



Enhanced Further Learning

Autumn 1

Year 9

Enhanced Further Learning: **Art: Independent Study**

<p style="text-align: center;">Easier Tasks</p> <p>Confidently use and explore different ways of using the formal elements in various media.</p> <p>Formal elements (Line, shape, form, tone, texture, pattern and colour).</p> <ol style="list-style-type: none"> 1. Take your own photographs or find images on Pinterest. Try to find interesting compositions. You could study fruit, vegetables, flowers, etc. 2. Use two media combinations (e.g. oil pastel, acrylic paint) to copy the whole image, or a section of it. <p>CHALLENGE: Zoom in on a small section of the image, and enlarge it. Add as much detail as you can. Use a different media.</p> <p>Hint: string, tissue paper, cardboard.</p>	<p style="text-align: center;">Harder Tasks</p> <p>Investigate topics to demonstrate a wider contextual knowledge of Art.</p> <p>Choose an Art Movement (Pop Art, Cubist, Surrealist, Fauvism, Arts and Crafts).</p> <p>Analysis</p> <ol style="list-style-type: none"> 1. Choose an art movement from above or choose your own, and analyse one painting. Make clear critical judgements and research any political, social or economic links. 2. Copy the image you have chosen using at least two different media. <p>Development of Ideas</p> <p>Compare and make critical judgements about Art using the 'formal elements'.</p> <ol style="list-style-type: none"> 3. Using secondary or primary images, create an interesting composition. You could cut the image up and rearrange it in the style of photomontage. 4. Create an observational study of this composition in the style of the artist you have researched in the previous activity. Consider what media they used, and whether their work is abstract, realistic or expressive. Do they use bold or subtle colours? 5. Enlarge one section of your composition and work in another media. 6. Annotate your work, making critical judgements. Discuss how you can develop your work, or change your choice of media.
<p style="text-align: center;">Literacy</p> <p>Research and find an artist who has studied a similar to the previous activity. Make a mind map about the artist, using either key words or full sentences to describe their artwork, referring to the formal elements and specific artistic vocabulary.</p>	
<p style="text-align: center;">Skills/Numeracy</p> <p>Work in different scales keeping perspective and proportion.</p> <p>SCALE</p> <p>Embedded: Can work in different scales competently keeping proportions.</p> <p>Observational work</p> <p>1) Copy a primary composition (your own image), enlarging the scale to create a close-up, highlighting detail, tone and form.</p> <p>Challenge:</p> <p>2) Find the perimeter of one shape in your composition.</p>	

Year 9 English Enhanced Further Learning: Reading Challenge

Here are the titles of some books that are recommended for Year 9 pupils:

Book Title	Author	Short Description
Monsters of Men	Patrick Ness	Part 3 of the Chaos Walking trilogy, Monsters of Men explores the effects of war.
Brave New World	Aldous Huxley	A grave warning about the future... Provoking, stimulating, shocking and dazzling
Brighton Rock	Graham Green	A book that explores the gang wars between mods and rockers.
Catch 22	Joseph Heller	A funny and explosive WW2 narrative.
The Catcher in the Rye	JD Salinger	The ultimate coming-of-age story.
Dracula	Bram Stoker	A classic vampire tale.
Empire of the Sun	JG Ballard	A gripping WW2 novel, based on the author's own life.
I, Claudius	Robert Graves	An intense and gripping historical thriller.
Shakespeare: The World as a Stage	Bill Bryson	A book that explores the myths, lies and realities of Shakespeare's plays.
The Old Man and the Sea	Ernest Hemingway	A classic fable about an epic battle.

Once you have completed reading your book for this half term, complete a short Book Report and hand it into your English teacher.

You do not have to read a book of the recommended list above for it to count as your Enhanced Further Learning, but we would love it if you did!

Book Report

Name of Book:

Name of author:

Rating out of 5:

Why you have given it this score:

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Virtues in Fiction

All of us want to 'achieve our potential' in life. But unless we have developed our virtues, it will be impossible to fulfil our potential.

Acquiring and practising these virtues (wisdom, love, integrity, fortitude, self-control and justice) will help you fulfil your potential. You will be able to achieve all sorts of things in life when you have developed these important virtues (good moral habits), and you will be able to achieve more than you could without them.

