2018/19

Enhanced Further Learning

Year 9

Enhanced Further Learning: **Food Preparation and Nutrition**

<table>
<tr>
<td><u>Easier Tasks</u>
ARE: Students can cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet.
Task: Research 2 of the following target groups and explain why they may need to follow a specific food diet.
1. Muslims
2. Vegans
3. Elderly
4. Diabetics</td>
<td rowspan="3"><u>Harder Tasks</u>

ARE: Students understand and apply the principles of nutrition and health and the Eatwell guide to their cooking.

1. Explain the function of protein in the diet, and give examples of sources of protein
(challenge: which foods contain protein which vegans could eat?)

2. Explain the function of fats in the diet, and give examples of sources of fat.
(challenge: what is the function of unsaturated fats? Give some examples of sources of unsaturated fats and why they are more beneficial that saturated fats)

ARE: Students can cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet.

3. Task: Go onto the internet and find a recipe for a beef burger and chips. Explain how the ingredients could be changed to make the dish healthier.

4. Task: Go onto the internet and find a recipe for a spaghetti Bolognese. Explain how the cooking methods could be changed to make the dish healthier.

5. Task: Suggest healthier alternatives for the following with detailed reasons for your suggestions:
• Fried bacon sandwich with ketchup on white bread
• Deep fat fried chip butty
• Chocolate mousse dessert
• Crisps
• Fried chicken with chips
• Jacket potato with cheese</td>
</tr>
<tr>
<td><u>Literacy</u>
Task: Write out the definitions of these key words.
1. Sieve
2. Sensory
3. Organoleptic
4. Appearance
5. Texture</td>
</tr>
<tr>
<td><u>Skills/Numeracy</u>

ARE: Students can understand the characteristics of a broad range of ingredients.

Task: Go onto the internet and find the cost of the following meals in at least 3 different supermarkets.

1. Lasagne
2. Chicken Cesar salad
3. Chocolate fudge cake
4. Pepperoni pizza
5. Chicken wings

Challenge: Work out how much It would cost for a family of four to go to one of the supermarkets and purchase 2 lasagne main meals with 1 Cesar salad side and 2 chicken wings and complete their meal with 3 chocolate fudge cake portions</td>
</tr>
</table>

Enhanced Further Learning: **English**

Easier Tasks PQES hit:

- Each PQE in AO3.

Harder Tasks PQES (1 and 2) hit:

- Each PQE in AO5 and AO6.
- Each PQE in AO1 and AO2.

Literacy:

- Each PQE in AO6

Skills/Numeracy PQES (3) hit:

- Each PQE in AO4.

Easier Tasks

Can you identify 3 similarities between the film 'Frozen' and another film of your choice?

Things to consider:

- *GAP*
- *Context*
- *Themes*
- *Actors/actresses*
- *Narration style (1st/3rd person)*

Literacy

Describe your journey to school today, with 3 different sentence types and 3 a semi-colon.

Harder Tasks

1) Using the success criteria, can you write a **persuasive** article, persuading parents about the importance of young love to teenagers?
    - *AAFORREST Techniques*
    - *Varied sentence types*
    - *Varied punctuation (; : , !)*

2) Using the success criteria, can you write a **descriptive** narrative, describing a favourite childhood memory.
    - *Descriptive language techniques (metaphor/simile/ personification/ alliteration)*
    - *Varied sentence types*
    - *Effective paragraphing*
    - *Varied punctuation (; : , !)*

3) Read the article and answer the GCSE style questions:
    i) Identify two things that help the robot recognise the people's faces (lines 1-5)
    ii) Give one example of how the author uses language to show the effects of young love on some teenagers.
    iii) Analyse how the author uses language and structure to interest and engage the reader.

Write two PETERs on language used and 2 PETERs on structural techniques used.
Look out for:

- *Formal language*
- *Metaphor*
- *Statistics*
- *Anecdotes*
- *Sentence structure*
- *Listing*
- *Contrast*
- *Rhetorical Question*
- *Emotive language*

Skills/Numeracy

Evaluate how successfully the author shows the importance of young love.

