



NT CURRICULUM

IT'S YOUR STORY TO TELL

Year 11

Learning Journal

Term 1

2022

**YEAR 11 – Term 1: GCSE Art**

By the end of this year, I will:

Art - Personal Project: AO1- Develop ideas through investigations, demonstrating critical understanding of sources.**Evidenced****Refined****Key Vocabulary**

Be able to research and annotate artists appropriate to the theme of your choice demonstrating your knowledge, opinions and understanding of the work.

Analyse

Know how to create a title page with a collection of secondary sources, mind maps and notes to explain your ideas and intentions.

Annotate

Composition

Be able to show the planning of ideas through either design sketches, digital drawing and collage for development work and final outcomes.

Collage

Know how to reflect on the techniques explored, what worked well, areas for improvements and how those techniques link with the artists I am looking at.

Design

Develop

Dry-point etching

Art - Personal Project: AO2- Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.

Edit

Know how to explore ideas using a printmaking process such as Dry-point Etching, Lino printing or Mono-print.

Evaluate

Be able to experiment with a range of techniques that link effectively with chosen artists.

Intention

Investigate

Be able to experiment with various compositions to plan my development pieces and outcomes.

Observation

Be able to experiment with digital and traditional collage to create ideas.

Personal

Have experimented with.....

Primary source

Art - Personal Project: AO3- Record ideas, observations and insights relevant to intentions as work progresses.

Record

Know how to record through observational drawing using a technique that shows off my best skills, create a sustained study.

Research

Be able to use Photography to record and creatively explore a chosen theme.

Refine

Select

Evidence of writing about your ideas- how you intend to use photographic techniques, how you intend to develop your idea within your chosen theme, evaluating your work and ideas as you progress.

Secondary source

Sources

Sustained

Art - Personal Project: AO4- Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.

Theme

Be able to present a personal and sustained outcome(s) that shows links with chosen artists and bring together the ideas explored throughout my project.

Know how to present sustained development work.

Understand how to select and present my best photographs.

Have learnt how to select, present and mount work professionally.

Target(s)

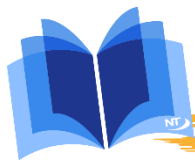


YEAR 11 – Term 1: GCSE 3D Art

By the end of this year, I will:

Art - Personal Project: AO1- Develop ideas through investigations, demonstrating critical understanding of sources.	Evidenced	Refined	Key Vocabulary
Be able to research and annotate artists appropriate to the theme of your choice demonstrating your knowledge, opinions and understanding of the work.			Annotate
Know how to create a title page with a collection of secondary sources, mind maps and notes to explain your ideas and intentions.			Analyse
Be able to show the planning of ideas through either design sketches, digital drawing, Maquette and collage for development work and final outcomes.			Collage
Know how to reflect on the techniques explored, what worked well, areas for improvements and how those techniques link with the artists I am looking at.			Composition
Art - Personal Project: AO2- Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.			Construct
Know how to explore ideas using a range of appropriate 3D materials and process such as ceramics, card construction, thermolite block, Modroc, etc.			Design
Be able to experiment with a range of techniques that link effectively with chosen artists.			Develop
Be able to experiment with various compositions, sketch designs, Maquettes, etc to plan my development pieces and outcomes.			Edit
Be able to experiment with digital and traditional collage to create ideas.			Evaluate
Have experimented with.....			Intention
Art - Personal Project: AO3- Record ideas, observations and insights relevant to intentions as work progresses.			Investigate
Know how to record through observational drawing and making using a technique that shows off my best skills, create a sustained study.			Form
Be able to use Photography to record and creatively explore a chosen theme.			Maquette
Evidence of writing about your ideas- how you intend to use photographic techniques, how you intend to develop your idea within your chosen theme, evaluating your work and ideas as you progress.			Model
Art - Personal Project: AO4- Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.			Mould
Be able to present a personal and sustained outcome(s) that shows links with chosen artists and bring together the ideas explored throughout my project.			Observation
Know how to present sustained development work.			Personal
Understand how to select and present my best photographs.			Primary source
Have learnt how to select, present and mount work professionally.			Mark making
			Relief
			Refine
			Record
			Research
			Select
			Sculpture
			Secondary source
			Sources
			Sustained
			Texture
			Theme
			Three-Dimensional

Target(s)

**YEAR 11 - Term 1: Hospitality and Catering**

By the end of this unit,

**Key Vocabulary**

					Special diets
Revision for the Unit 1 exam					Vegan
					Vegetarian
Complete the first section of your coursework					Nutrients
					HBV and LBV protein
AC1.1 should have been finished and you can make any amendments to this					Nutrition
					Garnishing
AC 1.2 Special diets looking at different groups of people and their specific dietary needs					Decorative Techniques
AC 1.3. Deficiencies with nutrients					
AC 1.4 Cooking methods					
Looking at presentation techniques in the practical sessions this term					
Trialling suitable dishes for the exam task					
AC 2.1 Dish proposals. Analysis of the Exam Board Brief and proposing suitable ideas					
AC 2.2 Environmental issues					
AC 2.3 Explaining how dishes on a menu address customer needs					

Target(s)

Target...

To develop practical skills and make sure that high level skills are demonstrated in the exam

To use time wisely in practical sessions so dishes are completed on time

To develop independence

To be able to follow instructions accurately

To present dishes to a high standard

To use a range of SORT to improve revision techniques



YEAR 11 - Term 1: Computer Science

By the end of this unit I will be able to:

SUMMARISE



ORGANISE



RECALL



TEST YOURSELF



Key Vocabulary

Unit 1.6 Ethical, Legal, Cultural

Be able to choose from a given list, which Act is relevant to a particular scenario

Be able to list one attribute and advantage of open source software and proprietary software

Be able to describe some ethical, legal, cultural and/or environmental issues in relation to a given scenario

Be able to describe some privacy issues in relation to a given scenario

Be able to describe the differences between open source and proprietary software and give advantages of each

Be able to list the clauses of the Data Protection Act and Computer Misuse Act and give examples of situations in which they are relevant

Be able to evaluate the impact of and issues related to the use of computers in society

Unit 2.5 Programming Languages and IDEs

Be able to program in assembly language

Be able to describe the role of the interpreter

Be able to describe the role of translators

Be able to describe the role of compilers

Target(s)



YEAR 11 - Design Technology: Term 1

By the end of this unit, I will be able to:



Key Vocabulary

NEA Completion Assessment Objective 1

Identify Problems

Identify Users/Client Needs

Research Plan

Existing Product Analysis

Technical Research

Final Design Brief

Specification

NEA Completion Assessment Objective 2

Initial Design Ideas

Client User Feedback

Developed Design Ideas

Modelling

Final Design



YEAR 11 – Term 1 Drama

SUMMARISE	ORGANISE	RECALL	TEST YOURSELF
✓	✓	✓	✓

Basic skills I need for this component

I can read the question and pick out key words. I am able to refer to these throughout my answer.

My legibility and speed of writing meets the time limit and I spend the right amount of time on each question

I am able to use subject specific terminology

I can proof read my answer

Section A: Theatre Roles and Terminology 4 Marks

I understand stage positioning, can identify the different types of stages and can identify the roles and responsibilities of theatre makers in contemporary modern practice

Section B: Set Play 44 Marks

I understand the plot of our set text

I am developing the knowledge of the characters in the play

I understand the context of the play

I can interpret how I would use my vocal skills to create meaning for the audience (intonation, pause, accent, volume, pitch, timing, pace)

I can interpret how I would use my physical skills to create meaning for the audience (facial expression, body language, gait, gesture, posture, stance)

I can suggest how meaning is conveyed through costume, hair and make-up in our set text (period, material, colour)

I can comment on how lighting could create meaning for the audience (colour, intensity, direction)

I can suggest how sound design could create meaning for an audience (diegetic, non-diegetic, effects, music, amplification, pace)

I can suggest how space and spatial relationships could create meaning for an audience (blocking, proxemics, staging)

I can suggest how special effects could create meaning for an audience (smoke, projections, pyrotechnics, multimedia show)

I can interpret a set design for the play (staging, scale, colour, texture, context)

Section B: Live Theatre Production 32 Marks

I can describe and evaluate how the actor's vocal skills created meaning for an audience (intonation, pause, accent, volume, pitch, timing, pace)

I can describe and evaluate how the actor's physical skills created meaning for the audience (facial expressions, body language, gait, gesture, posture, stance)

I can describe and evaluate how the use of space in the performance created meaning for the audience. (proxemics, staging, spatial relationships).				
I can describe how lighting was used to support that action in the performance (colour, intensity, direction and atmosphere)				
I am able to evaluate the use of sound and successful it was at helping to communicate the action of the production. (diegetic, non-diegetic, effects, music, amplification, pace).				
I am able to describe how costumes were used to help communicate meaning to the audience (shape, fit, fabric, accessories, colour, texture)				
I am able to evaluate the use of set and how it created meaning for an audience (levels, type of staging, materials)				

Target(s)

Year 11 Term 1 Engineering

By the end of this unit, I will know:



Key Vocabulary

Lathe
Centre
Spot drill
HSS drill
Carbide
ISO metric coarse
Knurling
Tap and die
Reamer
Chamfer

I will have manufactured the following;				
Lamp Base				
Lamp Arms				
Clamp 1				
Clamp 2				
Hand Wheel 1				
Hand Wheel 2				
Lamp Head				
I will attend catch up sessions if I fall behind.				
I will have written Method of Works statements for the following;				
Lamp Base				
Lamp Arms				
Clamp 1				
Clamp 2				
Hand Wheel 1				
Hand Wheel 2				
Lamp Head				
I will have written Making Diaries with my own photos for the following;				
Lamp Base				
Lamp Arms				
Clamp 1				
Clamp 2				

Hand Wheel 1				
Hand Wheel 2				
Lamp Head				
I have completed Unit 1 page 1 Product Analysis				
I have completed Unit 1 page 2 Product specifications				
I have completed Unit 1 page 3 Initial design ideas				
I have prepared and revised for Unit 3 exam questions 1 and 2				
I will know how to carry out a product analysis of any given product using the following terms:				
Function				
Performance				
User requirements				
Aesthetics				
Materials / material requirements				
Ergonomics / anthropometrics				
Price				
Sustainability				
Safety				
Surface finish				
Legal requirements				
Manufacturing method				
Joining method				
I will be able to produce an orthographic dimensioned drawing using Techsoft 2D Design with dimensions				
I will be able to produce simple 3D rendered drawings in isometric using Techsoft 2D Design				
I will be able to draw the components of the desk lamp using Fusion 360				

I will develop my designing skills using Fusion 360				

Target(s)

Be able to create accurate working CAD drawings to BS8888 and be able to manufacture a product from a working drawing.