Virtues	Description of Virtue
Wisdom	The habit of exercising good judgement; being able to see what is true and good and choosing the best course of action.
Love	The habit of acting selflessly, for the good of another, without seeking recognition or reward.
Integrity	The habit of being true to ourselves and truthful with others; standing up for moral principles and following our conscience.
Fortitude	The habit of the doing what is right and necessary in the face of difficulty.
Self-Control	The habit of self-restraint; the mastery and moderation of our desires, emotions, impulses and appetites.
Justice	The habit of treating everyone with equal respect and fairness.

1. Fill in the table below, identifying which virtues are displayed in your story, and briefly explaining why.

Virtue that is evident in the story you are reading	Explanation of how the virtue is evident

Developing Your Own Virtues

2. With your parent or carer, decide which of the virtues you will set as a personal target for this half term. Discuss and make a note of how you can develop this virtue:

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Enhanced Further Learning: **Geography: Coasts**

Easier Tasks	Harder Tasks
<p>PQE = Describe the major upland & lowland areas and river systems in the UK. Task = On a UK map, locate the major upland areas. Add the names of 7 UK cities.</p> <p>Task = Draw a bar graph showing the 10 longest rivers in the UK. Add a city each river flows through.</p>	<p>PQE = Explain the physical processes that produce distinctive coastal and glacial landforms. Task 1 = Find images of five different coastal landforms you have studied around the world and label them with their key features.</p> <p>Task 2 = Using a flow chart explain how a coastal area and the landforms there might change over time.</p>
<p style="text-align: center;">Literacy</p> <p>Define the following key terms:-</p> <ul style="list-style-type: none"> • Attrition • Hydraulic action • Saltation • Traction • Erosion • Deposition • Transport • Landform 	<p>PQE = Describe how management strategies affect coastal and glaciated areas. Task 1 = Imagine you are a resident at a coastal town where erosion is a serious problem. Write a letter to the local council explaining what kind of sea defence you want and why.</p>
<p style="text-align: center;">Skills/Numeracy</p> <p>PQE = Use Ordnance Survey maps, digital maps and aerial photographs to analyse an area. Task = Using an OS map identify the following features: Campsite, Train station, Beach, Groynes, Hotel.</p> <p>PQE = Draw and annotate geographical sketches. Task = Using the internet create sketches that show at least ten different things you might see at the beach.</p>	<p>Task 2 = Name a coastal area and give 5 reasons why tourists would visit that area.</p> <p><i>GCSE Questions</i></p> <p><i>“Explain the formation of a spit and a bar”.</i></p> <p><i>“Describe the processes of erosion and deposition that occur along UK coastlines”.</i></p> <p><i>“Describe the reason for predicted sea level rise in the future”.</i></p>

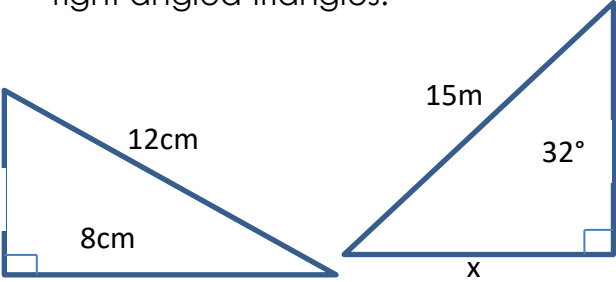
Enhanced Further Learning: **History: Civil Rights in Britain and the USA**