Teenagers in Love

Friends from our childhood or adolescence are special, no matter how much time has elapsed between visits. These compelling connections are the result of shared roots during the formative years. Our childhood friends and teenage sweethearts experienced with us all the wonderful, horrible, boring, and embarrassing moments that helped to make us who we are today.

Yet, when children are young, parents may regard these relationships as insignificant. If the family must move to a new community and the children's close friends must be left behind, so what? They will make new friends, the parents assure them. But, is a friend as interchangeable as a new toy for an old one, or is there more to friendship than that? Why are we so elated to rediscover long lost friends in our adult years if, as some parents believe, they were so dispensable to us as children?

Even more belittled by many parents is a teenager's (or preteen's) love for a boyfriend or girlfriend. Adults refer to these relationships with demeaning language, calling them "just puppy love," and these romantic bonds are not taken seriously. Parents question the ability of teenagers to know what love is, yet they accept their teenagers' statements, "I love you, Mom & Dad," with full appreciation and at face value. If adults accept that teenagers can love parents truly, then shouldn't they also accept that teen romances are "real" love?

Dating for fun is relatively new. Teenagers many years ago married their first sweethearts right out of high school. These men and women of the World War II Generation married at younger ages than their Baby Boomer children or their Generation X or Millennial grandchildren.
But education has become prolonged, so marriage is later.

Adults who underestimate the strength of the bond-- or the impact of the loss -- of a first love may have forgotten what a blow it was when they lost their own first loves. They may even try to comfort teenagers with lighthearted lessons: a surprising number of men and women wrote to me to bitterly complain about parents who joked years ago, "Don't worry! Boyfriends/girlfriends are like buses... a new one comes along every ten minutes!" This was not helpful, and it was not funny. The loss of a first love can be so crushing to some teenagers that they become suicidal.

The pain of the breakup will subside with time, but the love may stay buried and dormant for decades. While most men and women find satisfying partners after first love breakups, there are adults who spend their married years aware that "something is missing." They continue to think about their lost first loves. Perhaps if they had married their first loves when they were younger, they tell me, they could have formed lasting and fulfilling marriages, but they will never know. These romances were interrupted - often by their parents' interference.

In my recent survey of 1600 people (who had never tried a reunion with a lost love), ages 18 to 92, 56% of the participants said they would not want to go back to their first loves, 19% were not sure -- but 25% said they would!

The longer I study lost loves and lost love reunions, the clearer it becomes to me how important young love really is. First love, young love, is indeed real love. This intense love does not come along every ten minutes. It may come only once.

Enhanced Further Learning: **Geography**

<table>
<tr>
<td><u>Easier Tasks</u>

PQE = Explain how food, water and energy are fundamental to human development
Task 1 = Explain how water scarcity will affects future population growth?
Task 2 = Explain why geothermal energy is used in areas such as Iceland?</td>
<td rowspan="3"><u>Harder Tasks</u>

PQE = Explain the physical processes that produce distinctive coastal and glacial landforms
Task 1 = Explain the formation of corries and pyramidal peaks. Use diagrams to make things clearer.
Task 2 = Produce a leaflet showing you understand the glacial budget.
Task 3 = Explain how glacial troughs form, including the key types of erosion that occur.

PQE = Describe how management strategies affect coastal and glaciated areas
Task 1 = Write a report suggesting the various avalanche management scheme that are used in Alpine areas.
Task 2 = Describe how Alpine areas manage tourism to allow for sustainable development.