YEAR 11 - Term 1: Macbeth

By the end of this unit, I will understand:

	 SUMMARISE ✓	 ORGANISE ✓	 RECALL ✓	 TEST YOURSELF ✓	Key Vocabulary
Why does Shakespeare open the play with witches? Why is it good for Macbeth not to appear first? How does Shakespeare structure the witches language and why? (Why is <u>James 1st</u> significant here?)					
When Macbeth is told of his new title, how do he and Banquo demonstrate the differing attitudes to witchcraft in the Jacobean era? Can you think of reasons for the difference in reactions?					
What does Lady Macbeth fear about her husband, after she has read his letter?					
Lady Macbeth tells her husband to "look like the innocent flower/But be the serpent under it". Explain what she means (either generally or specifically or both, as you think appropriate). How is King James message a political one?					
After his servant leaves him (Act 2, scene 1, line 33 and following) Macbeth imagines he can see something (in some film versions the audience may be shown this, too). What is it? Explain why, you think, Macbeth sees this, especially at this time and in this place.					
When Lady Macbeth says, "That which hath made them drunk hath made me bold", what does she mean? Who are "them" and why should she want them to be drunk?					
Explain the significance of the motifs of sleep and blood in the play.					
Why does Macbeth ask Banquo so many apparently casual questions about where he is riding? Why should Macbeth be worried about Banquo (think about what he knows and about his character)?					
Who or what is Hecate and what does she think of the witches' involvement with Macbeth?					
How are the witches presented as evil and manipulative in this second meeting?					
How does Shakespeare present Lady Macduff? Why has he done this?					
Why might Malcolm be suspicious of Macduff? Does he know as much as the audience does about why Macbeth and Macduff are enemies?					
In Act 4, scene 3, there is an account of the miraculous healing powers of the English king - what is the purpose of this? What effect does it have on the audience?					
How does Lady Macbeth's behaviour in Act 5, scene 1 affect the way the audience sees her?					
Perhaps the most famous speech in the play is the one that begins "Tomorrow and tomorrow and tomorrow". In your own					

words, summarize the main points that Macbeth makes in this speech.				
When Macbeth fights Young Siward he is very confident of the outcome? Why is this? Is he right to be so confident?				
Macduff believes that he alone should kill Macbeth. Why does he think this? What other reason emerges, when he speaks with Macbeth, for his being the only person who should do this?				
How does Macbeth feel about fighting Macduff? What makes up his mind to do so?				
How does Old Siward feel about the death of his son? He makes a joke at this point - does this suggest that he doesn't care, or that he is controlling his feelings?				

Target(s)



YEAR 11 - Term 1: Enterprise and Marketing

By the end of this unit:



Key Vocabulary

R069 Topic Area 3: Plan and pitch a proposal – Part One

I have explained the factors for consideration when planning a pitch for a business proposal.

I have produced resources/supporting materials fully tailored to the needs of the target audience.

I have pre-empted responses to possible questions that the audience may pose.

Topic Area 3: Plan and pitch a proposal – Part Two

Effective support offered to peers during their practice pitch.

I have refined my pitching plan, pitch plans and supporting materials based on feedback.

I have used Visual aids, resources and supporting materials to aid delivery of the pitch

A comprehensive outline of the business proposal is presented using effective presentation skills.

I demonstrated effective time management skills.

I have tailored the pitch to meet the needs of the co-owners.

I used clear and effective content in the pitch to persuade the co-owners to produce the trainers.

I have given fully justified answers are given to questions posed, demonstrating a full understanding of the proposal and issues raised.

I have reviewed my own pitch / pitching skills. I have explained my strengths and areas for development regarding the pitch/pitching skills.

I have reviewed my business proposal using a range of sources.

I have explained the likely success of the business proposal.

I have assessed the strengths and areas for future development of your business proposal are comprehensively assessed.

R067 Exam unit - Summarise the purpose of market research.

I have explained why and when entrepreneurs need to carry out **market research** and explained the difference between primary and secondary market research. I have summarised the primary market research methods that could be used and explained the relative advantages and disadvantages of each primary market research method. I have summarised the secondary market research sources that could be used and explained the relative advantages and disadvantages of each secondary market research source. I have summarised the ways that a market can be segmented and analysed the benefits of market segmentation to a business.

**REP YEAR 11 – Contemporary Ethical Issues****By the end of this unit, I will know:**

Consideration of the status and role of religion in the UK in the 21st Century.

Place of religion in the context of human rights and how they can conflict with contemporary societal values.

The views of religions to important social issues and how they should respond to a developing society.

The religious views on the roles of men and women as shown in scripture and practice.

The role and reaction of religions in gender prejudice and discrimination.

The role and reaction of religions in racial prejudice and discrimination including slavery.

Religious attitudes for and against abortion.

Exploration of the concept of secularism and the challenges it puts on religious faith.

Debate on whether Britain should become a secular society or not.

Religious views on the causes of poverty and how poverty should be understood.

Religious teachings on the origins of wealth and the roles and responsibilities those with wealth have.

Religious views on and examples of charitable giving and actions.

Religious movements to tackle exploitation including fair-pay, loans and people-trafficking.

Religious views on personal responsibility and how you can overcome challenges in life.

Exploration of the Latin-American Christian resistance to oppression of the poor and the religious responses to it.

Target(s)

**GCSE RS YEAR 11 - Term 1 Relationships****By the end of this unit, I will know:**

The nature of human sexuality, including both heterosexual and homosexual relationships

Attitudes towards sexual relationships outside of marriage

Attitudes towards the use of contraception

The nature and purpose of marriage

Views on same sex marriage and cohabitation

Attitudes towards divorce and remarriage; including ethical arguments and the sanctity of marriage

The nature of families, including:

- the role of parents and children
- extended families and the nuclear family.

The purpose of families, including:

- procreation
- stability and the protection of children
- educating children in a faith.

Contemporary family issues including:

- same-sex parents
- polygamy

The roles of men and women

Attitudes towards gender equality; including prejudice and discrimination



YEAR 11 - Term 1: French

By the end of this unit, I will know how to:

SUMMARISE



ORGANISE



RECALL



TEST YOURSELF



Le Grand Large - Holidays

say what I normally do on holiday				
talk about holidays in the past, present, future				
talk about an ideal holiday				
use the conditional tense				
deal with a hotel stay				
book a hotel and understand reviews				
use reflexive verbs in the perfect tense				
order in the restaurant (recap)				
use <i>en</i> + present participle				
talk about travelling				
revise transport				
use <i>avant de</i> + infinitive				
use the comparative with transport				
use the <i>nous/notre/nos</i> forms				
use the present and perfect tenses				
buy souvenirs				
use demonstrative adjectives and pronouns				
talk about a holiday disaster				
use the pluperfect tense				
look at French cities and their tourist attractions				

Au Collège – At School

revise school subjects and talk about timetable				
give opinions on school subjects and facilities				
understand direct object pronouns				
use the pronouns <i>il</i> and <i>elle</i>				
talk about my school and schools in France				
use <i>ils</i> and <i>elles</i> form of verbs				
discuss rules and regulations				
use <i>il faut</i> and <i>il est interdit de</i>				
talk about school activities				
recognise and use the imperfect tense				
use the present and future tenses				
talk about successes at school				
use past present and future time frames				
talk about a school exchange				
describe a photo about school				

En Pleine Forme – Healthy and Unhealthy Living

talk about healthy eating and healthy lifestyles				
discuss diet related problems				
discuss vices				
explain illness and injuries				

**YEAR 11 - Term 1 Geography : Component 1 (Coasts) and 2 Environmental and Development Issues**

By the end of this unit, I will

SUMMARISE	ORGANISE	RECALL	TEST YOURSELF
✓	✓	✓	✓

**Key
Vocabular
y****Theme 1 Landscapes and Physical Processes (Core)****Key Idea: 1.2b Landform process and change in two different and distinctive landscapes (COASTS)****AO1 KNOWLEDGE I can...**

Define the term Fetch, Prevailing Wind, Relative Resistance

Describe processes of Coastal Erosion; Abrasion, Attrition and Hydraulic Action

Describe the process of Longshore Drift (transportation)

Describe types of weathering (Slope Processes)

Describe strategies to manage coastal erosion (Soft and Hard Engineering)

Locate and describe UK coastlines with distinctive landforms and different rates of change (Barton on Sea (Soft Rock), Southerndown (Hard Rock), Swanage Bay (Old Harry) – Discordant, Lulworth Cove – Concordant)

AO2 UNDERSTANDING I can...

Explain why cliffs retreat (Explain why rock falls occur on hard rock cliffs and landslides occur on soft rock cliffs)

Explain the formation of distinctive coastal landforms and features:

Theme 5: Weather, Climate and Ecosystems (Core)**Key Idea: 5.1 Climate Change during the Quaternary Period****AO1 KNOWLEDGE I can...**

State what is meant by Quaternary Period (what time period does it cover?)

Define the terms *glacial* and *inter-glacial*.

Describe how the climate changed during the Quaternary Period.

State the natural causes of climate change.

Identify the main greenhouse gases and the human activities which create these.

