less privileged. ✓
- 24) **Stage directions** - Guide to the actor/actress on how to present their character at that point in the play. Stage directions can also reveal extra information to the audience about the character. ✓
- 25) **Beginnings and endings** - Priestley freezes the action between Acts to make the audience wait and consider how a character will respond. They build up tension and suspense. ✓
- 26) **Omniscience** - The Inspector seems to be omniscient - he knows what will happen and how characters will react. ✓
- 27) **Symbolism** - Characters represent particular social groups (Mrs Birling represents the hypocrisy of the upper Edwardian class). ✓
- 28) **Colloquial language** - Characters use language to represent their social status. The younger generation use slang or 'squiffy' in contrast to their old fashioned parents. Mr Birling uses language related to business. ✓
- 28) **Colloquial language** - Characters use language to represent their social status. The younger generation use slang or 'squiffy' in contrast to their old fashioned parents. Mr Birling uses language related to business. ✓
- 29) **Graphic imagery** - The Inspector uses language to shock the Birlings and the audience. 'She burnt her insides out'. ✓
- 30) **Euphemism** - A way of not saying something unpleasant. Mr and Mrs Birling use this to not look as guilty. ✗
- 30) **Euphemism** - A way of avoiding saying something unpleasant. Used by Mr and Mrs Birling to make them look less guilty. ✓

Maths Homework Information

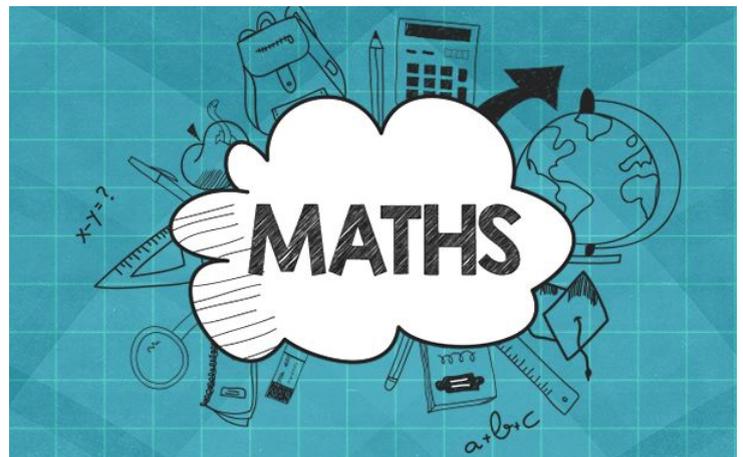
Your compulsory Key Skills Maths Task is set Friday to Friday. Your maths teacher will check this work in class.

Hegarty Maths Information: Every question on the Key Skills Maths Task will include a Hegarty task number. You will be able to watch the Hegarty video or complete the Hegarty task if you are stuck with your Key Skills Task, or if you need more practice around the topic you have been studying in class. Your teacher will no longer set you Hegarty tasks, instead you choose the task that is most useful to you. You will receive a positive point for completing Hegarty tasks, with prizes and reward trips for the students who have engaged most at the end of each term.

Times Table Rock Stars: Being good at your times tables will help you to complete all areas of your maths work. The more you practice, the quicker you will get. Everyone who has completed a TTRS task each week will receive a positive point, there will be a TT Rock Stars concert at the end of each term for the top competitors across the school.

My Login Information:

| | Times Tables Rock Stars | Hegarty Maths |
|----------|--------------------------------|----------------------|
| Username | | |
| Password | | |



| Week 2: Writing Frame for Unseen Poetry Question 27.1 | | | RAG |
|---|------------------------------------|---|--|
| 1. | OPENING | Arguably, the poet explores the theme of (theme) in order to | |
| 2. | FORM AND STRUCTURE | Firstly, the poet... <ul style="list-style-type: none"> ● identify form/use of rhyme scheme ● embed evidence ● analyse effect | |
| 3. | LANGUAGE | Furthermore, the poet uses... <ul style="list-style-type: none"> ● identify word class/device ● embed evidence ● analyse effect | |
| 4. | LANGUAGE | Moreover, (repeat analysis of language as above) | |
| 5. | ENDING | Overall,... | |
| Week 3: Key Quotations- Macbeth Act 1 | | | |
| | | Quotation | Techniques |
| | | Context | |
| 6. | The Witches (Act 1, Sc 1) | <i>Fair is foul, and foul is fair, Hover through the fog and filthy air</i> | Rhyme / Paradox Pathetic Fallacy Equivocation |
| 7. | Macbeth (Act 1, Sc 4) | <i>Stars hide your fires let not light see my <u>black</u> and <u>deep</u> desires</i> | Motif: Light and dark Plosive alliteration Rhyming couplets |
| 8. | Lady Macbeth (Act 1, Sc 5) | <i>It is too full o' the <u>milk</u> of human kindness</i> | Gender roles Metaphor |
| 9. | Lady Macbeth (Act 1, Sc 5) | <i><u>Come</u> to my woman's <u>breast</u> and take my <u>milk</u> for gall</i> | Imperative Symbolism |
| 10. | Macbeth (Act 1, Sc 7) | <i><u>False</u> face must hide what the <u>false</u> heart doth know</i> | Alliteration |
| | | | Introduces the idea of subverting the natural order. |
| | | | Shakespeare contrasts Macbeth and King Duncan - antithesis . Divine Right of Kings . |
| | | | Criticism of Macbeth from Lady Macbeth. Her ambition is revealed. Machiavellian . |
| | | | Rejection of femininity . Connects Lady Macbeth with the Supernatural/Witchcraft . |
| | | | Macbeth has been convinced by Lady Macbeth. Hamartia . |
| Week 4: Stylistic Devices | | | |
| 11. | Soliloquy | One character speaking to the audience, sharing genuine thoughts and feelings. | |
| 12. | Dramatic Irony | When the audience knows more than the characters, e.g. the audience knows that Duncan will die. | |
| 13. | Symbolism | The use of symbols to represent ideas or qualities, e.g. blood represents Macbeth's guilt. | |
| 14. | Hamartia | The fatal flaw in a protagonist/character which leads to their downfall. Macbeth's is ambition. | |
| 15. | Hubris | Intense pride – links to Macbeth and Lady Macbeth. | |
| 16. | Catharsis | A purifying or figurative cleansing of the emotions, especially pity and fear. | |
| 17. | Equivocation | The use of ambiguous language to hide the truth. The witches/apparitions use equivocation. | |
| 18. | Antithesis | People or things that oppose each other, e.g. Duncan/Malcolm vs Macbeth in Kingship. | |
| Week 5: Writing Frame for Unseen Poetry Question 27.2 | | | |
| 19. | FORM AND STRUCTURE: content | How does the form of the poem and/or structure of the poem convey the theme? | |
| 20. | FORM AND STRUCTURE paragraph frame | Firstly, <ul style="list-style-type: none"> ● identify form/use of rhyme scheme ● embed evidence ● analyse effect Similarly / On the other hand, | |

| | | | |
|-----|----------------------------------|---|--|
| 21. | LANGUAGE: content | How is language (word choice or poetic devices) used to convey the theme? | |
| 22. | LANGUAGE: paragraphs frame | <p><i>Furthermore,</i></p> <ul style="list-style-type: none"> ● identify form/use of rhyme scheme ● embed evidence ● analyse effect <p><i>Similarly / On the other hand,</i></p> | |

Week 6: Key Quotations- Macbeth Act 2

| | | Quotation | Techniques | Context |
|-----|-------------------------------|--|---|--|
| 23. | Macbeth (Act 2, Sc 2) | <i>Sleep no more: Macbeth does murder sleep</i> | Metaphor Foreshadowing | Macbeth hallucinates after killing King Duncan. |
| 24. | Macbeth (Act 2, Sc 2) | <i>Will all great <u>Neptune's oceans</u> wash this blood clean from my hands?</i> | Interrogative Metaphor/Allusion Foreshadowing | Macbeth worries that there is not enough water to clean his hands. Foreshadows Lady Macbeth's desperate attempts in Act 5, Sc 1. |
| 25. | Lady Macbeth (Act 2, Sc 2) | <i>A <u>little water</u> clears us of this deed</i> | Irony Symbolism | Lady Macbeth wishes to wash away Duncan's blood to feel innocent. |