PQE = Explain how increasing energy demands can lead to conflict
Task 1 = Explain clearly why ‘nuclear power’ is a controversial method of producing energy
Task 2 = Describe the arguments for and against the development of sustainable energy schemes in Low Income countries (LICs).</td>
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<tr>
<td><u>Literacy</u>

Write a definition for the following:
Plucking
Abrasion
Freeze-thaw
Corrie
Glacial trough
Arete
Water Stress
Organic Produce
Agribusiness
Fracking
Fossil Fuels</td>
</tr>
<tr>
<td><u>Skills/Numeracy</u>

PQE = Draw and annotated geographical sketches
Task 1 = Find a photograph of an erosional glacial landscape. Draw an annotated sketch including at least 3 key words.
Task 2 = Find a photograph of a depositional glacial landscape. Draw an annotated sketch including at least 3 key words.</td>
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Enhanced Further Learning: **History**

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<tr>
<td><u>Easier Tasks</u>

PQE: Civil Rights in America

Find an image that represents Civil rights in 1960s America.

Ask a friend / family member what they know about the Civil Rights movement in America.

Compose a fact-file about President Johnson and Johnson and how they dealt with civil rights.

Write a profile about Martin Luther King- it should include who he was, what he stood for and what he did.</td>
<td rowspan="3"><u>Harder Tasks</u>

PQE: Pupils can use their knowledge of the period to describe, explain and analyse events, people and factors.

Describe the racial tensions in America in the 1960s (4 marks)

Describe two ways in which the Civil Rights campaigners in the 1950s and 1960s challenged racial segregation? (4 marks)

PQE: Pupils can use secondary interpretations to examine change, cause and significance.
Knowledge for 8 mark interpretation exam questions;
• What was Martin Luther King’s role in the Civil Rights Movement?
• What was the significance of Malcolm X and the Black Power movement?
• What were the Civil Rights Act of 1964 and 1968 and what was the impact?

PQE: Pupils can use their knowledge of the period to describe, explain and analyse events, people and factors.

Who was more successful in their attempts to make America a better, fairer society;
• President Kennedy
• President Johnson
(12 marks)

Which of the following had more of an impact on American society;
• Brown v Board of Education ruling
• Little Rock incident
(12 marks)</td>
</tr>
<tr>
<td><u>Literacy</u>

Write a definition for the following terms:
• Inequality
• Segregation
• Jim Crow Laws
• Civil Rights
• Civil Rights Act</td>
</tr>
<tr>
<td><u>Skills/Numeracy</u>

PQE: Civil Rights in America

Find: An image from the 1960s that shows what life was like for black people in the USA.

Create: a display how different people campaigned for Civil Rights

Explain: What were the Black Panthers and how did they divide opinion.</td>
</tr>
</table>

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

Easier Tasks

PQE: Apply the knowledge of circles to solve problems

a) Find the area and circumference of a circle with radius 5 cm.

b) A triangle has angles of 35° and 110°. How big is the third angle? What kind of triangle is this?

Literacy

When working out worded questions, what should you take the following key words to mean? The first one has been done for you:

"Sum" means: **ADD**

"Total" means:_____

"Difference" means:_____

"The same" means:_____

Skills/Numeracy

PQE: Apply ratio knowledge

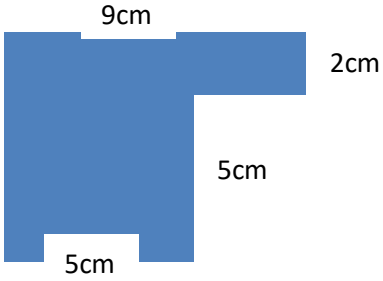
a) Write a step-by-step guide for sharing any amount into a given ratio.

PQE: Understand and use the rules of angles in parallel lines

b) Explain the four different types of angles in parallel lines. You should draw a picture for each to illustrate your understanding.

Harder Tasks

1) Find the area and perimeter of this shape.



PQE: Apply ratio knowledge

2) James shares £300 between his three children in the ratio 1 : 2 : 3. How much money does each child receive?

3) Jam is made from sugar and strawberries in the ratio 2 : 7. Julia puts 350grams of strawberries in a pot, how much sugar should she add?