Outline the carbon cycle (Draw a labelled diagram including stores/flows/ processes).				
Describe sources of evidence used to show our climate has changed (including Ice Cores and CO2 measurements).				
Describe how CO2 levels have changed in the last 50 years (Keeling curve).				
AO2 UNDERSTANDING I can...				
Explain how volcanic eruptions cause global cooling.				
Explain other natural causes of climate change.				
Explain how humans are creating an enhanced Greenhouse Effect.				
Explain how human activity affects the carbon cycle.				
Theme 5: Weather, Climate and Ecosystems (Core)				
Key Idea: 5.2 Weather Patterns and Process				
A01 : KNOWLEDGE I can				
Describe the pattern of rainfall and temperature in different regions of the UK (Comparing SW, NW, SE, NE regions)				
Describe the weather associated with a Depression and Anti-cyclone in the UK				
Identify factors which create a Micro-Climate.				
A02 UNDERSTANDING I can.....				
Explain how temperature and rainfall in the UK is affected by latitude, altitude and ocean currents.				
THEME 6 Development and Resource Issues (Core)				
KEY IDEA: 6.3 Water Resources and their management				
A01: KNOWLEDGE I can				
Describe how global trends in water consumption have changed.				
Identify different uses of water.				
Define the terms water footprints and water security.				
Describe strategies to manage water supplies, including; construction of reservoirs for water supply/irrigation, water transfer schemes and the abstraction of ground-water				
Describe one located example where a water resource is being managed across an international boundary (e.g. Colorado River, USA/Mexico)				
Locate an area where groundwater is being over-abstracted and describe uses for the water (India).				
Outline examples of small-scale water management technologies.				
A02 UNDERSTANDING I can.....				
Explain why demand for water is increasing, including; population growth, agricultural change, and the growth of consumerism.				
Explain why people need to manage water supplies.				
Explain the consequences of managing water across an international boundary (e.g. constructing large scale dams and water transfer schemes).				
Explain why over-abstraction of groundwater causes issues.				



YEAR 11 - Term 1: Health and Social Care Examination content

By the end of this unit, I will know:

First Aid Unit

 SUMMARISE

☐

 ORGANISE

☐

 RECALL

☐

 TEST YOURSELF

☐

Key Vocabulary

Coursework

Task 1

Write up how to assess a situation including:

- assess the dangers to the casualty, the first aider and others
- consider how the area can be made safe
- obtain informed consent
- demonstrate clear communication

Describe:

- when and how to seek additional support
- why the people reported to are appropriate
- the information you would supply to the emergency services.

Task 2

First aid procedures table

- conscious/unconscious and breathing/not breathing
- choking
- an asthma attack
- burns or scald
- bleeding
- shock.

Task 3

Evaluate your practice

Strength and weaknesses of practice

Improvements



YEAR 11 - Term 1: GCSE History Paper 2; Superpower Relations

By the end of this unit, I will know and be able to discuss and answer:



Key Vocabulary

Origins of the Cold War 1941-1958					
What were the key events after WW2?					Novikov telegram
Tehran, Yalta and Potsdam Conferences					Yalta conference
Long and Novikov Telegrams					Tehran conference
Iron Curtain speech					Potsdam conference
Soviet expansion into Europe					Kennan's Long Telegram
How did the Truman Doctrine lead to the Berlin Airlift?					Iron Curtain speech
Marshall Plan and Truman Doctrine					VJ Day
Cominform and Comecon					VE Day
Division of Germany (location of West Berlin)					The Grand Alliance
Deutschmark					Truman Doctrine
Bizonia and Trizonia					Marshall Plan
Berlin Blockade and Airlift					North Atlantic Treaty Organisation
NATO and Warsaw Pact					
What were the causes and consequences of the Hungary Uprising?					Comecon
Arms race, H Bomb and ICBM's					Cominform
Khrushchev and Eisenhower					Dollar Imperialism
Destalinization					Warsaw Pact
Nagy threatens to leave Warsaw Pact					Operation Vistles'
Soviet Invasion and US response					Berlin Ultimatum
Cold War Crisis 1958-1970					Khrushchev
What were the causes and consequences of the Berlin Wall 1961?					Revolution
Refugee crisis					Bay of Pigs
Khrushchev's Berlin Ultimatum					Cuban Missile Crisis
Summits (Geneva, Paris, Camp David)					Brinkmanship
Building of the wall (speed its built, division it causes)					Prague Spring
Consequences (physical division, reduces tension in Europe)					Brezhnev Doctrine
What were the causes and consequences of the Cuban Missile Crisis?					Détente
Cuban revolution 1959					Vietnam War
Bay of Pigs invasion					Mutually Assured Destruction (MAD)
Reasons for Soviet missiles being placed on Cuba					SALT 1 & 2
JFK's options and response					Helsinki Accords

'Thirteen Days'					Afghanistan
Hotline, Test Ban Treaty, Outer space Treaty					Gorbachev
What were the causes and consequences of the Prague Spring					
Brezhnev					
Dubcek 'Socialism with a human face'					
Reforms introduced by Dubcek					
Soviet response to reforms					
The Brezhnev Doctrine					
End of the Cold War 1970-1991					
What impact did Détente have on Superpower relations?					
SALT I					
Helsinki Accords					
SALT II					
What was the impact of the Soviet invasion of Afghanistan?					
Ayatollah Khomeini					
Regan elected					
Boycotts of Moscow and LA Olympics					
SDI or 'Star Wars' and Second Cold War					
What was the cause and consequence of the collapse of communism?					
Gorbachev's 'New Thinking'					
Superpower Summits (two examples)					
Rise in nationalism and demonstrations across Europe					
Consequences of the fall of the Berlin Wall					
Collapse of the Soviet Union					

Target(s)

YEAR 11 - Term 1-2: GCSE Paper 1: Warfare Through Time

By the end of this unit, I will know and be able to discuss and answer:



Key Vocabulary





Warfare in 1250: Introduction					
Nature of warfare, including size, shape, strategy					Crossbow
Castles and tactical formations					Schiltron
Recruitment of cavalry					Cavalry
Assize of Arms, mercenaries and scutage					Halberds
					Mace
Composition of the Army: 1250-present					Battle-axe
Infantry/schiltrons/pikemen/bowmen					Limited warfare
Cavalry: Knights, Dragoons					Guerrilla warfare
Artillery: Musket men					Archers
Specialist troops: Engineers, logistics, medical, EOD					The melee
					Feudal system
Change in Weapons: 1250- present					Assize of Arms
Longbow, schiltron, sword					Mercenaries
Cannon					Scutage
Arquebus, matchlock, flintlock, Brown Bess, Rifles					Infantry
Bayonets					Statute of Winchester
Machine guns, mini bullets					Muster
Recruitment and Training: 1250-present					Mercenaries
Feudal, Assize of Arms, paid troops					Arquebus
The Tudor System, general muster, pressing					Militia Act
Militia Act 1757, Colonels' regiments, bought commissions					Recruitment
Cardwell's reforms, 1870 Army Act, cadet training					Battle of Falkirk
Conscription, volunteers, National Service Act, women					Agincourt
					Artillery
Requisition and Provisioning: 1250-Present					Billmen
Purveyance, Royal Armouries, Baggage trains,					Pikemen
Free Quarter, requisition, plunder, taxes					Dragoons
War Office, Army clothing department					Requisition
Land Transport Corps, Army Service Corps					Demobilised

Impact on Civilians: 1250-Present					New Model Army
Raids and plunder on property					Muskets
Taxes, damage, plunder, free-quarter					Rifles
Public opinion on war, war reporting					Royal Military Academy
Total war, fear of nuclear, rationing, home front					Knight
The Battles case studies: 1250-Present					Jingoism
Battle of Falkirk					Pacifism
Battle of Agincourt					Imperialism
Battle of Naseby					Wellington
Battle of Waterloo					Napoleon
Battle of Balaclava					Battle of Balaclava
Battle of the Somme & Western Front					Royal Air Force
The Iraq War 2003					Trench warfare
					Satellites
					F-117 aircraft
					Paveway bombs
					Storm Shadows

Target(s)

**Year 11: Term 1 Creative iMedia**

By the end of this unit, I will:

	 SUMMARISE ✓	 ORGANISE ✓	 RECALL ✓	 TEST YOURSELF ✓	Key Vocabulary
R085 Websites LO1					
Produce a summary of the purpose and component features of websites in the public domain which demonstrates a thorough understanding.					
Provide a detailed description of the devices used to access web pages.					
Demonstrate a thorough understanding of internet connection methods.					
R085 Websites LO2					
Produce an interpretation from the client brief for a multipage website which fully meets the client requirements.					
Produce a clear and detailed identification of target audience requirements. Clearly draws upon relevant Skills/knowledge/understanding from other units in the specification.					
Produce a clear and detailed work plan for the creation of the multipage website, which is fully capable of producing the intended final website.					
Apply complex planning techniques in a well-organised way, including detailed reference to a house style showing clear consideration of the client requirements.					
R085 Websites LO3					
Create logical and well-structured folder structures which are consistently used appropriately.					
Source and import a wide range of assets for use, consistently using appropriate methods.					
Combine components effectively to produce a clear and coherent working navigation system when creating the multipage website					

Save and publish the website and related files consistently using appropriate formats. The website will frequently load quickly and correctly.					
R085 Websites LO4					
Produce a review of the finished website which demonstrates a thorough understanding of what worked and what did not, fully referencing back to the brief					
Review identifies areas for improvement and further development of the final website, which are wholly appropriate and justified.					