Week 7: Key Quotations - P/C poetry

| | | Quotation | Techniques | Context |
|-----|----------|--|--|---|
| 26. | Remains | <i>I see every <u>round</u> as it <u>rips</u> through his life/ I see broad daylight on the other side</i> | First person Alliteration | A soldier is haunted by the memory of killing a looter and the graphically violent nature of the killing. The soldier suffers from PTSD. |
| 27. | Remains | <i>'<u>probably</u> armed, <u>possibly</u> not'</i> | Alliteration Fragmentation of phrases Plosives | |
| 28. | Remains | <i>'his <u>bloody</u> life in my <u>bloody</u> hands'</i> | Allusion to Macbeth Repetition Pronouns | |
| 29. | Kamikaze | <i>They treated him as though he no longer existed</i> | Irony | Cruel irony – he chose to live but now must live as though he is dead. |
| 30. | Kamikaze | <i>dark <u>shoals</u> of <u>fish</u> <u>flashing</u> silver</i> | Sibilance | Image links to a Samurai sword – conveys the conflict between his love for nature/life and his sense of duty |
| 31. | London | <i>Marks of <u>weakness</u>, marks of <u>woe</u></i> | Visual imagery Alliteration Repetition | Sensory language creates an immersive effect |
| 32. | London | <i><u>mind-forged</u> manacles</i> | Compound adjective Alliteration | They are trapped in poverty. |
| 33. | London | <i>each <u>chartered</u> street</i> | Adjective | Criticises the powerful - everything is owned by the rich |

Week 8: P/C poetry- writing frame

| | | | |
|-----|--------------------------------------|---|--|
| 34. | OPENING | <i>Arguably, both poets explore the theme of ... However, whereas ...</i> | |
| 35. | FORM AND STRUCTURE: Content | Compare how both poets have chosen the form of their poems and/or structured their poems to convey the theme | |
| 36. | FORM AND STRUCTURE: Writing frame | <p><i>Firstly,</i></p> <ul style="list-style-type: none"> ● identify form/use of rhyme scheme ● embed evidence ● analyse effect <p><i>Similarly / On the other hand,</i></p> | |

| | | | |
|-----|------------------------------------|--|--|
| 37. | LANGUAGE: Content | Compare how both poets have used language (word choice or poetic devices) to convey the theme | |
| 38. | LANGUAGE: Writing Frame | <p><i>Furthermore, (</i></p> <ul style="list-style-type: none"> ● identify form/use of rhyme scheme ● embed evidence ● analyse effect <p><i>Similarly / On the other hand</i></p> <p><i>Moreover, (repeat analysis of language above)</i></p> | |
| 39. | ENDING | <i>Overall,...</i> | |

Week 9: P/C poetry- Bayonet Charge and Poppies quotations

| | | Quotation | Techniques | Context |
|-----|----------------|--|---|--|
| 40. | Bayonet Charge | <i>The <u>patriotic</u> tear that brimmed in his eye / Sweating like molten iron</i> | Adjective Simile | His sense of duty (tear) has now turned into the hot sweat of fear and pain. |
| 41. | Bayonet Charge | <i>“cold <u>clockwork</u> of the stars and nations”</i> | Alliteration | The soldiers are part of a cold and uncaring machine of war. |
| 42. | Bayonet Charge | <i>“his foot hung like statuary in midstride.”:</i> | Caesura | He is frozen with fear/bewilderment. The caesura jolts him back to reality. |
| 43. | Bayonet Charge | <i>“a <u>yellow</u> hare that rolled like a flame/ And <u>crawled</u> in a threshing circle”:</i> | Adjective Simile Emotive language | The impact of war on nature – the hare is distressed, just like the soldiers |
| 44. | Poppies | <i>“cat hairs”, “play at being Eskimos”, “bedroom” “blockade”, bandaged”, “reinforcements”</i> | Semantic fields | Contrasting semantic fields of home/childhood with war/injury |
| 45. | Poppies | <i>I listened, hoping to hear your <u>playground</u> voice catching on the wind</i> | Adjective | Shows longing for dead son. |
| 46. | Poppies | <i>I was brave, as I walked with you, to the front door</i> | First person Pronouns | Shows a different perspective of bravery in conflict. |
| 47. | Poppies | <i>All my words flattened, rolled, turned into felt</i> | Aural (sound) imagery Metaphor | Shows pain and inability to speak |

Science – Year 11 – Unit 1 – Chemistry

| Week 1: | | RAG |
|---------|----------------------------------|--|
| 1. | Rate of reaction | The rate at which a reaction takes place, i.e for the reactants to be used up and the products to be formed. |
| 2. | Catalyst | Substance which speeds up a chemical reaction , without being used up. Provides an alternative pathway for a reaction which has a lower activation energy. |
| 3. | Surface area | The total area of a substance across its whole surface. A powder has a larger surface area, than lumps of a substance. |
| 4. | Concentration | The amount of particles of a substance in a certain volume. |
| 5. | Reversible reaction | A reaction in which the products can react to re-form the reactants. |
| 6. | Irreversible reaction | A reaction in which the products do not further react to make the reactants. |
| 7. | Hydrated | when a crystalline structure contains water molecules between its crystals. |
| 8. | Anhydrous | Describes a substance which does not contain water. |
| 9. | Closed System | A system where no matter (particles, molecules etc) can enter or leave. |
| 10. | Equilibrium | The point in a reversible reaction at which the forward and backward rates of reaction are the same. The amounts of substances present remain constant. |
| Week 2: | | |
| 11. | Le Chatelier's Principle | <i>When a change in conditions is introduced to a system at equilibrium, the position of equilibrium shifts so as to cancel out that change.</i> |
| 12. | Mixture | When some elements (or compounds) mix together and do not chemically react. |
| 13. | Hydrocarbon | A molecule made up of carbon and hydrogen atoms only. |
| 14. | Fractions | Hydrocarbons separated from crude oil , which similar boiling points. |
| 15. | Fractional Distillation | A way to separate liquids from a mixture by boiling off the substances at different temperatures, then condensing them back into a liquid. |
| 16. | Alkanes | A hydrocarbon which contains only single carbon-carbon bonds. Molecules from this group have a name ending in -ane. |
| 17. | Alkenes | A hydrocarbon which contains at least one double carbon-carbon bond in its structure. Molecules from this group have a name ending in -ene. |
| 18. | Saturated | A hydrocarbon which contains only single carbon-carbon bonds. |
| 19. | Unsaturated | A hydrocarbon which contains at least one double carbon-carbon bond. |
| 20. | Flammable | Easily ignited and able to burn rapidly. |
| Week 3: | | |
| 21. | Viscosity | The resistance of a liquid to flowing or pouring; a liquids 'thickness'. |
| 22. | Volatility | The ability of a liquid to turn to a vapour form. |
| 23. | Oxidised | A reaction where oxygen is added to a substance/ or where electrons are lost from a substance. |
| 24. | Complete combustion | Where fuel burns fully with oxygen, to form carbon dioxide and water. General equation: Fuel + oxygen → carbon dioxide + water |
| 25. | Incomplete combustion | Where fuel does not fully burn with oxygen. General equation: Fuel + oxygen → carbon dioxide + water + carbon + carbon monoxide |
| 26. | Cracking | The reaction used in the oil industry to break down large hydrocarbon molecules into smaller, more useful ones. |
| 27. | Thermal decomposition | The breaking down of a compound using heat. |
| 28. | Rate of Reaction Equation | $Mean\ rate\ of\ reaction = \frac{quantity\ of\ product\ formed}{time}$ |
| 29. | Rate of Reaction Equation | $Mean\ rate\ of\ reaction = \frac{quantity\ of\ reactant\ used}{time}$ |
| 30. | Collision theory | An increased proportion of particles exceeding the activation energy has a greater effect on rate than the increased frequency of collisions. |