PQE: Find the volume of prisms

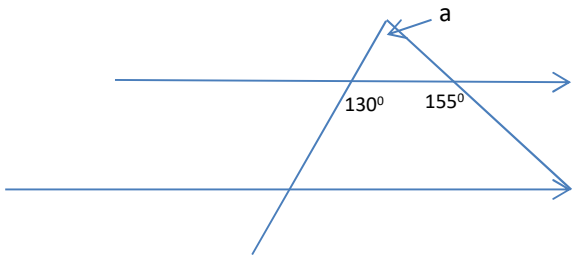
4) Work out the volume of a cylinder with radius 5 cm and height 8 cm.

PQE: Work out interior and exterior angles in regular polygons

5) Show that no regular polygon can have an exterior angle of 25°.

PQE: Understand and use the rules of angles in parallel lines

6) Find angle a:



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

Easier Tasks

PQE: Apply the knowledge of circles to solve problems

a) Find the area and circumference of a circle with diameter 8cm.

b) Find the area and perimeter of a semi-circle with radius 2.5 inches.

Literacy

Explain in your own words what the following mathematical words mean:

Angle

Circumference

Perimeter

Sector

Skills/Numeracy

PQE: Work out interior and exterior angles in regular polygons

a) How big are the exterior angles of a regular nonagon?

b) A ship starts at point A and travel 50km at a bearing of 045^{o} to point B. It then travels at a bearing of 134^{o} to point C. Find the bearing of the ships final point from A.

PQE: Find the volume of prisms

c) Test yourself to memorise the formulae for the area of a trapezium, the volume of a cylinder and the volume of a pyramid.

Harder Tasks

PQE: Work out interior and exterior angles in regular polygons

1) Show that no regular polygon has an exterior angle of 25^{o}.

PQE: Apply the knowledge of circles to solve problems

2)Find the area and arc length of a sector with radius 9cm and an angle of 52^{o}.

3) A square has an area of 64cm^{2}. A triangle has the same base length as the square, and the same area. Find the perpendicular height of the triangle.

PQE: Understand and use the rules of angles in parallel lines

4) Make a diagrammatic proof that the angles in a triangle add up to 180^{o}.

PQE: Work out interior and exterior angles in regular polygons

5) 6 regular hexagons can fit together at a point with no gaps. Can you explain why this is, and find any other regular polygons that have this property?

PQE: Find the volume of prisms

6) A cylinder has a volume of 125cm^{3}. It has a circle as a base of radius 5cm. Work out the height of the cylinder. Give your answer to 2 d.p.

7) A sphere has the same volume as a cone. If the sphere has radius 5cm, and the cone has perpendicular height 12cm. Find the radius of the cone.

Enhanced Further Learning: **French**

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<tr>
<td><u>Easier Tasks</u>

PQE - Identify a wide range of familiar TL vocabulary: Make a wordsearch using the key words we have learned this half term.
PQE - Identify a wide range of familiar TL vocabulary: Make a revision mindmap of the words we have learned this half term.
PQE - Identify a wide range of familiar TL vocabulary: Create a set of flashcards to help you learn the words we have learned this half term.</td>
<td rowspan="3"><u>Harder Tasks</u>

PQE - Writing : Write an answer to the following questions in French:

- Tu aimes les maths ? (Do you like Maths?)
- Qu’est-ce que tu voudrais étudier? (What would you like to study?)
- Qui est ton prof préféré? (Who is your favourite teacher?)

PQE - Translate sentences accurately from the French to English: passage 1 into English (you can collect this from your classroom).
PQE - Translate sentences accurately from the French to English: passage 2 into English (you can collect this from your classroom).
PQE - Translate sentences accurately from English into French: passage 3 into French (you can collect this from your classroom).
PQE - Translate sentences accurately from English into French: passage 4 into French (you can collect this from your classroom).