Target(s)



YEAR 11 - Term 1: Graphs & Algebra

By the end of this unit, I will know how to:



Key Vocabulary

Gradients and lines

Equations of lines parallel to the axis

Plot straight line graphs

Interpret $y=mx+c$

Find gradients of a straight-line graph

Find the equation of a straight-line graph

Solve linear simultaneous equations graphically

Higher Tier only:

Explore perpendicular lines and find their equations

Non-linear graphs

Plot and read from quadratic graphs

Plot cubic and reciprocal graphs

Recognise graph shapes

Understand and find roots & intercepts of quadratics

Higher Tier only:

Understand & use exponential graphs

Understand the equation of a circle with centre at (0,0)

Find the equation of the tangent to any curve

Using graphs

Reflect shapes in a given line

Construct & interpret conversion graphs

Construct & interpret real life graphs

Interpret & construct distance/time graphs

Interpret & construct speed/time graphs

Recognise graphs that illustrate direct & inverse proportion

Find approximate solutions to equations using graphs

Higher Tier only:

Estimate the area under a curve

Expanding and factorising

Expand & factorise with a single bracket

Expand binomials

Gradient: the steepness and direction of a line**Linear:** a scale in which the divisions are evenly spaced**Quadratic:** a second order equation or equation of degree 2**Cubic:** an expression, polynomial or equation of degree 3**Reciprocal:** also called the multiplicative inverse**Tangent:** a straight line touching a curve once at a given point.**Inverse:** function that has the opposite effect.**Factorise:** finding the factors of an expression**Expression:** an expression is one or a group of terms and may include variables, constants, operators and grouping symbols.**Formula:** a mathematical rule written using symbols, usually as an equation describing a certain relationship between quantities.**Equation:** an equation says that two things are equal—it will have an equals sign=**Identity:** An equation where both sides have variables that cause the same answer includes \equiv

Factorise quadratics					Intercept: the y-intercept is the point at which a line crosses the y-axis. Linear: a scale in which the divisions are evenly spaced
Solve equations equal to 0					
Solve quadratic equations by factorising					
Higher Tier only:					
Factorise & solve complex quadratic expressions					
Complete the square					
Solve quadratic equations using the quadratic formula					
Changing the subject					
Solving linear equations & inequalities					
Change the subject of a formula, including complex formula					
Higher Tier only:					
Change subject when the subject appears more than once					
Solve equations by iteration					
Functions					
Use function machines					
Substitution into expressions & formulae					
Use function notation					
Graphs of quadratic functions					
Higher Tier only:					
Work with composite and inverse functions					
Solve quadratic inequalities					



Year 11 Term 1: Music Video & Online Media

By the end of this unit, I will

By the end of this unit, I will know:

SUMMARISE



ORGANISE



RECALL



TEST YOURSELF



Media Language

the various forms of media language used to create and communicate meanings in media products

how choice (selection, combination and exclusion) of elements of media language influences meaning in media products, including to create narratives, to portray aspects of reality, to construct points of view, and to represent the world in ways that convey messages and values

the relationship between technology and media products

the codes and conventions of media language, how they develop and become established as 'styles' or genres (which are common across different media products) and how they may also vary over time

intertextuality, including how inter-relationships between media products can influence meaning

fundamental principles of semiotic analysis, including denotation and connotation

theoretical perspectives on genre, including principles of repetition and variation; the dynamic nature of genre; hybridity and intertextuality

theories of narrative, including those derived from Propp

Representation

the ways in which the media re-present (rather than simply present) the world, and construct versions of reality

- the choices media producers make about how to represent particular events, social groups and ideas

- the ways aspects of reality may be represented differently depending on the purposes of the producers

- the different functions and uses of stereotypes, including an understanding of how stereotypes become established, how they may vary over time, and how stereotypes enable audiences to interpret media quickly

- how and why particular social groups may be under-represented or misrepresented

- how representations (including self-representations) convey particular viewpoints, messages, values and beliefs, which may be reinforced across a wide range of media products

- the social, cultural and political significance of particular representations in terms of the themes and issues that they address

• how representations reflect the social, historical and cultural contexts in which they were produced				
• the factors affecting audience interpretations of representations, including their own experiences and beliefs				
• theoretical perspectives on representation, including processes of selection, construction and mediation; also, including theoretical perspectives on gender representation, including feminist approaches				
Media Industries				
the nature of media production, including by large organisations, who own the products they produce, and by individuals and groups				
the impact of production processes, personnel and technologies on the final product, including similarities and differences between media products in terms of when and where they are produced				
the effect of ownership and control of media organisations, including conglomerate ownership, diversification and vertical integration				
the impact of the increasingly convergent nature of media industries across different platforms and different national settings				
the importance of different funding models, including government funded, not-for-profit and commercial models				
how the media operate as commercial industries on a global scale and reach both large and specialised audiences				
the functions and types of regulation of the media				
the challenges for media regulation presented by 'new' digital technologies				
Audiences				
how and why media products are aimed at a range of audiences, from small, specialised audiences to large, mass audiences				
the ways in which media organisations target audiences through marketing, including an understanding of the assumptions organisations make about their target audience(s)				
how media organisations categorise audiences				
the role of media technologies in reaching and identifying audiences, and in audience consumption and usage				
the ways in which audiences may interpret the same media products very differently and how these differences may reflect both social and individual differences				
the ways in which people's media practices are connected to their identity, including their sense of actual and desired self				
the social, cultural and political significance of media products, including the themes or issues they address,				

the fulfilment of needs and desires and the functions they serve in everyday life and society				
how audiences may respond to and interpret media products and why these interpretations may change over time				
theoretical perspectives on audiences, including active and passive audiences; audience response and audience interpretation				
Blumler and Katz's Uses and Gratifications theory				

Target(s)

Target...



GCSE Music Year 11 Term 1

By the end of this unit, I will know:



Key Vocabulary

Component 1: - I can recognise and define the term / I can apply the term in class discussion/listening tasks/exam questions.....

Dynamics

Italian terms with abbreviations

Pianissimo (pp)

Piano (p)

Mezzo-piano (mp)

Mezzo Forte (mf)

Forte (f)

Fortissimo (ff)

Crescendo <

Diminuendo >

Rhythm

Rests, note durations

Syncopation

Time signatures

Tempos with Italian terms

Polyrhythm

Augmentation/diminution

Anacrusis

Structure

Binary

Ternary

Rondo

Arch-shaped, through-composed

Theme and variations

Sonata

Concerto

Cadenza

Call and response

Song form					
Melody					
Conjunct					
Disjunct					
Arpeggio, broken chords, triadic					
Scalic					
Intervals within one octave					
Passing notes					
Diatonic					
Chromatic					
Slide/portamento					
Ornamentation - Trills					
acciaccaturas					
appoggiaturas					
Ostinato					
Phrasing					
articulation					
Instrumentation					
The Orchestra – strings, brass, woodwind, percussion,					
Pop/Rock instruments					
Instrumental technique – pizzicato, tremolo, pitch bend, mute					
Texture					
Polyphonic					
Homophonic					
Monophonic					
Melody and accompaniment,					
Heterophonic					
Imitation					
Harmony and Tonality					
Chords, primary chords, major/minor chords					
Keys and key signatures, major, minor, modal, bitonal, atonal					
Elements and key terminology relating to Area of					
Study 2 – Popular Music					
I can recognise and define the term / I can apply the term in class discussion/listening					

Melody

Riff

Pitch Blend

Melisma

Hook

Slide

Glissando

Improvisation

Ostinato

Blue notes

Harmony

Power chords

Chord Symbols e.g. C7

Stock chord progressions e.g. I, VI, IV, V

Tonality

Pentatonic

Modal

Blues Scale

Structure

Intro/Outro

Verse

Chorus

Break

12 bar Blues

Target(s)

Target...

**Year 11: BTEC Tech Award in Music Practice**

Component 1: Exploring Music Products and Styles	Define ✓	Apply ✓
Melody and Articulation - I can recognise and define the term		
I can apply the term effectively when evaluating the features of a specific genre		
Conjunct		
Disjunct		
Arpeggio, broken chords, triadic		
Scalic		
Intervals within one octave		
Passing notes		
Diatonic		
Chromatic		
Slide/portamento		
Ornamentation / Trills		
acciaccaturas		
appoggiaturas		
Ostinato		
Phrasing		
Sequence		
Imitation		
Staccato		
Legato		
Accent		
Pizzicato		
Arco		
Vibrato		
Tonguing		
Dynamics and Texture - I can recognise and define the term		
I can apply the term effectively when evaluating the features of a specific genre		
Italian terms with abbreviations		

Pianissimo (pp)		
Piano (p)		
Mezzo-piano (mp)		
Mezzo Forte (mf)		
Forte (f)		
Fortissimo (ff)		
Crescendo <		
Diminuendo >		

Homophonic		
Monophonic		
Polyphonic		
Unison		
Solo		
Duet		
Melody and accompaniment		

Structure - I can recognise and define the term

I can apply the term effectively when evaluating the features of a specific genre

Binary		
Ternary		
Rondo		
12 Bar Blues		
Arch-shaped, through-composed		
Theme and variations		
Sonata		
Call and response		
Song form		
Chorus / Verse / Bridge		
Introduction / Outro / Coda		

Harmony, Tonality, Scales and Modes - I can recognise and define the term

I can apply the term effectively when evaluating the features of a specific genre

Primary triads		
Power Chords		
7 th Chords		
Extended chords		
Arpeggio		
Major		

Minor		
Inversion		
Modulation		
Cadence		
Major scale		
Minor scale		
Blues Scale		
Modes – Dorian, Mixolydian etc		

Instrumentation - I can recognise and define the term

I can apply the term effectively when evaluating the features of a specific genre

The four families of Orchestral instruments – strings, brass, woodwind, percussion,		
Pop/Rock instruments		
Instrumental technique – pizzicato, tremolo, pitch bend, mute		
Use of Technology – Guitar effects, Amplifiers, Autotune etc		

Rhythm, Tempo and Time Signatures - I can recognise and define the term

I can apply the term effectively when evaluating the features of a specific genre

Rests, note durations		
Syncopation		
Time signatures		
Tempos with Italian terms		
Polyrhythm		
Swing		
One drop		
Off beat		

Production - I can recognise and define the term

I can apply the term effectively when evaluating the features of a specific genre

Dynamic and Condenser microphones		
Microphone techniques		
Recording style – eg live, multitracked		
Sampling		
Looping		
Use of plug-ins and FX		
Turntablism		
Automation		
DAW		
MIDI		