| Week 4: | | |
|---------|-----------------------------------|---|
| 31. | Bromine water test | Alkane: bromine water maintains its colour, so stays orange. Alkene: bromine water turns from orange to colourless. |
| 32. | Accuracy | Degree to which results of a measurement or calculation is close to the correct value. |
| 33. | Precision | Refinement in a measurement especially as represented by the number of digits given. |
| 34. | Resolution | The smallest interval measurable by a scientific instrument. |
| 35. | Significant figures | Representing a value to that number of digits, which are significant. For 3 Significant figures, examples include: 0.00435, 1.34, 4035 or 125. |
| 36. | Decimal places | The number of digits you show after the decimal point, before rounding (if needed). For 3 decimal places, examples include: 0.234, 0.002 or 23.347. |
| 37. | Melting Point | The temperature at which it changes state from solid to liquid at atmospheric pressure. |
| 38. | Boiling Point | The temperature at which it changes state from liquid to gas at atmospheric pressure. |
| 39. | Pure substance | A substance which consists of just one type of atom or molecule. |
| 40. | Compound | A substance which contains two or more different elements in its structure. |
| Week 5: | | |
| 41. | Formulation | A mixture that has been designed for a useful product. |
| 42. | Nanoparticles | Very tiny particles or structures between 1-100 nanometres in size. |
| 43. | Rf (Retention factor) | A measurement from chromatography: it is the distance a spot of substance has been carried above the baseline divided by the distance of the solvent front. $Rf = \frac{\text{distance moved by substance}}{\text{distance moved by solvent}}$ |
| 44. | Chromatography | The process whereby small amounts of dissolved substances are separated by running a solvent. |
| 45. | Sulphuric acid | H ₂ SO ₄ |
| 46. | Nitric acid | HNO ₃ |
| 47. | Hydrochloric acid | HCl |
| 48. | Sulfate ion | SO ₄ ²⁻ |
| 49. | Carbonate ion | CO ₃ ²⁻ |
| 50. | Hydroxide ion | OH ⁻ |
| Week 6: | | |
| 51. | Ammonium ion | NH ₄ ⁺ |
| 52. | Pipette | A glass tube used to measure accurate volumes of liquids. |
| 53. | Splint | A wooden stick which is ignited to carry a flame from one place to another. |
| 54. | Electrolysis | A process used to decompose a compound using electrical current. |
| 55. | Atmosphere | The relatively thin layer of gases that surround Earth. |
| 56. | Purification | A process used to move contaminants from a sample, to obtain a pure substance. |
| 57. | Waste water | Water which has come from household and is dirty. For example the washing machine, tap and toilets. |
| 58. | Infrared spectroscopy | An analytical technique using infrared radiation to identify the bonds present in a substance. |
| 59. | Carbon footprint | The total amount of carbon dioxide and other greenhouse gases emitted over the full life cycle of a product, service or event. |
| 60. | Carbon capture and storage | A technique where carbon dioxide produced from fossil fuel power stations is pumped deep underground, to be absorbed by porous rocks. |
| Week 7: | | |
| 61. | Bioleaching | A process used to extract copper using bacteria. |
| 62. | Particulates | Small solid particle given off from motor vehicles as a result of incomplete combustion of its fuel. |
| 63. | Global dimming | Where particulates travel to the upper atmosphere and reflect sunlight back into space. |
| 64. | Atmosphere | The relatively thin layer of gases that surround Earth. |
| 65. | Test for Oxygen | Relights a glowing splint. |
| 66. | Test for Carbon Dioxide | Turns limewater cloudy. |
| 67. | Test for Chlorine | Bleaches damp litmus paper. |
| 68. | Test for Hydrogen | Burns with a 'squeaky pop'. |

| | | | | | |
|----------------|----------------------------------|---|-----------------|---------------|--|
| 69. | Greenhouse Gases | Carbon dioxide, methane, water vapour | | | |
| 70. | Acid Rain | Caused by sulfur dioxide and nitrogen oxides. | | | |
| Week 8: | | | | | |
| 71. | Subatomic Particles | | relative charge | relative mass | |
| | | proton | +1 | 1 | |
| | | neutron | 0 neutral | 1 | |
| | | electron | -1 | 1 / 1840 | |
| 72. | Transition element | Element from the central block of the periodic table. | | | |
| 73. | Alkali Metals | Elements in group 1 of the Periodic Table– These all have 1 electron in their outer shell. | | | |
| 74. | Halogens | Elements in group 7 of the Periodic table– These all have 7 electrons in their outer shell. | | | |
| 75. | Ionic Bonding | The electrostatic force of attraction between positively and negatively charged ions. | | | |
| 76. | Giant ionic structures | A huge 3D lattice of Ionically bonded atoms, e.g. Sodium Chloride. | | | |
| 77. | Covalent Bond | The bond between two or more atoms that share one or more pairs of electrons. | | | |
| 78. | Giant Covalent structures | A huge 3D network of covalently bonded atoms, e.g. graphite | | | |
| 79. | Oxidation | A reaction in which oxygen is added or when electrons are lost. | | | |
| 80. | Reduction | A reaction in which oxygen is lost or electrons are gained. | | | |
| Week 9: | | | | | |
| 81. | Acid | When dissolved in water, its solution has a pH value less than 7. Proton (H ⁺ ion) donors. | | | |
| 82. | Base | The oxide, hydroxide, or carbonate of a metal that will react with an acid, forming a salt as one of the products. Proton (H ⁺ ion) acceptors. | | | |
| 83. | Alkali | A water-soluble base. Its solution has a pH value more than 7. | | | |
| 84. | Salt | A compound formed when some or all of the hydrogen in an acid is replaced by a metal. | | | |
| 85. | Neutralisation | The chemical reaction of an acid with a base in which a salt and water are formed. If the base is a carbonate, carbon dioxide is also produced. | | | |
| 86. | pH | A number which shows how strongly acidic or alkaline a solution is. | | | |
| 87. | pH scale | The scale that runs from 0 (most acidic) to 14 (most alkaline). | | | |
| 88. | Universal indicator | A mixture of many dyes which turns a range of colours as the pH changes. | | | |
| 89. | Strong acid | An acid that ionises completely in solution releasing all its H ⁺ ions. | | | |
| 90. | Weak acid | An acid which does not completely ionise in solution, reaching an equilibrium in which both the acid molecules and their ions are present. | | | |

History Year 11 Unit 1 Germany, Conflict and Tension in Asia, Normans & Health and the People

| Week 1: | | | RAG |
|---------|---|--|-----|
| 1. | What did the Enabling Act of 1933 allow Hitler to do in regard to making laws? | Hitler did not have to ask the Reichstag for permission to make laws. | |
| 2. | What were the Gestapo and concentration camps? | They were part of the Police State. | |
| 3. | Who was the creator of the idea of the four humours? | Hippocrates | |
| 4. | What were the four humours? | Blood, yellow bile, black bile and phlegm | |
| 5. | What was often thought to be the cause of illness during the middle ages? | An imbalance of the four humours | |
| 6. | What were two common treatments used to balance the four humours? | a) Purging b) Bleeding | |
| 7. | Name three people you would go to for treatment in Medieval England. | a) Local wise woman b) Barber surgeon c) University trained doctor | |
| 8. | What was the name of the US initiative to give Europe \$13 billion in 1947? | The Marshall Plan | |
| 9. | Who said that an 'Iron Curtain' had divided Europe after 1945? | Winston Churchill | |
| 10. | What was the Western military alliance called? | NATO | |
| Week 2: | | | |
| 11. | Which political party did Hindenburg ban from the Reichstag after the Reichstag Fire of 1933? | Communists | |
| 12. | What was the communist military alliance called? | The Warsaw Pact | |
| 13. | What was Truman's policy of containing communism called? | The Truman Doctrine | |
| 14. | Which 4 men thought they had a claim to the throne of England after Edward the Confessor died? | Harold Godwinson, Hardrada, William Duke of Normandy and Aethling | |
| 15. | Who became king on 6th January 1066, the day after Edward the Confessor died? | Harold Godwinson became King Harold | |
| 16. | What were the group of earls and bishops that advised the king called? | The Witan | |
| 17. | When was the Battle of Fulford Gate (day, month and year) that was between the Vikings, led by Hardrada and the Anglo Saxons, led by Edwin and Morcar and was won by Hardrada? | 20 September 1066 | |
| 18. | When was the Battle of Stamford Bridge (day, month and year) where Godwinson (Anglo-Saxon) defeated Hardrada (Viking)? | 25 September 1066 | |
| 19. | Who was the Greek physician, surgeon and philosopher in the Roman Empire? | Galen | |
| 20. | What was a journey undertaken to a religious shrine, sometimes in an attempt to get forgiveness from God for your sins so that you might be healed, called? | Pilgrimage | |
| Week 3: | | | |