Easier Tasks	Harder Tasks
<p>Find an image from the Civil Rights movement in either Britain or the USA. Explain what it shows.</p> <p>Make a fact file about Martin Luther King.</p> <p>Find an image that shows segregation in the USA and label it to show the features.</p> <p>Find an image that shows how the US government works.</p>	<p>Create revision cards for this topic using what we have learned in class.</p> <p>Write a letter explaining why a statue of Paul Stephenson should be put up in Bristol.</p> <p>Write a new paper article about the arrival of the Windrush generation. Explain why they were invited to the UK and their contribution.</p>
<p style="text-align: center;">Literacy</p> <p>Define the following key words;</p> <ul style="list-style-type: none"> • Segregation • Discrimination • Colour bar • Boycott • Direct action • Ku Klux Klan • Supreme Court • Congress 	<p>Research the case of the Mangrove 9.</p> <p>Watch “Black and British” on BBC iPlayer (episode 4) and explain what it tells us about black people in Britain.</p> <p>Exam Questions: Describe two features of racial discrimination in the USA. (4 marks)</p> <p>Write a narrative account of changes in education in the USA, 1954-1957 (8 marks)</p>
<p style="text-align: center;">Skills/Numeracy</p> <p>Make a timeline showing the key events in the Civil Rights Movement. Research Brown vs Board of Education (1954). Explain why it was significant. Make a table showing the successes and failures of the British Civil Rights Movement.</p>	<p>Explain why there was change in the rights of black people in the USA, 1954-1960. (12 marks)</p> <p>Find a source relating to segregation in the USA and explain why it is useful.</p>

Enhanced Further Learning: **Maths (Foundation)**

<p style="text-align: center;">Easier Tasks Grade 1</p>	<p style="text-align: center;">Harder Tasks Grade 2/3/4</p>
<p>Calculate</p> <p>$456 + 254$</p> <p>$983 - 217$</p> <p>23×67</p> <p>$185 \div 5$</p>	<p>1) A shop keeper has 31 identical bars of soap. He is trying to arrange them on a shelf so each row has the same number of bars. Is this possible? Explain your answer?</p> <p>2) Write 96 as a product of its prime factors</p> <p>3) What is the highest common factor and lowest common multiple of 96 and 72?</p> <p>4) Here are 4 number cards: 5, 8, 3, 6. The cards are used for making calculations. Complete the following:</p> <p>$35 + _ _ = 121$ $83 - _ _ = 27$ $_ _ 8 + _ = 364$</p> <p>5) $3 \times 7 = 21$. Sam says that whenever you multiply two prime numbers together the answer will always be odd. Explain why Sam is wrong.</p> <p>6) Find the highest common factor of 32, 48 and 72.</p>
<p style="text-align: center;">Literacy Grade 1</p> <p>Create a definition for the following mathematical terms</p> <ul style="list-style-type: none"> • Factor • Multiple • Prime • Square • Cube 	<p>7) Simplify 27:45</p> <p>8) Share 120 in the ratio 2:3</p> <p>9) If the ratio of girls to boys is 4:5. If there are 45 boys. How many girls are there?</p> <p>Here are four single-digit number cards.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid purple; border-radius: 10px; padding: 5px; margin: 2px;">5</div> <div style="border: 1px solid purple; border-radius: 10px; padding: 5px; margin: 2px;">8</div> <div style="border: 1px solid purple; border-radius: 10px; padding: 5px; margin: 2px;">3</div> <div style="border: 1px solid purple; border-radius: 10px; padding: 5px; margin: 2px;">6</div> </div> <p>The cards are used for making calculations. Complete the following.</p> <p>a $\boxed{3} \boxed{5} + \boxed{\dots} \boxed{\dots} = 121$</p> <p>b $\boxed{8} \boxed{3} - \boxed{\dots} \boxed{\dots} = 27$</p> <p>c $\boxed{\dots} \boxed{\dots} \boxed{8} + \boxed{\dots} = 364$</p>
<p style="text-align: center;">Skills/Numeracy Grade 2/3</p> <p>If $a = 6$ and $b = 8$. What is $a^2 + b^2$</p> <p>Estimate 34×17</p> <p>Round 345.783 to;</p> <ol style="list-style-type: none"> a) The nearest 10 b) The nearest 100 c) 1 decimal place d) 2 decimal places e) 1 significant figure 	