Music Industry Products – I can recognise and define these products

I have developed the skills necessary to create these products

Live performance

Audio recording

Composition for media – Film, Tv, Adverts, Computer game

Original song or composition

Digital Audio Workstation (DAW) project

Component 2: Exploring Music Products and Styles**Professional Skills for the Music Industry - I can define the skill****I have developed and utilised the skill in my own practice**

Time management

Self-discipline

Working with others

Correct and safe use of equipment

Identifying resources required

Auditing existing skills and maintaining a development plan

Strategies for skill development

Managing equipment and resources

Methods of capturing musical development – portfolios, recordings, drafts etc

Having a clear and organised approach to communicating

Methods of sharing and commenting on work – social media, jam sessions, demos, remix

Performance Skills and Technique Development - I can define the skill**I have developed and utilised the skill in my own practice**

Timing and Phrasing

Using rhythm and pitch in the creation of music

Using equipment, instrumentation or software appropriately

Expression and Articulation

Combining instruments/sounds

Learning repertoire

Physical preparation and exercises

Instrumental or vocal technique

Practice exercises such as scales

Following accompaniment

Stage presence

Performing live

Composition Skills and Technique Development - I can define the skill

I have developed and utilised the skill in my own practice

Timing and Phrasing

Using rhythm and pitch in the creation of music

Using equipment, instrumentation or software appropriately

Expression and Articulation

Combining instruments/sounds

Exploring and extending ideas

Using structure effectively

Using rhythmic and melodic patterns

Developing harmony

Developing melodic ideas

Music Production Skills and Technique Development - I can define the skill**I have developed and utilised the skill in my own practice**

Timing and Phrasing

Using rhythm and pitch in the creation of music

Using equipment, instrumentation or software appropriately

Expression and Articulation

Combining instruments/sounds

Using software instruments

Using audio and software tools

Manipulation techniques

Inputting and editing audio

Using effects

Structuring music

Recording live instruments

Component 3: Responding to a Music Brief**Features of a Music Brief and Planning to respond effectively - I can define the skill****I have developed and utilised the skill in my own practice**

Identifying the creative intentions and purposes product

Identifying the aim, purpose and requirements of the brief

Identifying the nature of the specific area of the industry

Identifying the target audience and company's vision

Understanding how investigation and exploration can inform the response

Understanding the rationale behind the selection of musical material

Investigating musical styles

Identifying the human and physical resources required		
Proposing structure, version and arrangement		
Proposing a timeline for development		
Creating a format and scope of final response		
Identifying relevant performing skills from Component 2		
Identifying relevant composing skills from Component 2		
Identifying relevant music production skills from Component 2		
Setting and meeting deadlines		

Presenting and Commenting on Your Response to a Music Brief - I can define the skill

I have developed and utilised the skill in my own practice

Ensuring quality of outcome – appropriate presentation, audio mix, EQ balance etc		
Ensuring a clear and organised approach to communication		
Utilising Screenshots appropriately and effectively		
Providing commentary to justify creative decisions		
Presenting intentions to a client		
Justifying creative decisions and changes in direction		
Commenting on the development of the product		
Evaluating the suitability of the final product to the target audience		
Evaluating the skills and resources used		
Evaluating application of personal management		
Identifying strengths and areas for development in relation to the process		
Utilising effective methods for capturing your development (screenshots/audio etc)		
Evidencing the discarding, refinement and extension of ideas		
Reflecting on how the musical product meets the requirement of the brief		
Reflecting on your contribution to the creative process		
Reflecting on your strengths and areas of development		

Target(s)

YEAR 11 – Term 1: GCSE Photography

AO1- Develop ideas through investigations, demonstrating critical understanding of sources.	Evidenced	Refined	Key Vocabulary
Research and annotate artists appropriate to the theme of your choice demonstrating your knowledge, opinions and understanding of the work.			Analyse Aperture Annotate Composition Collage
Create a title page with a collection of secondary sources, mind maps and notes to explain your ideas and intentions.			Depth of field Design Develop Edit
Respond to photographers through your own practical work showing your understanding of their visual language.			Evaluate Exposure F-stop Focus Intention
Show the planning of your ideas through either design sketches, digital drawing and collage for your development work and final outcomes.			Investigate Light Location Observation Personal Photograph Primary source Record Research Refine Select
Reflect on the techniques explored, what worked well, areas for improvements and how those techniques link with the artists you are looking at.			Secondary source Sources Studio Sustained Theme
AO2- Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes.			
Plan your photoshoots effectively considering <u>light</u> , location, weather, models, props, make up and camera kit.			
Refine your technical photographic knowledge, show evidence in your sketchbook through imagery and supporting annotations.			
Experiment with angles, viewpoints and composition and show this through exciting and varied contact sheets. (min 30 photos per shoot)			
Experiment with digital software to edit and refine your photography. (show some evidence of before and after.)			
Experiment through re-shooting. Show improvements in your photography by making changes. (e.g. Props, location, model, compositions, camera settings)			
AO3- Record ideas, observations and insights relevant to intentions as work progresses.			
Use Photography to record and creatively explore your chosen theme.			
Be aware of line, shape, texture, pattern, tone and colour in your photography.			
Evidence of writing about your ideas- how you intend to use photographic techniques, how you intend to develop your idea within your chosen theme, evaluating your work and ideas as you progress.			
To use simple drawing sketches and diagrams to plans your ideas, compositions.			
AO4- Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language.			
Present a personal and sustained outcome(s) that shows links with chosen artists and bring together the ideas explored throughout your project.			
Present sustained development work. (The best edits form each shoot in sketchbook)			
Learn how to be <u>selective</u> and <u>present</u> a series of well edited and professional Photographs that link with your projects theme.			

Target(s)



GCSE RS YEAR 11 - Term 1 (Teacher 1): Crime & Punishment [2021-2023 intake]

By the end of this unit, I will know:



Different types of crime					
Main causes of crime					
Hate Crimes					
Evil as a cause of crime					
Purposes of punishment: <ul style="list-style-type: none">• Retribution• Reform• Security• Deterrence					
Religious attitudes towards suffering of victims					
Arguments for and against Capital Punishment					
Attitudes to custodial sentences					
Corporal punishment and community service					
Importance of forgiveness					
Role of forgiveness in reconciliation					
Importance of reconciliation					

GCSE RS YEAR Relationships

By the end of this unit, I will know:



The nature of human sexuality, including both heterosexual and homosexual relationships					

Attitudes towards sexual relationships outside of marriage					
Attitudes towards the use of contraception					
The nature and purpose of marriage					
Views on same sex marriage and cohabitation					
Attitudes towards divorce and remarriage; including ethical arguments and the sanctity of marriage					
The nature of families, including: <ul style="list-style-type: none"> - the role of parents and children - extended families and the nuclear family. 					
The purpose of families, including: <ul style="list-style-type: none"> - procreation - stability and the protection of children - educating children in a faith. 					
Contemporary family issues including: <ul style="list-style-type: none"> - same-sex parents - polygamy 					
The roles of men and women					
Attitudes towards gender equality; including prejudice and discrimination					

GCSE RS YEAR 11 – Term 1: Society & Human Rights

By the end of this unit, I will know:



Status and treatment of women in religions					
Religious attitudes towards homosexuality					
Religious attitudes towards equality and free expression.					
Religious attitudes towards human rights and responsibilities					
Religious views on social justice					
The role and reaction of religions in racial prejudice and discrimination including slavery.					
Religious views on the causes of poverty and how poverty should be understood.					
Religious teachings on the origins of wealth and the roles and responsibilities those with wealth have.					
Religious views on and examples of charitable giving and actions.					
Religious movements to tackle exploitation including fair-pay, loans and people-trafficking.					
Religious views on personal responsibility and how you can overcome challenges in life.					

GCSE RS YEAR 11 - Term 1: The Existence of God & Revelation

By the end of this unit, I will know:



Divine Characteristics of God:					
Theist/Atheist/Agnostic views on God					
Immanent vs Transcendent God					
Personal vs Impersonal God					
Arguments in support of Intelligent Design					
Arguments opposed to Intelligent Design					
Aquinas' first cause argument					
Critiques of Aquinas' first cause argument					
Miracles					

Evil and suffering as a challenge to God's existence				
Scientific secularism				
General and Special revelation				
Importance of scripture				
Enlightenment as a source of knowledge				

Target(s)



YEAR 11 Combined Science - Biology - Term 1

By the end of this unit, I will be able:



Key Vocabulary

Ecosystem Processes

Explain how and why ecologists use quadrats and transects

Describe and interpret predator-prey cycles

Required practical 9: measure the population size of a common species in a habitat. Use sampling to investigate the effect of one factor on distribution

Describe what biodiversity is, why it is important, and how human activities affect it

Describe the impact of human population growth and increased living standards on resource use and waste production

Explain how pollution can occur, and the impacts of pollution

Describe how humans reduce the amount of land available for other animals and plants

Explain the consequences of peat bog destruction

Describe what deforestation is and why it has occurred in tropical areas

Explain the consequences of deforestation

Describe how the composition of the atmosphere is changing, and the impact of this on global warming

Describe some biological consequences of global warming

Describe both positive and negative human interactions in an ecosystem and explain their impact on biodiversity

Describe programmes that aim to reduce the negative effects of humans on ecosystems and biodiversity

Reproduction

Describe features of sexual and asexual reproduction

Describe what happens during meiosis and compare to mitosis

Describe what happens at fertilisation

Describe the structure of DNA and its role in storing genetic information inside the cell

Explain the term 'genome' and the importance of the human genome (specific examples from spec only)

Describe how characteristics are controlled by one or more genes, including examples				
Explain important genetic terms: gamete, chromosome, gene, allele, genotype, phenotype, dominant, recessive, homozygous and heterozygous				
Explain and use Punnet square diagrams, genetic crosses and family trees				
HT ONLY: Construct Punnet square diagrams to predict the outcomes of a monohybrid cross				
Describe cystic fibrosis and polydactyly as examples of inherited disorders				
Evaluate social, economic and ethical issues concerning embryo screening when given appropriate information				
Describe how the chromosomes are arranged in human body cells, including the function of the sex chromosomes				
Explain how sex is determined and carry out a genetic cross to show sex inheritance				