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| 21. | What powers was Hitler given by President Hindenburg as a result of the Reichstag Fire in 1933? | Emergency powers | |
| 22. | What did Hindenburg and Papen both try to do when Hitler became Chancellor of Germany in 1933? | They tried to control Hitler | |
| 23. | What is the line which separates North Korea from South Korea called? | 38th parallel | |
| 24. | What were working men, mainly peasants, who were called to fight for the king in times of war called in Anglo-Saxon times? | Fyrd | |
| 25. | Making a defensive “wall” with shields, to protect the army’s line. What was this called? | Shield wall | |
| 26. | Pretending to retreat to tempt the enemy to follow so that they could be surrounded and killed. This was a well-known Norman tactic. What was this tactic called? | Feigned retreat | |
| 27. | When was William Duke of Normandy crowned King of England (day, month and year)? | 25th December (Christmas day) 1066 | |
| 28. | What was a strong wooden, or later stone, tower that was part of a castle called? | Keep | |
| 29. | During the Middle Ages what did the Church recommend as the best treatment for illness? | Prayer | |
| 30. | Name two Muslim doctors who had a great influence on Western medicine. | Rhazes and Avicenna | |
| Week 4: | | | |
| 31. | Goebbels was in charge of propaganda (the spreading of ideas and information) in the Nazi Party. What key idea did Goebbels spread as propaganda? | ‘Work and Bread’ | |
| 32. | What was the name of the leader of North Korea in 1948? | Kim-Il-sung | |
| 33. | What is the capital of South Korea? | Seoul | |
| 34. | What was a large mound of earth, typically 5-7 metres high that was part of a castle called? | Motte | |
| 35. | What was the enclosure below the motte in a castle called? | Bailey | |
| 36. | When was the rebellion on the Welsh border that was led by the thegn called Eadric the Wild. | 1067 | |
| 37. | When was the rebellion in Kent that was led by Eustace of Boulogne? | 1067 | |
| 38. | When was the rebellion in Northumbria against Copsig? | 1067 | |
| 39. | When was the rebellion in Exeter led by King Harold’s mother? | 1068 | |
| 40. | When was the rebellion in Mercia and York led by Earls Edwin and Morcar? | 1068 | |
| Week 5: | | | |

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| 41. | As a result of the Wall Street Crash in 1929 and the Depression that followed in Germany, people started to support extreme parties more. What did the middle classes in Germany widely fear? | The rise in support for Communism | |
| 42. | What did unemployment rise to in Germany as a result of the Great Depression by 1933? | 6 million | |
| 43. | What does the term capitalist mean? | Individuals are free to own businesses and land and compete with others. | |
| 44. | When was the second rebellion in York when Earl Robert de Comines of Northumbria was murdered (month and year)? | January 1069 | |
| 45. | When was the third rebellion in York when Aethling joins the rebellion (month and year)? | February 1069 | |
| 46. | Who defeated the rebels in York? | King William I | |
| 47. | Who attacked York in September 1069? | The Danish with Aethling | |
| 48. | When did the rebellion at Ely happen with Hereward the Wake, the Danes and later Morcar? | 1070 | |
| 49. | When was the revolt of the Norman earls (Roger FitzOsbern, Earl of Hereford, Earl Ralph de Gael and the English Earl Waltheof)? | 1075 | |
| 50. | When was the Harrying of the North? | 1069 | |
| Week 6: | | | |
| 51. | While Hitler was in prison after the Munich Putsch of 1923 what book did Hitler write? | <i>Mein Kampf</i> | |
| 52. | What was the name of the US Commander-in-Chief of UN forces in Korea? | General MacArthur | |
| 53. | What was the reason for MacArthur's sacking? | For sending troops back into North Korea | |
| 54. | When King William I died in 1087 who became the next king of England? Was it: a) Robert (King William I eldest son) b) William Rufus (King William I second son) c) Henry (King William I third son) | William Rufus | |
| 55. | What is controlling access to privileges, land or appointments called? | Patronage | |
| 56. | What was the law that William introduced called, that meant that people were no longer allowed to hunt in the forests or graze their animals if the forest was a royal forest? | Forest Law | |
| 57. | What did William I commission in 1085 to tell him what land and property there was, who owned it, and what it was worth? | The Domesday Book | |
| 58. | Where did most surgery take place during the Middle Ages? | Battlefields | |
| 59. | What is the technique called when you apply heat to a wound to stop the blood flowing? | cauterisation | |
| 60. | Name an Arab Muslim physician and surgeon who invented 26 new surgical instruments. | Abulcasis | |

| Week 7: | | |
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| 61. | Who was holding the political meeting Hitler disturbed during the Munich Putsch of 1923? | Gustav von Kahr |
| 62. | In 1920 membership of the Nazi Party was 3000. What had it grown to by 1921? | 5000 |
| 63. | What was the name used for Vietnam, Laos and Cambodia before the Second World War and up to the Battle of Dien Bien Phu? | French Indochina |
| 64. | Who was tied to the village and were very poor and they were given less land by the lord in the Norman period? | Bordars & cottars |
| 65. | Who made up 10% of the population in 1066 but as the church disapproved and because it was cheaper to give land in return for labour rather than support a slave this number dropped rapidly under the Normans? | Thralls (slaves) |
| 66. | What were citizens of towns, who had more freedoms, and some legal protections, called in the Norman period? | Burgesses |
| 67. | People believed that the king was chosen by God and therefore the king ruled by _____ (fill in the gaps with the answer) | Divine right |
| 68. | What is a place to put human waste called? | cesspit |
| 69. | What did people think was a major cause of disease in the Middle Ages and Renaissance period (not God or the four humours this time)? | Miasma (bad smells in the air) |
| 70. | When did the Black Death arrive in England? | 1348 |
| Week 8 | | |
| 71. | When Hitler became leader of the German Workers Party what did he change the name to? | National Socialist German Workers Party (Nazi/NSDAP) |
| 72. | What was the country called which controlled Indochina during the Second World War? | Japan |
| 73. | Who led the Vietnamese communists fighting the French after the Second World War? | Ho Chi Minh |
| 74. | During the Norman period everyone was very concerned with what would happen when they died. They were concerned whether they would go to heaven or hell. What was this day called? | Day of Judgement |
| 75. | Who was the Anglo-Saxon Archbishop of Canterbury in 1052 and then was replaced by the Norman Archbishop in 1070? | Archbishop Stigand |
| 76. | Which Norman did King William I appoint as the Archbishop of Canterbury in 1070? | Archbishop Lanfranc |
| 77. | What is a synod? | Church council |
| 78. | What is it called when you give someone a job because they are your relative, not because they are the best person for the job? | Nepotism |
| 79. | List two consequences for the Black Death. | a) Food shortages |

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| | | b) Rising prices | |
| 80. | What did the peasants demand following the Black Death and why? | Higher wages as there were less workers | |
| Week 9: | | | |
| 81. | What two plans did Stresemann agree with the USA to get financial support from them and what years were they agreed? | a) Dawes Plan - 1924 b) Young Plan - 1929 | |
| 82. | What did Germany sign In 1928 agreeing never to go to war with countries? | The Kellogg-Briand Pact | |
| 83. | What was the conference that was to decide the future of Vietnam after the Battle of Dien Bien Phu where the French were defeated by the Vietnamese communists called? | The Geneva Conference | |
| 84. | What is it called when a lay person (a non-churchman, in this case the king) would “invest” (officially appoint) a newly consecrated bishop by presenting the symbols of his office? | Lay investiture | |
| 85. | What is the religious way of life in a monastery (a religious house where monks or nuns live a religious life) called? | Monasticism | |
| 86. | What are the rules that monks should live by that were written in the 6th century called? <ul style="list-style-type: none"> ● Poverty - giving up paid positions ● Chastity - not getting married and being celibate ● Obedience - obeying the abbot and prioress ● Prayer - attending eight prayer services a day ● Work - everything they needed or ate had to be produced by them ● Silence - apart from during prayer ● Service - looking after the sick,poor and travellers | The Rule of St Benedict | |
| 87. | What kind of monastery does this describe? <ul style="list-style-type: none"> ● Followed the Rule of St Benedict ● Independent ● Recruited “lay (not churchmen) brothers” to do manual work. | Cluniac Monastery | |
| 88. | What was the order of monks called that did not think the Cluniac Monasteries were strict enough? | The Cistercian Order | |
| 89. | When was the Middle Ages (give dates) | 1000-1500 | |
| 90. | What is the cutting open of a body or plant to study it called? | Dissection | |