Enhanced Further Learning: **Maths (Higher)**

<p style="text-align: center;">Easier Tasks Grade 2/3</p>	<p style="text-align: center;">Harder Tasks Grade 4/5</p>
<p>Write 24 as a product of its prime factors.</p> <p>Find the highest common factor of 24 and 60.</p>	<p>1) Calculate x in each of the following right angled triangles.</p> 
<p style="text-align: center;">Literacy Grade 4/5</p> <p>Explain the difference between Pythagoras' theorem and right angles trigonometry.</p>	<p>2) A ship sails 5 miles North and then 8.1 miles East. It then returns directly to its starting point. What is the total distance the ship travels?</p>
<p style="text-align: center;">Skills/Numeracy Grade 3</p> <p>One bus leaves the bus station every 15 minutes. Another bus leaves the station every 12 minutes.</p> <p>They both leave the station at 2.30pm. At what time will this happen next?</p> <p>The HCF of two numbers is 2. Write down three possible pairs of numbers.</p> <p>If $a=4.5$ and $b = 6.2$ Work out</p> <p>$a^2 + b^2$</p> <p>$\sqrt{a^2 + b^2}$</p>	<p>3) Can a right angled triangle have lengths of;</p> <ul style="list-style-type: none"> • 4cm, 5cm and 8cm? • 9cm, 12cm and 15cm? • 5cm, 12cm and 13cm? <p>4) A ladder 7m long is leaning against a wall. The angle of elevation is 72°.</p> <ul style="list-style-type: none"> • What height does the ladder reach? <p>5) A man is working out the height of a vertical tree.</p> <p>The man is able to measure the angle of elevation of the top of the tree from his measuring instrument. The measuring instrument is 1.8m above the ground level. When the man is standing 19m from the base of the tree, the angle he measures is 56°.</p> <p>Calculate the height of the tree.</p>

Enhanced Further Learning: **French: The Home**

<p style="text-align: center;">Easier Tasks</p> <p>PQE – Vocabulary: Make a wordsearch using the key words we have learned this half term.</p> <p>PQE – Vocabulary: Make a revision mindmap of the words we have learned this half term.</p> <p>PQE – Vocabulary: Create a set of flashcards to help you learn the words we have learned this half term.</p>	<p style="text-align: center;">Harder Tasks</p> <p>PQE – Writing (content, range of language, accuracy) Write an answer to the following questions in French:</p> <ul style="list-style-type: none"> - Où habites-tu? (Where do you live?) - Comment est ton quartier? (What is your area like?) - Décris ta maison. (describe your home). - Où voudrais-tu vivre dans le futur? (Where would you like to live in the future?) <p>PQE – Translation: I live in a small house in the city centre. My house is comfortable but I think the kitchen is old and ugly. I would like a new kitchen. Also, in my house, there isn't a garden and I would like a garden because I like to spend time outside.</p> <p>PQE – Tenses: Write a set of rules explaining how you conjugate the verb 'vivre' in the present tense.</p>
<p style="text-align: center;">Literacy</p> <p>Key words:</p> <p>J'habite / je vis – I live Une maison – a house Un quartier – an area Il y a – there is / are On trouve – we find Une pièce – a room Je voudrais – I would like</p>	
<p style="text-align: center;">Skills/Numeracy</p> <p>PQE – Vocabulary: Search Carr Manor Year 9 French on quizlet for vocabulary practice and games.</p> <p>PQE – Vocabulary: Create your own set of vocabulary games on quizlet.</p>	

Enhanced Further Learning: **Spanish: Fashion**

<p style="text-align: center;">Easier Tasks</p> <p>PQE – Vocabulary: Make a wordsearch using the key words we have learned this half term.</p> <p>PQE – Vocabulary: Make a revision mindmap of the words we have learned this half term.</p> <p>PQE – Vocabulary: Create a set of flashcards to help you learn the words we have learned this half term.</p>	<p style="text-align: center;">Harder Tasks</p> <p>PQE – Writing (content, range of language, accuracy) Write an answer to the following questions in Spanish:</p> <ul style="list-style-type: none"> - ¿Qué piensas de tu uniforme? (What do you think of your uniform?) - ¿Qué llevas los fines de semana? (What do you wear on the weekends?) - ¿Qué compraste el fin de semana pasada? (What did you buy last weekend?) - ¿Qué vas a hacer el fin de semana que viene? (What are you going to do next weekend?) <p>ARE – Translation: Normally I wear blue jeans and a baggy jumper on the weekends because it's comfortable. However, this weekend I am going to wear my multicoloured trainers because I am going to the park with my friends. Last weekend I bought some expensive shirts and a green hat.</p> <p>ARE – Accuracy: Find a picture of a famous fashion icon and write 4 sentences about the picture in Spanish.</p> <p>Write a set of rules explaining how you conjugate verbs into different tenses.</p> <p>ARE – Vocabulary: Create a party outfit and label it in Spanish.</p>
<p>Literacy</p>	
<p>Key words:</p> <p>La moda – fashion llevo – I wear Me gustaría llevar – I would like to wear Pienso que – I think that</p>	
<p>Skills/Numeracy</p>	
<p>PQE – Vocabulary: Search Carr Manor Year 9 Spanish on Quizlet for vocabulary practice and games.</p> <p>PQE – Vocabulary Create your own set of vocabulary games on Quizlet.</p>	