YEAR 11 Separate Science - Biology - Term 1

By the end of this unit, I will be able:



Key Vocabulary

Ecosystem Processes

Explain how and why ecologists use quadrats and transects

Describe and interpret predator-prey cycles

Required practical 9: measure the population size of a common species in a habitat. Use sampling to investigate the effect of one factor on distribution

Describe what biodiversity is, why it is important, and how human activities affect it

Describe the impact of human population growth and increased living standards on resource use and waste production

Explain how pollution can occur, and the impacts of pollution

Describe how humans reduce the amount of land available for other animals and plants

Explain the consequences of peat bog destruction

Describe what deforestation is and why it has occurred in tropical areas

Explain the consequences of deforestation

Describe how the composition of the atmosphere is changing, and the impact of this on global warming

Describe some biological consequences of global warming

Describe both positive and negative human interactions in an ecosystem and explain their impact on biodiversity

Describe programmes that aim to reduce the negative effects of humans on ecosystems and biodiversity

Bio ONLY: Describe the different trophic levels and use numbers and names to represent them**Bio ONLY: Describe what decomposers are and what they do****Bio ONLY: Construct pyramids of biomass accurately from data and explain what they represent****Bio ONLY: State how much energy producers absorb from the Sun and how much biomass is transferred**

Bio ONLY: Explain how biomass is lost between trophic levels, including the consequences of this and calculate efficiency between trophic levels				
Bio ONLY: Explain the term 'food security' and describe biological factors that threaten it				
Bio ONLY: Explain how the efficiency of food production can be improved				
Bio ONLY: Explain the term 'factory farming', including examples, and ethical objections				
Bio ONLY: Explain the importance of maintaining fish stocks at a level where breeding continues				
Bio ONLY: Explain some methods that can help to conserve fish stocks				
Bio ONLY: Describe how modern biotechnology is used in food production, including the fungus <i>Fusarium</i> as an example				
Bio ONLY: Describe the uses of genetically modified organisms in insulin and food production				
Genetics				
Describe features of sexual and asexual reproduction				
Describe what happens during meiosis and compare to mitosis				
Describe what happens at fertilisation				
Bio ONLY: Explain advantages of sexual and asexual reproduction				
Bio ONLY: Describe examples of organisms that reproduce both sexually and asexually (malarial parasites, fungi, strawberry plants and daffodils)				
Describe the structure of DNA and its role in storing genetic information inside the cell				
Explain the term 'genome' and the importance of the human genome (specific examples from spec only)				
Bio ONLY: Describe the structure of DNA, including knowledge of nucleotide units				
Bio & HT ONLY: Explain complementary base pairing in DNA				
Bio & HT ONLY: Explain the relationship between DNA bases (ATCG), amino acids and proteins				
Bio & HT ONLY: Describe how proteins are synthesised on ribosomes, including protein folding and its importance for protein function				

Bio & HT ONLY: Explain what mutations are, and the possible effects of mutations				
Bio & HT ONLY: Explain what non-coding parts of DNA are, and why they are important				
Describe how characteristics are controlled by one or more genes, including examples				
Explain important genetic terms: gamete, chromosome, gene, allele, genotype, phenotype, dominant, recessive, homozygous and heterozygous				
Explain and use Punnet square diagrams, genetic crosses and family trees				
HT ONLY: Construct Punnet square diagrams to predict the outcomes of a monohybrid cross				
Describe cystic fibrosis and polydactyly as examples of inherited disorders				
Evaluate social, economic and ethical issues concerning embryo screening when given appropriate information				
Describe how the chromosomes are arranged in human body cells, including the function of the sex chromosomes				
Explain how sex is determined and carry out a genetic cross to show sex inheritance				

Target(s)

**YEAR 11 chemistry term 1**

By the end of this unit, I will be able:

**Key Vocabulary****4.2.1 Reactions of acids with metals**

Recall that acids react with some metal to produce salts and hydrogen.

Explain in terms of gain or loss of electrons, that these are redox reactions.

Identify which species are oxidised and which are reduced in given chemical equations.

4.2.2 Neutralisation of acids and salt production

Recall that acids are neutralised by alkalis (eg soluble metal hydroxides) and bases (eg insoluble metal hydroxides and metal oxides) to produce salts and water.

Recall that Acids are neutralised by metal carbonates to produce salts, water and carbon dioxide.

Name salts produced by these reactions.

Predict products from given reactants.

Use the formulae of common ions to deduce the formulae of salts.

4.2.3 Soluble salts

State the reactions that can be used to make soluble salts.

Describe how to make pure, dry samples of named soluble salts from information provided.

4.2.4 The pH scale and neutralisation

Recall that acids produce hydrogen ions (H^+) in aqueous solutions.

Recall that aqueous solutions of alkalis contain hydroxide ions (OH^-).

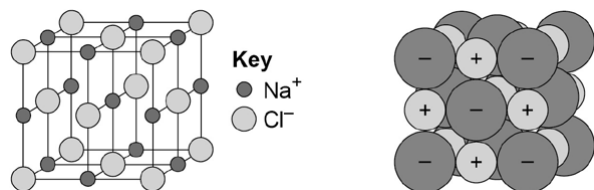
Describe what the pH scale is and how it is used.

Recall that in neutralisation reactions between an acid and an alkali, hydrogen ions react with hydroxide ions to produce water.

State the ionic equation for a neutralisation reaction.				
Describe the use of universal indicator or a wide range indicator to measure the approximate pH of a solution.				
Use the pH scale to identify acidic or alkaline solutions.				
Describe how to carry out titrations (Chemistry Only)				
Calculate concentrations from titrations in moldm-3 and gdm-3 (chemistry only)				
4.2.6 Strong and weak acids (HT only)				
State what a strong acid is and give examples.				
State what a weak acid is and give examples.				
Recall that for a given concentration of aqueous solutions, the stronger an acid, the lower the pH.				
Recall that as the pH decreases by one unit, the hydrogen ion concentration of the solution increases by a factor of 10.				
Use and explain the terms dilute and concentrated, and weak and strong in relation to acids				
Describe neutrality and relative acidity in terms of the effect on hydrogen ion concentration and the numerical value of pH (whole numbers only).				
2.1.1 Chemical bonds				
State the three types of strong chemical bonds.				
For each bond, state what it is, where it occurs and the particles involved.				
2.1.2 Ionic bonding				
Describe the formation of an ionic bond in terms of electron transfer.				
Represent the electron transfer during the formation of an ionic compound using dot and cross diagrams. For example.				
$\text{Na} \cdot + \cdot \overset{\times \times}{\underset{\times \times}{\text{Cl}}} \longrightarrow \left[\text{Na} \right]^+ \left[\overset{\times \times}{\underset{\times \times}{\text{Cl}}} \right]^-$ <p>(2,8,1) (2,8,7) (2,8) (2,8,8)</p>				
Work out the charge on the ions of elements in group 1, 2, 6 and 7.				
Draw dot and cross diagrams for ionic compounds formed by elements in groups 1 and 2 with elements in group 6 and 7.				
2.1.3 Ionic compounds				

Describe the structure of a giant ionic lattice, with references to the forces holding it together.

Recognise ionic structures represented in the following forms, for example sodium chloride.



Describe the limitations of using dot and cross diagrams to represent a giant ionic structure.

Describe the limitations of using ball and stick diagrams to represent a giant ionic structure.

Describe the limitations of using 2D diagrams to represent a giant ionic structure.

Describe the limitations of using 3D diagrams to represent a giant ionic structure.

Work out the empirical formula of an ionic compound from given information.

2.1.4 Covalent bonding

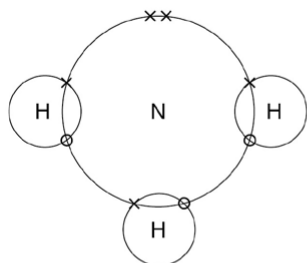
Describe a covalent bond in terms of electron sharing.

Recall that some covalent substances consist of small molecules, some have very large molecules, such as polymers, and some have giant covalent structures such as diamond and silicon dioxide.

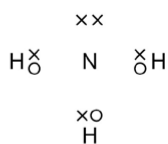
Recognise common substances that consist of small molecules from their chemical formula.

Recognise the covalent bonds in molecules and giants structures in the following forms.

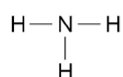
For ammonia (NH_3)



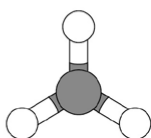
and/or



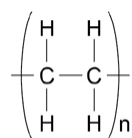
and/or



and/or



Polymers can be represent in the form:



poly(ethene)

where n is a large number.

Draw dot and cross diagrams for the molecules of hydrogen, chlorine, oxygen, nitrogen, hydrogen chloride, water, ammonia and methane.

Represent the covalent bonds in small molecules, in the repeating units of polymers and in part of giant covalent structures, using a line to represent a single bond.

Describe the limitations of using dot and cross diagrams to represent molecules or giant structures.

Describe the limitations of using ball and stick diagrams to represent molecules or giant structures.

Describe the limitations of using 2D diagrams to represent molecules or giant structures.

Describe the limitations of using 3D diagrams to represent molecules or giant structures.

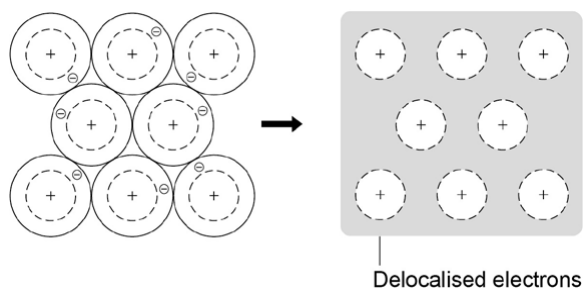
Work out the molecular formula of a substance from a given model or diagram in these forms, showing the atoms and bonds in the molecule.