French - Year 11 – The Environment and Homelessness AND Holidays, travel and regions of France

| | Week 1: Quels sont les plus grands problèmes environnementaux? | What are the biggest environmental problems? | RA G |
|-----|---|---|-----------------|
| 1. | De mon point de vue, le plus grand problème | From my point of view, the biggest | |
| 2. | environnemental c'est la réchauffement de la Terre car | environmental problem is global warming because | |
| 3. | les glaciers sont en train de fondre ce qui touche aux | the glaciers are melting which affects | |
| 4. | animaux, leurs habitats et les niveaux de l'eau. | animals, their habitats and sea levels. | |
| 5. | D'ailleurs, le plastique n'est pas biodégradable et les océans sont pleins des déchets. | Moreover, plastic isn't biodegradable and the oceans are full of rubbish. | |
| | Week 2 : Qu'est-ce que tu pourrais faire pour aider l'environnement? | What could you do to help the environment? | |
| 6. | En ce qui concerne la réchauffement de la Terre, | With regard to global warming, | |
| 7. | si je vais partout à pied ou en vélo, je réduirai mon | if I walk everywhere or go by bike, I will reduce my | |
| 8. | empreinte carbone ce qui, par conséquent, aidera | carbon footprint which, in turn, will help | |
| 9. | l'environnement. De plus, si je triais les déchets chez moi, | the environment. In addition, if I sorted the rubbish at home, | |
| 10. | je pourrais prendre les plastiques, le verre et le carton au centre de recyclage. | I could take the plastics, the glass and the cardboard to the recycling centre. | |
| | Week 3: Quels sont les problèmes sociaux dans ta ville? | What are the social issues in your town? | |
| 11. | Malheureusement, dans ma ville, il y a plusieurs | Unfortunately, in my town, there are many | |
| 12. | problèmes sociaux. Par exemple il y a beaucoup de gens | social problems. For example there are a lot of people | |
| 13. | qui dorment dans les rues, il y a de la pauvreté parmi | who sleep in the streets, there is a lot of poverty amongst | |
| 14. | les jeunes familles et le chômage touche les diplômés. | young families and unemployment affects graduates. | |
| 15. | J'essaye toujours de donner de la monnaie aux sans-abris. | I always try to give change to the homeless. | |
| | Week 4: Comment peut-on s'adresser à l'inégalité? | How can we address inequality? | |
| 16. | Afin de soutenir les personnes sans domicile fixe, | In order to support the homeless, | |
| 17. | on devrait donner des cartons alimentaires aux | we should donate food parcels to | |
| 18. | associations caritatives car c'est plus utile que de l'argent. | charities as it's more useful than money. | |
| 19. | Si j'avais plus de temps libre, je ferais du travail bénévole | If I had more free time, I would do volunteer work | |
| 20. | à la soupe populaire en ville. | at the soup kitchen in town. | |
| | Week 5: Où vas-tu en vacances normalement? | Where do you go on holiday usually? | |
| 21. | Généralement, je vais en France pendant les vacances, et | Generally, I go to France during the holidays, and | |
| 22. | je l'adore car il fait du soleil donc je peux nager et prendre un bain de soleil. | I love it because it's sunny therefore I can swim and sunbathe. | |
| 23. | Normalement je vais avec ma famille | Normally I go with my family | |
| 24. | et on voyage en bateau puis en voiture à notre maison secondaire. | and we travel by boat then by car to our holiday home. | |
| 25. | Si j'allais avec mes amis, on resterait dans une auberge de jeunesse. | If I went with my friends, we would stay in a youth hostel. | |
| | Week 6: Vas-tu aller en vacances cet été? | Are you going to go on holiday this summer? | |
| 26. | J'ai décidé d'aller à Nice dans le sud-est de la France | I've decided to go to Nice in the south-east of France | |
| 27. | car Nice propose des belles plages et on peut tout visiter | as Nice has beautiful beaches and you can visit | |
| 28. | à pied – c'est vraiment pratique ! Je voudrais | everything on foot – how convenient! I would like | |
| 29. | y voyager en avion étant donné que c'est plus rapide | to travel there by plane given that it's quicker | |
| 30. | qu'en voiture mais c'est beaucoup plus cher. | than by car but it's a lot more expensive. | |
| | Week 7: Quelles sont tes vacances de rêve? | What is your dream holiday? | |
| 31. | Mes vacances de rêve seraient en Amérique du Sud | My dream holiday would be to South America | |

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| 32. | pourvu que je puisse découvrir la culture. | as long as I could discover the culture. | |
| 33. | Cependant, l'année dernière je suis allé | However, last year I went | |
| 34. | aux montagnes pour les vacances d'hiver. | to the mountains for the winter holidays. | |
| 35. | J'ai fait du ski avec ma classe et je me suis très bien amusé(e). | I skied with my class and I had a lot of fun. | |
| Week 8: Voudrais-tu visiter la France ? | | Would you like to visit France? | |
| 36. | Il faut admettre que la France soit une destination variée. | You've got to admit that France is a diverse destination. | |
| 37. | Quand j'étais petit, je faisais des randonnées aux Pyrénées dans le sud, | When I was small, I used to go walking in the Pyrenees in the South, | |
| 38. | et avec ma famille on faisait du camping car | and with my family we used to do camping as | |
| 39. | il faisait très beau. On rendait visite à Toulouse aussi | it was good weather. We visited Toulouse as well | |
| 40. | car il y avait beaucoup de marchés au centre. | because there were a lot of markets in the centre. | |
| Week 9: Aimes-tu les vacances actives? | | Do you like active holidays? | |
| 41. | Moi, j'adore les vacances actives car je me passionne pour le sport. | Me, I love active holidays as I am passionate about sport. | |
| 42. | Je joue au volley depuis sept ans et j'adore y jouer à la plage. | I have played volleyball for 7 years and love playing it on the beach. | |
| 43. | J'aime aussi les sports individuels et en vacances je joue au golf le soir. | I also like individual sports and on holiday I play golf in the evening. | |
| 44. | Par contre, ma soeur déteste les sports. | On the other hand, my sister hates sport. | |
| 45. | Elle préfère visiter les monuments. Quelle barbe! | She prefers to visit monuments. What a bore! | |

Geography – Year 11 – Unit 1 – The Challenge of Natural Hazards and Physical Landscapes of the UK