Enhanced Further Learning: **PE:**
More to PE than being a Participant

Each time you attend Flexible Learning, this can also count as one piece of Enhanced Further Learning!

Easier Tasks	Harder Tasks
<p>PQE: Can identify the effects of exercise on the body in the short term.</p> <ul style="list-style-type: none"> -Research stress and the causes of stress. -Create a piece of work outlining the effect of PE and sport on stress. -Learn the rules of the sport of your choice 	<p>PQE: Works with motivation and makes informed choices to lead a healthy and active lifestyle.</p> <ul style="list-style-type: none"> -Attend an extra-curricular practice and take on a new role such as the leader or umpire/referee.
<p style="text-align: center;">Literacy</p> <p>PQE: Can identify the effects of exercise on the body in the short term.</p> <p>Stress – when does stress occur? Umpire – what is an umpire? Which sports use umpires? Referee – what is a referee? Which sports use referees?</p>	<ul style="list-style-type: none"> -Create a learning map which shows the rules and regulations of the sport of your choice. -Complete the following task roles in the sport of your choice – referee/umpire, organiser, official, player, a line judge. -Organise a break time or lunch time practice or competition for younger pupils. -Produce an independent skill card which another pupil could use to help them get better in a skill.
<p style="text-align: center;">Skills/Numeracy</p> <p>PQE: Works with motivation and makes informed choices to lead a healthy and active lifestyle.</p> <ul style="list-style-type: none"> -Attend an extra curricular practice in a new sport. -Create a poster to direct pupils to different roles within a PE lesson. -Take the 30 day sit up challenge. -Take the 30 day squat challenge. 	<ul style="list-style-type: none"> -Produce a poster which outlines the best relief for stress. <p>ARE: Can identify benefits of exercise in the long term.</p>

Each time you attend Flexible Learning, this can also count as one piece of Enhanced Further Learning!

Easier Tasks

1. **Dance PQE Appraising:** Describe the difference between narrative and abstract dance. Include a short quote/screen grab of a narrative or abstract dance you find from youtube.
2. **Acting PQE appraising:** Describe the difference between site specific theatre and theatre in the round.
3. **Acting PQE – Voice/appraising:** Research the meaning of pace pause and accent when speaking
4. **Art PQE Appraising:** Research a fact file about Salvador Dali.
5. **Music PQE Appraising:** Research the history of your chosen instrument. How has it developed over the years?

Literacy

Learn the spelling of the following words...

Drama	Dance	Music
Themes	Musicality	Rhythm
Monologue	Stylistic qualities	Composing
Narrator	Choreography	Syncopated

Fine art

Techniques
 Layering
 Sculpture

Skills/Numeracy

1. **Acting PQE - Voice:** Record yourself and a friend or family member practicing your script using a change in pace, a pay sees and an accent
2. **Music PQE – Rhythm/Appraising:**
<https://www.youtube.com/watch?v=Gf1WT8VEZxk>. Listen to the track, Never ending story, and analyse/work out the counts of 8 in the instrumental section of the song only. What is the song about? Do you like it? Why/why not?
3. **Dance PQE – Choreography:** Create 4 lots of 8 movements to the start of the never ending story music above. Make this repeat. Video yourself and show Miss.
4. **Art PQE – Composition in Art:** Design the costume for a dancer that is dancing in a piece about *Time*. Use the 8 elements to help.