2.1.5 Metallic bonding

Describe the structure of a metallic lattice, with reference to positive ions and electrons.

Describe metallic bonding with reference to electrons.

Recognise metallic substances in the following forms.



2.2.1 The three states of matter

Describe the particle model.

Describe the three states of matter using the particle model.

Explain changes in state using the particle model.

Explain what determines the melting and boiling point of different substances, with reference to forces, particles, bonding and structure.				
Predict the states of substances at different temperatures given appropriate data.				
Explain the different temperatures at which changes of state occur in terms of energy transfers and the types of bonding present.				
Recognise that atoms themselves do not have the bulk properties of materials.				
Explain the limitations of the particle theory in relation to changes of state .				
2.2.2 State symbols				
State the four state symbols and what they mean.				
Use state symbols in chemical equations.				
2.2.3 Properties of ionic compounds				
Describe the structure of a giant ionic lattice with reference to ions and electrostatic forces.				
Recall that ionic compounds have high melting and boiling points.				
Recall that ionic compounds don't conduct electricity when solid, but do when melted or dissolved.				
Explain the properties of ionic compounds in terms of their structure and bonding.				
2.2.4 Properties of small molecules				
Recall that substances which consist of small molecules are usually gases or liquids and have relatively low melting points and boiling points.				
Describe what happens when these substances melt or boil, with reference to the intermolecular forces present.				
Describe how these forces change as the size of the molecules increase, and the effect this has on the melting and boiling points of substances.				
Recall that these substances don't conduct electricity.				
Explain the properties of small molecules in terms of their structure and bonding.				
Use ideas about the strength of intermolecular forces and covalent bonds to explain the bulk properties of molecular substances.				
2.2.5 Polymers				

Recall that polymers have very large molecules, and that the atoms in the polymer molecules are linked to other atoms by strong covalent bonds				
State the relative strength of the intermolecular forces between polymer molecules, and the effect this has on their state at room temperature.				
Recognise polymers from diagrams showing their structure and bonding.				
2.2.6 Giant covalent structures				
Recall that substances that consist of giant covalent structures are solids with very high melting points.				
Recall that all of the atoms in these structures are linked to other atoms by strong covalent bonds.				
Explain the properties of giant covalent structures in terms of their structure and bonding.				
Describe what happens when these substances melt or boil, with reference to the covalent bonds present.				
Recall that diamond and graphite (which are forms of carbon) and silicon dioxide (silica) are examples of giant covalent structures.				
Recognise giant covalent structures from diagrams showing their bonding and structure.				
2.2.7 Properties of metals and alloys				
Recall that metals have giant structures of atoms with strong metallic bonds.				
Recall that these strong metallic bonds mean that most metals have high melting and boiling points.				
Describe the arrangements of atoms in pure metals.				
Explain the properties of metals in terms of their structure and bonding.				
State what an alloy is and describe how the atoms are arranged.				
Explain the properties of alloys (when compared to pure metals) in terms of their structure and bonding.				
2.2.8 Metals as conductors				
Recall that metals are good conductors of electricity.				
Recall that metals are good conductors of thermal energy.				
Explain these properties of metals in terms of their structure and bonding.				

2.3.1 Diamond

Describe the structure of diamond.

Recall that diamond is very hard and has a very high melting point.

Recall that diamond doesn't conduct electricity.

Explain these properties in terms of its structure and bonding.

2.3.2 Graphite

Describe the structure of graphite.

Recall that graphite is soft and slippery.

Recall that graphite has a high melting point.

Recall that graphite conducts electricity.

Explain these properties in terms of its structure and bonding.

2.3.3 Graphene and fullerenes

Describe the structure of graphene.

Recall that its properties make it useful in electronics and composites.

Explain the properties of graphene in terms of its structure and bonding.

Describe the structure of fullerenes.

Recall that the first fullerene to be discovered was Buckminsterfullerene (C₆₀) which has a spherical shape.

Recall that carbon nanotubes are cylindrical fullerenes with very high length to diameter ratios.

Recall that their properties make them useful for nanotechnology, electronics and materials.

Recognise graphene and fullerenes from diagrams and descriptions of their bonding and structure

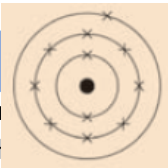
Give examples of the uses of fullerenes, including carbon nanotubes.

1.1.1 Atoms, elements and compounds

Define the word 'element' in terms of atoms.

Recall that there are about 100 different elements which are shown in the periodic table.

Describe what a compound is and how they are represented.				
Describe how compounds are formed and separated, and what this involves.				
Use the names and symbols of the first 20 elements in the periodic table, the elements in Groups 1 and 7, and other elements in the Chemistry course.				
Name compounds of these elements from formulae or symbol equations.				
Write word equations for all the chemical reactions in the Chemistry course.				
Write formulae and balanced chemical equations for all the chemical reactions in the Chemistry course.				
1.1.2 Mixtures				
Describe what a mixture is and whether the properties of each substance in the mixture are changed or unchanged.				
State the 5 processes which can be used to separate mixtures, and remember that they do not involve chemical reactions.				
For each process, state the mixture(s) it can be used to separate.				
Describe, explain and give examples of the each of these processes.				
Suggest suitable separation and purification techniques for mixtures when given information.				
1.1.3 The development of the model of the atom				
Explain what may lead to a scientific model being changed or replaced.				
Describe how the model of the atom changed as new evidence was discovered.				
Describe the roles of Niels Bohr and James Chadwick in the development of the model of the atom.				
Explain why the new evidence from the scattering experiment led to a change in the atomic model.				
Describe the difference between the plum pudding model of the atom and the nuclear model of the atom.				
1.1.4 Relative electrical charges of subatomic particles				
State the relative charges of protons, neutrons and electrons.				
Explain why atoms have no overall electrical charge.				

State what atomic number represents.				
State how atoms of different elements differ from each other.				
Use the nuclear model to describe the structure of atoms.				
1.1.5 Size and mass of atoms				
State the radius of an atom.				
State the radius of a nucleus				
State where most of the mass of an atom is.				
State the relative masses of protons, neutrons and electrons.				
State what mass number represents.				
Describe what an isotope is, how they differ from one another and how they are the same.				
Use the mass number and atomic number to calculate the number of protons, neutrons and electrons in an atom or ion.				
Relate the size of atoms to objects that can be seen.				
1.1.6 Relative atomic mass				
State what relative atomic mass is and how it is calculated.				
Calculate relative atomic mass from data given.				
1.1.7 Electronic Structure				
Describe how electrons fill up the energy levels (or 'shells') around the nucleus, starting from the lowest energy level (or innermost available shell).				
Represent the electronic structure of the first 20 elements of the periodic table in the following forms:				
1.2.1 Periodic table				
Describe how elements are arranged in the periodic table and why it is called the periodic table.				
State the name of the columns in the periodic table and why elements are placed in the same column.				
Explain how the position of an element in the periodic table is related to the arrangement of electrons in its atoms and its atomic number.				
Predict possible reactions and reactivity of elements from their positions in the periodic table.				
1.2.2 Development of the periodic table				

State how scientists initially classified elements.				
Describe problems with the early periodic table.				
Explain how Mendeleev overcame these problems.				
Explain how Mendeleev was proved right, and why the initial order based on atomic weights was not always correct.				
Describe the steps in the development of the periodic table.				
1.2.3 Metals and non-metals				
Identify where metals and non-metals appear in the periodic table.				
State the type of ion metals form.				
State the type of ion non-metals form.				
Describe the physical and chemical properties of metals.				
Describe the physical and chemical properties of non-metals				
Explain how the atomic structure of metals and non-metals relates to their position in the periodic table.				
Explain how the reactions of elements are related to the arrangement of electrons in their atoms and therefore their atomic number.				
1.2.4 Group 0 (Noble Gases)				
Explain why the noble gases (group 0) are unreactive, in terms of their outer electrons.				
Describe the trend in boiling point going down group 0.				
Predict properties from trends down the group.				
1.2.5 Group 1 (Alkali Metals)				
Describe the electronic structure of the alkali metals (group 1) and explain how their properties depend on this.				
Describe the reactions (observations and products) of the first 3 alkali metals with oxygen.				
Describe the reactions (observations and products) of the first 3 alkali metals with chlorine.				
Describe the reactions (observations and products) of the first 3 alkali metals with water.				
Explain the trend in reactivity going down the group.				
Predict properties from trends down the group.				
1.2.6 Group 7 (Halogens)				

Describe the electronic structure of the halogens (group 7) and explain how their properties depend on this.				
State the type of element the halogens are and describe what their molecules consist of.				
Describe the type of compounds formed when they react with metals				
Describe the type of compounds formed when they react with non-metals				
Explain the trend in reactivity going down the group.				
Explain displacement reactions involving halogens and solutions of their salts.				
Predict properties from trends down the group.				
1.3.1 Comparison of transition metals with group 1 elements (Chemistry only)				
State what the transition elements are.				
Describe the difference compared with group 1 in melting points, strength, hardness and reactivity with oxygen, water and halogens.				
Give examples of general properties with reference to Cr, Mn, Fe, Co, Ni, Cu.				
1.3.2 Typical properties of transition metals (Chemistry only)				
Describe the typical properties of transition elements.				
Give examples of general properties with reference to compounds of Cr, Mn, Fe, Co, Ni, Cu.				

Target(s)



YEAR 11 Triple Chemistry Term 1

By the end of this unit, I will be able:



Key Vocabulary

4.2.1 Reactions of acids with metals

Recall that acids react with some metal to produce salts and hydrogen.

Explain in terms of gain or loss of electrons, that these are redox reactions.

Identify which species are oxidised and which are reduced in given chemical equations.

4.2.2 Neutralisation of acids and salt production

Recall that acids are neutralised by alkalis (eg soluble metal hydroxides) and bases (eg insoluble metal hydroxides and metal oxides) to produce salts and water.