| Week 1: | | | RAG |
|---------|--|---|-----|
| 1. | Natural Hazard | A natural event that threatens people or has the potential to cause damage, destruction and death. | |
| 2. | Destructive Plate Margin example | The Pacific Ring of Fire. | |
| 3. | Constructive plate margin example | The Mid Atlantic Ridge. | |
| 4. | Conservative plate margin example | The San Andreas Fault. | |
| 5. | L'Aquila 2009 size, date and time. | Size: Magnitude 6.3 on the Richter scale Date: 6 April 2009 Time: 3:32 am | |
| 6. | L'Aquila 2009 primary effects | 308 people died / 1,500 injured / 10-15000 buildings collapsed, San Salvatore hospital damaged, many historical buildings damaged. | |
| 7. | L'Aquila 2009 secondary effects | Landslides triggered by aftershocks damaged roads / number of students at L'Aquila university decreased / rents on housing increased. | |
| 8. | L'Aquila 2009 immediate responses | 40,000 tents used for shelter / the Italian red cross searched for survivors within one hour / water and food distributed / mortgages and bills were suspended / EU gave \$552.9 million to begin rebuilding. | |
| 9. | L'Aquila 2009 Long term responses | Residents did not pay taxes in 2010 during immediate recovery period / students were given free tuition fees to attend the university / 1 government official and 6 scientists went to prison during investigations / it took approximately 15 years to rebuild L'Aquila. | |
| 10. | Nepal 2015 size, date and time. | Size: 7.8 on the Richter scale Date: 25 April 2015 Time: 11:56 am | |
| Week 2: | | | |
| 11. | Nepal 2015 primary effects | 8,841 people died / 16,800 injured / 26 hospitals, and 50% of schools destroyed, reduced supply of food, water and electricity. | |
| 12. | Nepal 2015 secondary effects | 1 million people homeless / avalanche on Mount Everest killed 19 people / reduced numbers of tourists visiting Nepal / rice seed was destroyed meaning people could not grow food. | |
| 13. | Nepal 2015 immediate responses | Nepal requested international help / the UK gave \$126 million for emergency aid / the Red Cross provided tents for 225,000 people / the WHO distributed medical supplies / shepas carried supplies into hard to reach areas / Facebook launched its Safe feature. | |
| 14. | Nepal 2015 term responses | Nepal created a Post-Disaster Needs Assessment / 23 areas needed completely rebuilding / \$274 million was promised from abroad for rebuilding / Mount Everest was opened by August for tourists. | |
| 15. | Why do people live in Hazard zones? | Geothermal energy (Iceland) / Farming (ash creates fertile soil) / Tourism (volcanoes are beautiful) / Poverty (attachments to the area you are from). | |
| 16. | Typhoon Haiyan 2013 size, date and time. | Size: Category 5 with wind speeds up to 314km/hr Date: hit the Philippines on 8 November 2013 Time: 4:40am | |
| 17. | Typhoon Haiyan 2013 primary effects | 6190 people died / 90% of Tacloban city destroyed / airport, homes and roads badly damaged / seed stocks lost. | |
| 18. | Typhoon Haiyan 2013 secondary effects | Oil barge ran aground causing a massive oil leak / looting happened as survivors fought for food supplies / sea water became contaminated. | |
| 19. | Typhoon Haiyan 2013 immediate responses | 800,000 people were evacuated before the storm / aid arrived 3 days later by plane / curfew was imposed to stop looting / \$1.5 billion of foreign aid was pledged / main airport reopened after 3 days / power was restored after a week. | |
| 20. | Typhoon Haiyan 2013 long term responses | Build Back Better was the pledge of the government (no build areas designated along some coastlines) / new storm surge warning system / mangroves replanted. | |
| Week 3: | | | |

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| 21. | Reducing the effects of tropical storms. | Monitoring - satellites and planes to see storms emerging, improvements in prediction using computer models. Protection - storm shelters, shutters on windows, better housing, remove trees that are close to buildings. Planning - disaster supply kits, training emergency services, building evacuation centres. | |
| 22. | Somerset levels 2014 causes | Flooding of the rivers Tone and Parrett - this was because it was the wettest January since records began. High tides prevented water getting to the sea. Lastly, the rivers had not been dredged for 20 years. | |
| 23. | Somerset levels 2014 effects | Social - 600 homes flooded, 16 farms evacuated, villages cut off, power supplies down. Economic - £10 million in damage, farmers lost money, people could not get to work. Environmental - sewage contaminated floodwater debris left from the flood. | |
| 24. | Somerset levels 2014 responses | Immediate responses - Homeowners coped the best they could, Villages cut off used boats to get shopping etc, Local volunteers helped out. Long-term - £20 million flood action plan by the environment agency, 8km of the Tone and Parrett were dredged, river banks and roads have been raised, some flood defences built. | |
| 25. | Evidence of climate change | Ice cores (CO ₂), tree rings, historical records such as diaries, current sea level rise and visible melting of the ice caps. | |
| 26. | Causes of natural climate change | 1) volcanic eruptions (global cooling) 2) orbital changes/Milankovitch cycles 3) solar activity. | |
| 27. | The greenhouse effect | The trapping of the sun's heat by gas in the atmosphere. | |
| 28. | The human causes of climate change | Increase in carbon dioxide due to burning of fossil fuels in power stations and cars. Increase in methane production due to livestock and rice farming. | |
| 29. | Adaptation to climate change examples | Maldives - raising houses on stilts, sea defences, restoring mangroves. Himalayas - creating artificial glaciers to store water until the summer. The Gambia - shade trees planted, new efficient irrigation systems, drought resistant crops used. | |
| 30. | Mitigation of climate change examples | Carbon capture, renewable/green energy sources, planting trees, international agreements to cut greenhouse gas emissions. | |
| Week 4: | | | |
| 31. | Destructive and constructive waves | Destructive wave have a bigger swash than backwash, a larger wave height and a shorter wavelength, they erode the beach. Opposite for constructive waves. | |
| 32. | Headlands and bays | Formed when there are bands of hard and soft rock lying at an angle to the sea. The softer rock erodes faster creating bays. The harder rock is left sticking out to sea forming headlands. | |
| 33. | Spits | Spits are formed where there is a large amount of eroded material that is moved along the shore by longshore drift. If the coastline changes direction at a river mouth then the sea may lose energy, depositing the material forming a spit. Spits have a hooked end as they cannot grow across a river and salt marshes grow up behind spits due to mud trapped from the river. | |
| 34. | Sea walls | Reflect wave energy, they are very effective but very expensive. | |
| 35. | Groynes | Trap sediment building up the beach, this is great for tourism but speeds up erosion along the coast. | |
| 36. | Rock armour | Absorbs wave energy, these are very effective and cheaper than a sea wall but they are still expensive and make getting to the beach difficult. | |
| 37. | Gabions | Absorbs wave energy and allow cliff drainage, these are cheap but break easily. | |
| 38. | Dune regeneration | Planting marram grass to trap sand building up the dunes, great for wildlife but dunes will not stand up to big storms. | |
| 39. | Dune fencing | Fences trap sand building up the dunes, they also keep people off of the dunes. | |
| 40. | Beach nourishment | Building up the beach to act as a barrier, this will need repeating often. | |
| Week 5: | | | |
| 41. | Managed retreat | Abandoning less valuable land to the sea, great for wildlife, but farmers lose land. | |
| 42. | Medmerry scheme | Aim - to protect Selsey in West Sussex, the old sea wall and beach nourishment was costing £200,000 per year Strategy - build a new clay sea wall inland and allowing the farm land to flood. | |
| 43. | Medmerry effects | Positive, Selsey has a 1 in 1000 chance of flooding (low), new salt marsh has been created, | |