Harder Tasks

1. **Dance PQE – Choreography:** Plan and write/draw the structure/floor plan for a solo dance that uses *Time* as the stimulus. Think of a clear beginning, middle and end, and whether the piece begins or end son stage, and what levels are used.
2. **Acting PQE – Interpretation:** Write a short script for two people or a monologue about a strange character that has gone backwards or forwards in TIME.
3. **Art PQE – Formal elements:** Create your own painting/drawing that represents Time. Use a range of materials.
4. **Music PQE – Melody/Chords/Notation:** Come and collect an instrument progress pack from your Music teacher. Practice the skills. How far can you progress? Film yourself or show your teacher live



5. **All PQE areas – Appraising:** Discuss – is this art? Why? Why not?

Enhanced Further Learning: **RE: Living the Muslim Life**

<p style="text-align: center;">Easier Tasks Exam knowledge for A-D questions</p>	<p style="text-align: center;">Harder Tasks Exam grade 2-9</p>
<p>ARE: Pupils can draw similarities between Islam and Christianity on key themes. Create a poster of the 10 obligatory Acts for Shia Muslim with examples of each one.</p> <p>Explain the difference between Shia and Sunni Muslims?</p> <p>Explain how the Ten commandments are similar and different compared to the 10 Obligatory Acts.</p>	<p>ARE: Pupils can explain the significance of religious of practices in Islam and or Christianity.</p> <p>A) Outline three beliefs about the Shahadah (3 marks).</p> <p>B) Describe two differences in worship between Islam and the main religious tradition of Great Britain (4 marks).</p> <p>C) Explain two ways that Muslims observe Ramadan (4 marks)</p> <p>D) Explain why Zakah is important to Muslims? Refer to a source of authority in your answer (5 marks)</p>
<p style="text-align: center;">Literacy Define the following words:</p> <ul style="list-style-type: none"> • Khums • Tawalla • Tabarra • Shahadah • Ablution • Salah • Shirk • Nisab • Sadaqah • Zakah 	<p>ARE: Assess religious teachings and explain their significance.</p> <p>E) 'It's the duty of governments, not individuals, to take care of the less fortunate'.</p>
<p style="text-align: center;">Skills/Numeracy</p> <p>ARE: Pupils can use knowledge of ethical issues and apply religious teachings from Islam and Christianity.</p> <p>Produce a spider diagram on Jihad; separating the lesser and greater jihad.</p> <p>Create a leaflet on Zakah and Khums. What is the difference and how does it affect the lives of Muslims?</p>	<p>Evaluate this statement considering arguments for and against. In your response, you should:</p> <ul style="list-style-type: none"> • Refer to Muslim teachings • Reach a justified conclusion (12 marks) • <p>F) 'The benefits of Hajj outweigh the challenges'.</p> <p>Evaluate this statement considering arguments for and against, you should:</p> <ul style="list-style-type: none"> • Refer to Muslim teachings <p>Reach a justified conclusion (12 marks)</p>

Enhanced Further Learning: **Biology**

Easier Tasks	Harder Tasks										
<p style="text-align: center;">Literacy</p> <p>Write a definition for the following words:</p> <ul style="list-style-type: none"> • Cell membrane • Vacuole • Nucleus • Cytoplasm 	<ol style="list-style-type: none"> 1. Explain how the structure of sperm cells is related to their function. (Expected) 2. Explain in detail how the circulatory system works. (Embedded) 3. Explain how vaccine can be used to help prevent disease. (Exceptional) 4. Describe using diagrams how white blood cells can fight against disease (3 ways). Embedded 5. Name 5 ways the human body defends itself against the entry of pathogens. (Expected) 6. Compare anaerobic and aerobic respiration. (Expected) 										
<p style="text-align: center;">Skills/Numeracy</p> <ol style="list-style-type: none"> 1) Calculate the mean for the following data points. Expected 12,11,14,14,12 11,15,15,16,18 90,92,99,92,93 2) Plot a graph using this data, from an experiment investigating respiration of snails. Embedded <table border="1" data-bbox="193 1541 794 1800"> <thead> <tr> <th>Temperature (°C)</th> <th>Bubbles of gas per minute</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>12</td> </tr> <tr> <td>20</td> <td>16</td> </tr> <tr> <td>25</td> <td>21</td> </tr> <tr> <td>30</td> <td>24</td> </tr> </tbody> </table>	Temperature (°C)	Bubbles of gas per minute	15	12	20	16	25	21	30	24	<ol style="list-style-type: none"> 7. Draw a labelled diagram of the heart. Use the internet and textbooks to help you. (Expected)
Temperature (°C)	Bubbles of gas per minute										
15	12										
20	16										
25	21										
30	24										