PQE - Writing : Find a picture of a school and write a paragraph about the picture in French.
PQE - Writing : Write a set of rules explaining the difference between present and past tense verbs.
PQE - Writing : Create a map of your old primary school and annotate it with sentences in past tense French.</td>
</tr>
<tr>
<td><u>Literacy</u>

Key words:
L’anglais – English
Les maths – maths
Le français – French
L’histoire – history
La géographie – geography
L’informatique – IT
Le sport - PE</td>
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<tr>
<td><u>Skills/Numeracy</u>

PQE - Identify a wide range of familiar TL vocabulary: Search Carr Manor Year 9 French on Quizlet for vocabulary practice and games.
PQE - Identify a wide range of familiar TL vocabulary: Create your own set of vocabulary games on Quizlet.</td>
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Enhanced Further Learning: **Spanish**

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<td><u>Easier Tasks</u>

PQE - Identify basic vocabulary: Take your vocab book home and learn 15 words by heart this week.

PQE - Identify basic vocabulary: Make a revision mindmap of the words we have learned this half term.

PQE - Identify basic vocabulary: Create a set of flashcards to help you learn the words we have learned this half term.</td>
<td rowspan="3"><u>Harder Tasks</u>

PQE - Writing : Write an answer to the questions in Spanish:

- ¿Te gusta escuchar música? (Do you like listening to music?)
- ¿Cuál es tu película favorita? (What is your favourite film?)
- ¿Te gusta leer? ¿Porqué? (Do you like reading? Why?)

PQE – Translation: translate passage 1 into English (you can collect this from your classroom).
PQE - Translation: translate passage 2 into English (you can collect this from your classroom).
PQE - Translation: translate passage 3 into Spanish (you can collect this from your classroom).
PQE - Translation: translate passage 4 into Spanish (you can collect this from your classroom).

PQE - Writing: Write a paragraph about a film you have watched recently.

PQE - Listening: Watch a Spanish film (ask your teacher for suggestions) and write a review of it in English.

PQE - Identify basic vocabulary: Listen to a Spanish song (ask your teacher for suggestions) and note down any words you recognise.</td>
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<tr>
<td><u>Literacy</u>

Key words:

La música – music
Las películas – films
Los libros – books
Escuchar – to listen
Ver – to watch
Leer – to read</td>
</tr>
<tr>
<td><u>Skills/Numeracy</u>

PQE - Identify basic vocabulary: Create your own set of vocabulary games on Quizlet.

PQE - Identify basic vocabulary: Create your own spelling test for people in your class on the vocabulary you have studied.</td>
</tr>
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Enhanced Further Learning: **PE**

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

Easier Tasks

ARE: Can identify the effects of exercise on the body in the short term.
Attend an extra curricular PE club after school. Think about the changes that happen to your body as you start to exercise. Make a poster, picture or video describing the changes that happen as you exercise.

Think about:

The colour of your skin?
Your breathing?
Your heart rate?

Literacy

ARE: Can idescribe the effects of exercise on the body in the short term.
Define the following terms:
Heart rate
Breathing rate
Vasodilation
Vasoconstriction
Sweating

Skills/Numeracy

ARE: Can identify the effects of exercise on the body in the short term.
Read the following article and highlight the important facts surrounding exercise and academic success.

http://www.bbc.co.uk/news/uk-scotland-24608813

Harder Tasks

ARE: Can identify benefits of exercise in the long term.
Produce a research presentation, booklet or leaflet describing the LONG TERM effects of exercise.

You should consider the following different effects that happen to the body as a result of a long term training programme:
Effects on the muscles
Effects on the heart
Effects on the heart rate
Effects on the breathing
Effects on the lungs

ARE: Works with motivation and makes informed choices to lead a healthy and active lifestyle.
Produce a poster or presentation detailing the psychological and social benefits that exercise can have on you.

Read the following article on physical activity and academic success.
http://www.bbc.co.uk/news/uk-scotland-24608813
Sum up the article in a 50 word piece of writing.