| | | | |
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| | | Tourists now come to see the birds on the new marsh. Negative - Farmland was lost, it cost £28 million, old habitats were destroyed. | |
| 44. | Gorges | Gorges form in the upper course of a river when hard rock lies over soft rock. At a waterfall the water falls into the plunge pool and the energy spreads out causing the soft rock to erode creating an overhang, Eventually the overhang collapses and the waterfall retreats leaving a gorge. | |
| 45. | Oxbow lakes | Oxbow lakes occur in the middle course where meanders move this is because the water moves faster on the outside of a meander causing erosion, deposition occurs on the inside where the water is slower. Over time meanders may move towards each other. When they reach each other the river takes the shortest route, reducing the speed of water on the meander, this causes deposition to occur cutting off the old meander, forming an oxbow lake. | |
| 46. | Floodplains and Levees | Floodplains occur in the lower course when meanders move sideways eroding valley sides. Levees are formed when rivers flood, sediment is deposited on the side of the river forming a river bank. | |
| 47. | Human causes of Flooding | Urbanisation, deforestation, soil compaction by machinery. | |
| 48. | Physical causes of flooding. | Amount of precipitation, saturated soil, impermeable rock, snow melt, steep slopes. | |
| 49. | Flood management | Hard engineering - Dams, Embankments, Flood relief channels, channel straightening. Soft engineering - Planting trees, floodplain zoning, river restoration, warning systems. | |
| 50. | Banbury flood management | Aim - to create a flood storage area outside Banbury to stop it flooding. Positives - reduced the fear of flooding in Banbury. Negatives - Cost £18.5 million, habitat was protected. | |
| Week 6: | | | |
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| | | for tourists. | |
| 65. | Why do people live in Hazard zones? | Geothermal energy (Iceland) / Farming (ash creates fertile soil) / Tourism (volcanoes are beautiful) / Poverty (attachments to the area you are from). | |
| 66. | Typhoon Haiyan 2013 size, date and time. | Size: Category 5 with wind speeds up to 314km/hr Date: hit the Philippines on 8 November 2013 Time: 4:40am | |
| 67. | Typhoon Haiyan 2013 primary effects | 6190 people died / 90% of Tacloban city destroyed / airport, homes and roads badly damaged / seed stocks lost. | |
| 68. | Typhoon Haiyan 2013 secondary effects | Oil barge ran aground causing a massive oil leak / looting happened as survivors fought for food supplies / sea water became contaminated. | |
| 69. | Typhoon Haiyan 2013 immediate responses | 800,000 people were evacuated before the storm / aid arrived 3 days later by plane / curfew was imposed to stop looting / \$1.5 billion of foreign aid was pledged / main airport reopened after 3 days / power was restored after a week. | |
| 70. | Typhoon Haiyan 2013 long term responses | Build Back Better was the pledge of the government (no build areas designated along some coastlines) / new storm surge warning system / mangroves replanted. | |
| Week 8: | | | |
| 71. | Reducing the effects of tropical storms. | Monitoring - satellites and planes to see storms emerging, improvements in prediction using computer models. Protection - Storm shelters, shutters on windows, better housing, remove trees close to buildings. Planning - Disaster supply kits, training emergency services, building evacuation centres. | |
| 72. | Somerset levels 2014 causes | Flooding of the rivers Tone and Parrett, wettest January since records began, high tides prevented water getting to the sea, rivers had not been dredged for 20 years. | |
| 73. | Somerset levels 2014 effects | Social - 600 homes flooded, 16 farms evacuated, villages cut off, power supplies down. Economic - £10 million in damage, farmers lost money, people could not get to work. Environmental - sewage contaminated flood water debris left from the flood. | |
| 74. | Somerset levels 2014 responses | Immediate responses - Homeowners coped the best they could, Villages cut off used boats to get shopping etc, Local volunteers helped out. Long-term - £20 million flood action plan by the environment agency, 8km of the Tone and Parrett were dredged, river banks and roads have been raised, some flood defences built. | |
| 75. | Evidence of climate change | Ice cores (CO ₂), Tree rings, historical records such as diaries, current sea level rise and visible melting of the ice caps. | |
| 76. | Causes of natural climate change | Volcanic eruptions (global cooling), Orbital changes/Milankovitch cycles, Solar activity. | |
| 77. | The greenhouse effect | The trapping of the sun's heat by gas in the atmosphere. | |
| 78. | The human causes of climate change | Increase in Carbon dioxide due to burning of fossil fuels in power stations and cars. Increase in Methane production due to livestock and rice farming. | |
| 79. | Adaptation to climate change examples | Maldives - Raising houses on stilts, sea defences, restoring mangroves. Himalayas - creating artificial glaciers to store water until the summer. The Gambia - shade trees planted, new efficient irrigation systems, drought resistant crops used. | |
| 80. | Mitigation of climate change examples | Carbon capture, Renewable/Green energy sources, Planting trees, International agreements to cut greenhouse gas emissions. | |
| Week 9: | | | |
| 81. | Destructive and constructive waves | Destructive wave have a bigger swash than backwash, a larger wave height and a shorter wavelength, they erode the beach. Opposite for constructive waves. | |
| 82. | Headlands and bays | are formed when there are bands of hard and soft rock lying at an angle to the sea. The softer rock erodes faster creating bays and the harder rock is left sticking out to sea forming headlands. | |
| 83. | Spits | Spits are formed where there is a large amount of eroded material that is moved along the shore by longshore drift. If the coastline changes direction at a river mouth then the sea may lose energy, depositing the material forming a spit. Spits have a hooked end as they cannot grow across a river and salt marshes grow up behind spits due to mud trapped from the river. | |
| 84. | Sea walls | Reflect wave energy, they are very effective but very expensive. | |

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| 85. | Groynes | Trap sediment building up the beach, this is great for tourism but speeds up erosion along the coast. | |
| 86. | Rock armour | Absorbs wave energy, these are very effective and cheaper than a sea wall but they are still expensive and make getting to the beach difficult. | |
| 87. | Gabions | Absorbs wave energy and allow cliff drainage, these are cheap but break easily. | |
| 88. | Dune regeneration | Planting marram grass to trap sand building up the dunes, great for wildlife but dunes will not stand up to big storms. | |
| 89. | Dune fencing | Fences trap sand building up the dunes, they also keep people off of the dunes. | |
| 90. | Beach nourishment | Building up the beach to act as a barrier, this will need repeating often. | |
| Week 10 | | | |
| 91. | Managed retreat | Abandoning less valuable land to the sea, great for wildlife, but farmers lose land. | |
| 92. | Medmerry scheme | Aim - to protect Selsey in West Sussex, the old sea wall and beach nourishment was costing £200,000 per year Strategy - build a new clay sea wall inland and allowing the farm land to flood. | |
| 93. | Medmerry effects | Positive, Selsey has a 1 in 1000 chance of flooding (low), new salt marsh has been created, Tourists now come to see the birds on the new marsh. Negative - Farmland was lost, it cost £28 million, old habitats were destroyed. | |
| 94. | Gorges | <ol style="list-style-type: none"> 1. Gorges form in the upper course of a river when hard rock lies over soft rock. 2. At a waterfall, the water falls into the plunge pool and the energy spreads out causing the soft rock to erode creating an overhang, 3. Eventually the overhang collapses and the waterfall retreats leaving a gorge. | |
| 95. | Oxbow lakes | <ol style="list-style-type: none"> 1. Oxbow lakes occur in the middle course where meanders move. 2. This is because the water moves faster on the outside of a meander causing erosion, deposition occurs on the inside where the water is slower. 3. Over time meanders may move towards each other. 4. When they reach each other the river takes the shortest route, reducing the speed of water on the meander, this causes deposition to occur cutting off the old meander, forming an oxbow lake. | |
| 96. | Floodplains and Levees | Floodplains occur in the lower course when meanders move sideways eroding valley sides. Levees are formed when rivers flood, sediment is deposited on the side of the river forming a river bank. | |
| 97. | Human causes of Flooding | Urbanisation, deforestation, soil compaction by machinery. | |
| 98. | Physical causes of flooding. | Amount of precipitation, saturated soil, impermeable rock, snow melt, steep slopes. | |
| 99. | Flood management | Hard engineering - Dams, Embankments, Flood relief channels, channel straightening. Soft engineering - Planting trees, floodplain zoning, river restoration, warning systems. | |
| 10 | Banbury flood management | Aim - to create a flood storage area outside Banbury to stop it flooding. Positives - reduced the fear of flooding in Banbury. Negatives - Cost £18.5 million, habitat was protected. | |

Computer Science- Year 11 - Unit 1 - Von Neumann Architecture, Systems and Security

| Week 1: Von Neumann Architecture | | | RAG | | | | | | | | | | | | | | |
|----------------------------------|---|---|-------------|---------|-----|----------------------|-----|----------------------------------|-----|---------------|-----|--------------|-----|---|-----|-----------------------------------|--|
| 1. | CPU | Short for Central Processing Unit. Is the main unit responsible for the processing instructions given to a computer. | | | | | | | | | | | | | | | |
| 2. | Fetch Execute Cycle | The CPU follows three steps in order to process data: Fetch Execute Decode | | | | | | | | | | | | | | | |
| 3. | Instruction Set | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #4F81BD; color: white;">Instruction</th> <th style="background-color: #4F81BD; color: white;">Purpose</th> </tr> </thead> <tbody> <tr> <td>ADD</td> <td>Add numbers together</td> </tr> <tr> <td>SUB</td> <td>Subtract numbers from each other</td> </tr> <tr> <td>STA</td> <td>Store a value</td> </tr> <tr> <td>LDA</td> <td>Load a value</td> </tr> <tr> <td>BRA</td> <td>Branch to a different part of the program (often used to repeat code)</td> </tr> <tr> <td>OUT</td> <td>Output a value (after processing)</td> </tr> </tbody> </table> | Instruction | Purpose | ADD | Add numbers together | SUB | Subtract numbers from each other | STA | Store a value | LDA | Load a value | BRA | Branch to a different part of the program (often used to repeat code) | OUT | Output a value (after processing) | |
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| OUT | Output a value (after processing) | | | | | | | | | | | | | | | | |
| Week 2: Fetch Execute Cycle | | | | | | | | | | | | | | | | | |
| 4. | Fetch Stage | the CPU fetches some data and instructions from main memory (RAM) and then stores them in its own temporary memory called 'registers | | | | | | | | | | | | | | | |
| 5. | Register | A small amount of fast storage in the CPU. | | | | | | | | | | | | | | | |
| 6. | Address Bus | his sends information about where data needs to go by sending an address to the memory. The address bus only sends data in one direction - from the CPU to RAM. | | | | | | | | | | | | | | | |
| 7. | Data Bus | this sends data to the memory or receives data from the memory. Data can flow both ways along the data bus. | | | | | | | | | | | | | | | |
| 8. | Decode Stage | <ul style="list-style-type: none"> •The decode step is where the CPU understands / works out what the instruction it has just fetched actually means. | | | | | | | | | | | | | | | |
| 9. | Execute Stage | <ul style="list-style-type: none"> •The Execute stage is where data processing happens. •Instructions are carried out on the data. •Once a cycle has been completed, another begins. | | | | | | | | | | | | | | | |
| Week 3: Registers | | | | | | | | | | | | | | | | | |
| 10. | The Accumulator (ACC) | A specialised CPU registered which stored the intermediate results of a F-D-E cycle. | | | | | | | | | | | | | | | |
| 11. | The Program Counter (PC) | A register that holds the address of the next instruction that is to be carried out. | | | | | | | | | | | | | | | |
| 12. | The Memory Address Register (MAR) | Each position within a computer's memory has a memory address. This address is used to locate the data or instructions that is stored there | | | | | | | | | | | | | | | |
| 13. | The Arithmetic and Logic Unit (ALU) | Part of the CPU that carries out all the arithmetic and logical operations. | | | | | | | | | | | | | | | |
| 14. | The Memory Data Register (MDR) | Holds the actual data that is being fetched into the CPU | | | | | | | | | | | | | | | |