Enhanced Further Learning: **Chemistry: Rates of Reaction**

Easier Tasks

Q1. What is a catalyst?
(Grade 3)

Q2. State five factors that can alter the rate of a chemical reaction? (Grade 4)

Q3. Name three practical methods that could be used to measure the rate of a reaction? (Grade 4)

Literacy

Grade 9-1

Define each key term:

- Catalyst
- Enzyme
- Activation energy
- Collision frequency
- Reversible reaction
- Reactivity series

Skills/Numeracy

1. Plot the following on a suitable graph
(Grade 7)

Conc Of HCL (m)	Vol of gas produced (cm ³)
0.1	20
0.2	45
0.4	32
0.5	85
0.6	110

1. Draw a line of best fit and circle the anomalous point (Grade 6)
2. What was the independent and dependent variable? (Grade 4)
3. What equipment would you need for this experiment? (Grade 5)

Harder Tasks

Q1. Give the formula that can be used to work out rate of reaction. (Grade 5)

Q2. Describe a precipitation method that could be used to measure the rate of a chemical reaction.
(Grade 5)

Q3. Give one possible problem with using the change in mass to follow a rate of reaction.
(Grade 5)

Q4. Explain why increasing the temperature of a given reaction increases the rate.
(Grade 6)

Q5. Draw and label an exothermic reaction profile to show how using a catalyst can change the rate of a reaction. (Grade 6)

Q6. Explain how increasing the surface area of a reactant can increase the rate of a reaction. In your answer you should mention Surface area to volume ratio. (Grade 7)

Q7. Why does increasing the pressure for gases increase the rate of reaction? (Grade 7-8).

Extension task- Ask you teacher for an exam question on rates of reaction.

Enhanced Further Learning: **Physics**

Easier Tasks	Harder Tasks										
<p>5) Draw a diagram of a magnetic field around two magnets; a) Attracting b) Repelling</p> <p>6) Describe the relationship between force and extension.</p> <p>7) In which direction to magnetic field lines go?</p>	<ol style="list-style-type: none"> 1. Write a Scientific method to separate magnetic materials from non-magnetic materials. Include equipment, safety and connective words. (Expected) 2. Explain how strength and distance from a magnet are related. (Expected) 3. Describe how to make an electromagnet using an iron nail and a battery. (Expected) 4. Name 4 ways an electromagnet can be made stronger. (Embedded) 5. Compare the field lines of two bar magnets attracting and repelling. (Embedded) 6. Draw a labelled diagram of the Earth's magnetic field, showing both geographic and magnetic poles. (Exceptional) 7. Use your diagram above to explain why the Northern Lights can be seen from Earth. (Exceptional) 										
<p style="text-align: center;">Literacy</p> <p>Write a definition for the following words:</p> <ul style="list-style-type: none"> • Attraction • Repulsion • Magnetic field • Extension • Electromagnet 											
<p style="text-align: center;">Skills/Numeracy (Embedded)</p> <p>3) Plot a graph using this data, from an experiment investigating Load and extension.</p> <table border="1" data-bbox="193 1413 785 1619"> <thead> <tr> <th>Force (N)</th> <th>Extension (m)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.1</td> </tr> <tr> <td>5</td> <td>1.0</td> </tr> <tr> <td>9</td> <td>1.9</td> </tr> <tr> <td>13</td> <td>2.8</td> </tr> </tbody> </table> <p>4) Draw a line of Best Fit. 5) Describe the trend of the graph.</p>	Force (N)	Extension (m)	1	0.1	5	1.0	9	1.9	13	2.8	
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