ARE (Excep): Can explain the effects of exercise on the body in the long term.
Produce a written argument to send to the government to show them the importance of providing free physical activity for young people.

Enhanced Further Learning:
Performing Arts Study School

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

Easier Tasks

Look up on youtube ONE of the following:
Art work based on the future.
Drama performance with a futuristic storyline
Dance pieces based on a future theme.
Music with the future in the lyrics.

Appraising PQE all: Write a review of what you watch:
Exp: Identifying what it is about
Emb: Describing what happens and why
Exc: Explaining why you liked it/didn't like it and why and how they showed the theme/need to improve the theme and what they could add.

Literacy

Art:
Minimalism
Surrealism
Dance:
Narrative
Episodic
Music:
Melody
Harmony
Drama:
Abstract
Naturalistic

Skills/Numeracy

Rehearse your study school **dance/drama/music work** in flexible learning time. Y9 time is on a **Monday at lunchtime.**

Go to Art club on Tuesdays after school to catch up on art work done in skills sessions.

Harder Tasks

ART PQE Media: Draw a futuristic picture or paint a scene from the future. Use a range of media techniques including:
Dot work
Collage
Water colours
Shading
Music PQE – appraising: Listen to this track and write a review.
https://www.youtube.com/watch?v=YJ9W2pZwvlY
Exp: Identify the instruments that make it sound futuristic
Emb: Describe the mood and feel it creates.
Exc: Justify and explain your reasons for your argument. Use examples such as lyrics, chords, instruments.
Drama PQE - voice:
Write a short monologue that is based in the future, about a person living in the future and comparing it to the past. Video yourself speaking or reading it. Use tone, pace, pitch and volume to show the emotion of the character.
Dance PQE – appraising:
Watch this clip:
https://www.youtube.com/watch?v=o-M7BRsX6Gc
Exp: Identify the elements in the performance that link to the future.
Emb: Describe the movements/actions that show the theme of the future.
Exc: Justify/explain why you like it/don't like it and give movement/music/costume/lighting examples.

Enhanced Further Learning: **RE**

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<td><u>Easier Tasks</u>

PQE: Assess religious teachings and explain their significance on the lives of followers

Create a poster on the different Christian celebrations.

Explain the difference between liturgical and non-liturgical worship.

Design a spider diagram illustrating the different types of Christian denominations.</td>
<td rowspan="3"><u>Harder Tasks</u>

A) Outline three purposes of Christian missionary work (3 marks).

B) Explain two reasons why evangelism is important to Christians. In your answer you must refer to a source of wisdom and authority (5 marks).

PQE: Pupils can draw similarities between Islam and Christianity on key themes

C) Describe two differences between Christian worship and of another religion you have studied (4 marks).

PQE: Pupils can develop and explain their opinion effectively and provide a counter argument
D) ‘Prayer should be informal’
Evaluate this statement considering arguments for and against. In your response you should:
• Refer to Christian teachings
• Refer to different Christian points of view
• Reach a justified conclusion (12 marks)

E) ‘Easter is the most important Christian festival’.
Evaluate this statement considering arguments for and against, you should:
• Refer to Christian teachings
• Refer to different Christian points of view
• Reach a justified conclusion (12 marks)</td>
</tr>
<tr>
<td><u>Literacy</u>
Define the following words and write a sentence explaining importance to Christians.
• Creed
• Worship
• Liturgical
• Sacrament
• Eucharist
• Anoint
• Epiphany
• Parish
• Reconciliation
• Advent</td>
</tr>
<tr>
<td><u>Skills/Numeracy</u>
PQE: Pupils can develop and explain their opinion effectively and provide a counter argument
• Produce a spider diagram on sacraments and their significant Christian ceremonies.