| Week 4: The CPU | | |
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| 15. | Control Unit | Responsible for directing the flow of all inputs and outputs to the CPU. Controls the different stages of the execution of an instruction . |
| 16. | Immediate Access Store (IAS) (Cache) | Small section of memory that is built into the CPU. Stores the most commonly used instructions and data to allow quick and easy access. |
| 17. | Clock Speed | The speed at which the CPU can carry out instructions. Measured in cycles per second. Measured in hertz. |
| 18. | Opcode | Part of an instruction that tells the CPU What operation to do |
| 19. | Operand | Part of an instruction that tells the CPU where to perform the operation. |
| 21. | Over Clocking | It is possible to increase the clock speed for a CPU. This is known as overclocking. In theory, if the clock is faster than the CPU can perform more calculations and perform faster. |
| 21. | CPU Core | The number of cores a CPU has can vary. If a CPU has a single core it is capable of processing one instruction at a time. If it has two cores- referred to as dual core= process two instructions simultaneously. Single core 2 ghz processor can process two billion instructions per second |
| 22 | Parallel Processing | the processing of program instructions by dividing them among multiple processors with the objective of running a program in less time |
| 23 | Multi Tasking | Function within an operating system that allows a computer to run many applications at one time. |
| 24 | Embedded System | A system normally built into a piece of machinery or device. System that is used to provide limited functions |
| Week 5: Searching and Sorting Algorithms | | |
| 23. | Linear / Serial Algorithm | Searching Algorithm. Sequential search of a data set. Algorithm starts at the beginning of the data set and moves through each data item one by one. |
| 24. | Binary Search Algorithm | Searching Algorithm. Used when we have a list of data that is in order. Works by dividing a list in half and looking at item in middle and compares with number on left and right. |
| 25. | Searching Algorithm | The step by step procedure used to find an item of data in a data set |
| 26. | Sorting Algorithm | The step by step procedure used to arrange a data set into an order |
| 27. | Bubble Sort Algorithm | Simplest sorting algorithm to understand Starts at the beginning of a list and first of all checks the first item against second item |
| 28. | Insertion Sort Algorithm | Used to sort a data set into order by looking at each item in turn and placing it in the correct order in the data set. |
| 29. | Merge Sort Algorithm | Works by dividing a list in half repeatedly, till it has a set of lists that have one item in them. |
| Week 6: Knowledge Interleave- System Software | | |
| 30. | Operating System | Controls the operations of the hardware in a computer system and manages all other software |
| 31. | Kernel | The kernel is the heart of the operating system and is responsible for looking after “the most low-level hardware operations |
| 32. | Application Software | Everyday programs that we used to create documents and perform tasks |
| 33. | System Software | Controls the operation of hardware in a computer |
| 34. | Memory Management | Managing the memory of a computer is a function carried out by the operating system.It keeps track of each and every memory location. |
| 36. | User Interface | One of the ways we interact with a computer system |
| 37. | Graphical User Interface | Uses windows, icons, menus and pointers (WIMP) to control the computer  |
| 38. | Menu Driven Interface | Uses menus to control the computer. These were very popular on early mobile phones and are seen in all high streets on cash machines and also on many MP3 players  |

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| 39. | Command Line Interface | Used to be the only way to interact with a computer (pre-80s) and is still used today by 'Linux users' and other professionals with technical knowledge. |  | |
| Week 7: Knowledge interleave- Utility Software | | | | |
| 40. | Utility Software | Helps manage, maintain and control the computer's resources | | |
| 41. | Encryption Software | used to encrypt data | | |
| 42. | Formatting Software | Formatting prepares the storage device for data storage. It creates sectors and tracks on which data can be stored. | | |
| 43. | Defragment Software | To help improve read speeds, defragmentation software searches the disk for related data items and reorganises them so they become positioned physically next to one another. | | |
| 44. | Data Compression Software | Uses compression algorithm to reduce the size of a file. Two main types Lossy and Lossless | | |
| 45. | Lossy Compression | A compression technique to reduce the size of a computer file. The file can never be restored to its original state as redundant data is permanently removed. This may result in a noticeable loss in quality. Used to compress sound and images mainly. | | |
| 46. | Lossless compression | Lossless compression means that as the file size is compressed, the picture quality remains the same - it does not get worse. Also, the file can be decompressed to its original quality. | | |
| 48. | Full Backup | It is a full copy of your entire data set. Used on a periodic basis as time consuming. | | |
| 49. | Incremental Backup | Incremental backups only <u>back up the data</u> that has changed since the previous backup. | | |
| Week 8: Knowledge interleave- Systems Security Methods of attack | | | | |
| 50. | Malware | Software that is designed to disrupt or harm a users computer | | |
| 51. | Malware examples | Virus - a Computer Program that infiltrates a computer system and replicates it self. Trojan- Type of Malware that is disguised as a harmless file or download. Once downloaded it can carry out the attack. Worm - Finds holes in a computer network and uses these to replicate itself. | | |
| 52. | Spyware | Computer programs that gather data about people without their knowledge. | | |
| 53. | Phishing | Sends emails pretending to be a reputable company to try to gain people's personal details. | | |
| 54. | Social Engineering | Tricking people into breaking security procedures to break into a network. | | |
| 55. | Brute Force Attack | When a person tries to access a network by cracking the login details through the process of trial and error. | | |
| 56. | Denial Of Service Attack | Threat designed to flood a network with useless network traffic. This will make it run very slowly or grind to a halt altogether. | | |
| 57. | Data Interception | Data packets are monitored that are travelling around a network. They are monitored for packets that contain personal information. | | |
| 58. | SQL Injection | Structured Query Language. Often used to search through data in a database. | | |
| Week 9: Knowledge interleave- Prevention | | | | |
| 61. | Penetration Testing | people that simulate potential attacks to a network | | |
| 63. | Acceptable use policy | is a document stipulating constraints and practices that a user must agree to for access to a corporate network or the Internet. | | |
| 64. | Backup policy | a predefined, set schedule whereby information from business applications and user files are copied to disk and/or tape to ensure data recoverability in the event of accidental data deletion, corrupted information or some kind of a system outage. | | |
| 65. | Disaster recovery policy | Disaster recovery involves a set of policies, tools and procedures to enable the recovery or continuation of vital technology infrastructure and systems following a natural or human-induced disaster. | | |
| 66. | Anti Virus Software | Designed to find any malware that has been downloaded onto a system. Finds the malware and quarantines it. | | |
| 68. | Firewalls | Security measure that prevents unauthorised traffic coming into or leaving a network by using a set of rules. | | |
| 69. | User access levels | Levels of access granted to a user. This is dependent normally on the level of hierarchy in the business/ company. | | |

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| 70. | Passwords | Used to help prevent unauthorised access to a network. Good password is alpha numeric and a mix of upper and lower case. | |
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