• Create a spider diagram on the different purposes of missionary work. Include arguments for and against.</td>
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Enhanced Further Learning: **Biology**

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<td><u>Easier Tasks</u>

Write the word equation for aerobic respiration. (grade 3)

Write the word equation for anaerobic respiration. (grade 3)</td>
<td rowspan="3"><u>Harder Tasks</u>

What factors affect the rate of photosynthesis? How do they affect it? (grade 5)

Explain the difference between transcription and translation relating to protein synthesis (grade 6)

Explain the importance of the breakdown of proteins, carbohydrates and lipids. (grade 5)

Make a poster to summarise the key information about photosynthesis. (grade 4)

Describe how you would carry out a reliable and valid investigation to investigate one factor affecting the rate of photosynthesis. (grade 7)

Sketch and explain 3 graphs to show the limiting factors of photosynthesis. (grade 7)

Draw a microscope. Add labels to show the stage, focussing wheel, objective lens and eyepiece. (grade 4)</td>
</tr>
<tr>
<td><u>Literacy</u>

Explain how you would prepare a slide of onion cells to view under a microscope. (grade 4)

Explain the structures and function of the following: (grade 4)

plasmids
mitochondria
chloroplasts
cell membranes</td>
</tr>
<tr>
<td><u>Skills/Numeracy</u>

Write the following numbers in standard form: (grade 4)

32000000000000
0.00003
0.00000000000006</td>
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Enhanced Further Learning: **Chemistry**

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<td><u>Easier Tasks</u>

• Write the definitions for elements and compounds. (grade 3)
• Identify the following substances as elements or compounds: copper, copper chloride, copper sulphate (grade 3)
• Identify the elements in potassium bromide. (grade 3)
• Name some elements from group 1. (grade 3)
• Name some elements from group 7. (grade 3)</td>
<td rowspan="3"><u>Harder Tasks</u>

Explain why atoms are neutral overall (grade 4)

Explain what isotopes are and find examples of isotopes. (grade 4)

Describe the steps you would need to take to separate salt from a mixture of salt and sand. (grade 3)

Explain how paper chromatography could be used to determine which of 3 pens was used to write a letter. (grade 5)

Draw a graph to show the melting point of a solid that is (grade 6)

a) pure
b) impure</td>
</tr>
<tr>
<td><u>Literacy</u>

Write definitions for relative atomic mass and relative molecular mass. (grade 3)</td>
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<tr>
<td><u>Skills/Numeracy</u>
• Work out the number of electrons, protons and neutrons for carbon, fluorine, sodium and aluminium. (grade 4)

• Draw the electronic structures of the first 20 elements in the periodic table (grade 4)

• Work out the relative molecular mass of
HNO_3
$CaCO_3$
H_2SO_4
NaOH
(grade 5)</td>
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</table>

Enhanced Further Learning: **Physics**

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<td><u>Easier Tasks</u>

• Draw the models for a solid, liquid and gas. (grade 3)
• What are the names for the changes of state? (grade 3)
• What are the units for; (grade 3)
Mass
Volume
Density
Pressure</td>
<td rowspan="3"><u>Harder Tasks</u>

A force of 20 N acts over an area of 2 m^2. What is the pressure? (grade 4)

How can we increase pressure? (grade 4)

☐ Reducing surface area
☐ Increasing surface area
☐ Reducing force

Use the particle model to explain why gases can be compressed but solids can't. (grade 5)

How would you work out the specific heat capacity of a material? (grade 5)

What equipment and what calculations would you need to determine the SHC for a substance? (grade 5)

Why do materials such as water, copper, aluminium all have different SHC's. (grade 6)

Show 3 calculations on SHC of materials- look up the SHC of materials on the web to help. (grade 6)</td>
</tr>
<tr>
<td><u>Literacy</u>

• Explain why gases have a low density (grade 3)
• How could you describe a solid (grade 3)
(think like a scientist)

• Draw the 'eureka can' experiment- label the equipment and explain how and why we use this (grade 5)</td>
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<tr>
<td><u>Skills/Numeracy</u>

• Draw a graph to show the temperature of ice as it is heated and turned into water and then steam. Label the graph to show where the changes of state are occurring. (grade 4)</td>
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