Recall that Acids are neutralised by metal carbonates to produce salts, water and carbon dioxide.

Name salts produced by these reactions.

Predict products from given reactants.

Use the formulae of common ions to deduce the formulae of salts.

4.2.3 Soluble salts

State the reactions that can be used to make soluble salts.

Describe how to make pure, dry samples of named soluble salts from information provided.

4.2.4 The pH scale and neutralisation

Recall that acids produce hydrogen ions (H^+) in aqueous solutions.

Recall that aqueous solutions of alkalis contain hydroxide ions (OH^-).

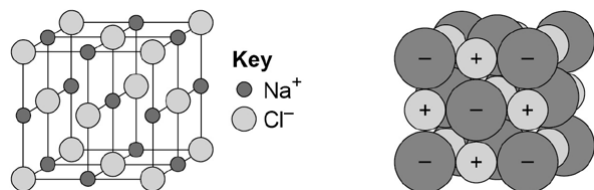
Describe what the pH scale is and how it is used.

Recall that in neutralisation reactions between an acid and an alkali, hydrogen ions react with hydroxide ions to produce water.

State the ionic equation for a neutralisation reaction.				
Describe the use of universal indicator or a wide range indicator to measure the approximate pH of a solution.				
Use the pH scale to identify acidic or alkaline solutions.				
Carry out Titrations and describe the experimental method				
Calculate concentrations of unknowns from titrations				
4.2.6 Strong and weak acids (HT only)				
State what a strong acid is and give examples.				
State what a weak acid is and give examples.				
Recall that for a given concentration of aqueous solutions, the stronger an acid, the lower the pH.				
Recall that as the pH decreases by one unit, the hydrogen ion concentration of the solution increases by a factor of 10.				
Use and explain the terms dilute and concentrated, and weak and strong in relation to acids				
Describe neutrality and relative acidity in terms of the effect on hydrogen ion concentration and the numerical value of pH (whole numbers only).				
2.1.1 Chemical bonds				
State the three types of strong chemical bonds.				
For each bond, state what it is, where it occurs and the particles involved.				
2.1.2 Ionic bonding				
Describe the formation of an ionic bond in terms of electron transfer.				
Represent the electron transfer during the formation of an ionic compound using dot and cross diagrams. For example. $\text{Na} \cdot + \cdot \overset{\times \times}{\underset{\times \times}{\text{Cl}}} \longrightarrow \left[\text{Na} \right]^+ \left[\overset{\times \times}{\underset{\times \times}{\text{Cl}}} \right]^-$ <p>(2,8,1) (2,8,7) (2,8) (2,8,8)</p>				
Work out the charge on the ions of elements in group 1, 2, 6 and 7.				
Draw dot and cross diagrams for ionic compounds formed by elements in groups 1 and 2 with elements in group 6 and 7.				
2.1.3 Ionic compounds				

Describe the structure of a giant ionic lattice, with references to the forces holding it together.

Recognise ionic structures represented in the following forms, for example sodium chloride.



Describe the limitations of using dot and cross diagrams to represent a giant ionic structure.

Describe the limitations of using ball and stick diagrams to represent a giant ionic structure.

Describe the limitations of using 2D diagrams to represent a giant ionic structure.

Describe the limitations of using 3D diagrams to represent a giant ionic structure.

Work out the empirical formula of an ionic compound from given information.

2.1.4 Covalent bonding

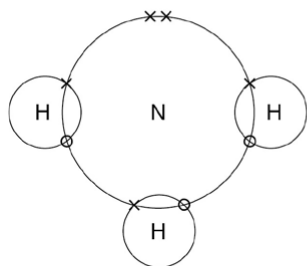
Describe a covalent bond in terms of electron sharing.

Recall that some covalent substances consist of small molecules, some have very large molecules, such as polymers, and some have giant covalent structures such as diamond and silicon dioxide.

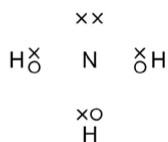
Recognise common substances that consist of small molecules from their chemical formula.

Recognise the covalent bonds in molecules and giants structures in the following forms.

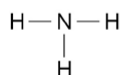
For ammonia (NH_3)



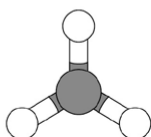
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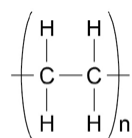
and/or



and/or



Polymers can be represent in the form:



poly(ethene)

where n is a large number.

Draw dot and cross diagrams for the molecules of hydrogen, chlorine, oxygen, nitrogen, hydrogen chloride, water, ammonia and methane.

Represent the covalent bonds in small molecules, in the repeating units of polymers and in part of giant covalent structures, using a line to represent a single bond.

Describe the limitations of using dot and cross diagrams to represent molecules or giant structures.

Describe the limitations of using ball and stick diagrams to represent molecules or giant structures.

Describe the limitations of using 2D diagrams to represent molecules or giant structures.

Describe the limitations of using 3D diagrams to represent molecules or giant structures.

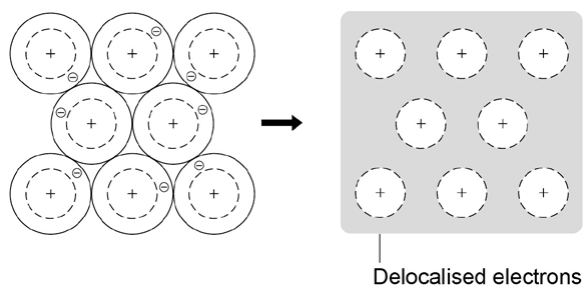
Work out the molecular formula of a substance from a given model or diagram in these forms, showing the atoms and bonds in the molecule.

2.1.5 Metallic bonding

Describe the structure of a metallic lattice, with reference to positive ions and electrons.

Describe metallic bonding with reference to electrons.

Recognise metallic substances in the following forms.



2.2.1 The three states of matter

Describe the particle model.

Describe the three states of matter using the particle model.

Explain changes in state using the particle model.

Explain what determines the melting and boiling point of different substances, with reference to forces, particles, bonding and structure.				
Predict the states of substances at different temperatures given appropriate data.				
Explain the different temperatures at which changes of state occur in terms of energy transfers and the types of bonding present.				
Recognise that atoms themselves do not have the bulk properties of materials.				
Explain the limitations of the particle theory in relation to changes of state .				
2.2.2 State symbols				
State the four state symbols and what they mean.				
Use state symbols in chemical equations.				
2.2.3 Properties of ionic compounds				
Describe the structure of a giant ionic lattice with reference to ions and electrostatic forces.				
Recall that ionic compounds have high melting and boiling points.				
Recall that ionic compounds don't conduct electricity when solid, but do when melted or dissolved.				
Explain the properties of ionic compounds in terms of their structure and bonding.				
2.2.4 Properties of small molecules				
Recall that substances which consist of small molecules are usually gases or liquids and have relatively low melting points and boiling points.				
Describe what happens when these substances melt or boil, with reference to the intermolecular forces present.				
Describe how these forces change as the size of the molecules increase, and the effect this has on the melting and boiling points of substances.				
Recall that these substances don't conduct electricity.				
Explain the properties of small molecules in terms of their structure and bonding.				
Use ideas about the strength of intermolecular forces and covalent bonds to explain the bulk properties of molecular substances.				
2.2.5 Polymers				

Recall that polymers have very large molecules, and that the atoms in the polymer molecules are linked to other atoms by strong covalent bonds				
State the relative strength of the intermolecular forces between polymer molecules, and the effect this has on their state at room temperature.				
Recognise polymers from diagrams showing their structure and bonding.				
2.2.6 Giant covalent structures				
Recall that substances that consist of giant covalent structures are solids with very high melting points.				
Recall that all of the atoms in these structures are linked to other atoms by strong covalent bonds.				
Explain the properties of giant covalent structures in terms of their structure and bonding.				
Describe what happens when these substances melt or boil, with reference to the covalent bonds present.				
Recall that diamond and graphite (which are forms of carbon) and silicon dioxide (silica) are examples of giant covalent structures.				
Recognise giant covalent structures from diagrams showing their bonding and structure.				
2.2.7 Properties of metals and alloys				
Recall that metals have giant structures of atoms with strong metallic bonds.				
Recall that these strong metallic bonds mean that most metals have high melting and boiling points.				
Describe the arrangements of atoms in pure metals.				
Explain the properties of metals in terms of their structure and bonding.				
State what an alloy is and describe how the atoms are arranged.				
Explain the properties of alloys (when compared to pure metals) in terms of their structure and bonding.				
2.2.8 Metals as conductors				
Recall that metals are good conductors of electricity.				
Recall that metals are good conductors of thermal energy.				
Explain these properties of metals in terms of their structure and bonding.				

2.3.1 Diamond

Describe the structure of diamond.

Recall that diamond is very hard and has a very high melting point.

Recall that diamond doesn't conduct electricity.

Explain these properties in terms of its structure and bonding.

2.3.2 Graphite

Describe the structure of graphite.

Recall that graphite is soft and slippery.

Recall that graphite has a high melting point.

Recall that graphite conducts electricity.

Explain these properties in terms of its structure and bonding.

2.3.3 Graphene and fullerenes

Describe the structure of graphene.

Recall that its properties make it useful in electronics and composites.

Explain the properties of graphene in terms of its structure and bonding.

Describe the structure of fullerenes.

Recall that the first fullerene to be discovered was Buckminsterfullerene (C₆₀) which has a spherical shape.

Recall that carbon nanotubes are cylindrical fullerenes with very high length to diameter ratios.

Recall that their properties make them useful for nanotechnology, electronics and materials.

Recognise graphene and fullerenes from diagrams and descriptions of their bonding and structure

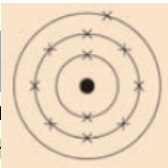
Give examples of the uses of fullerenes, including carbon nanotubes.

1.1.1 Atoms, elements and compounds

Define the word 'element' in terms of atoms.

Recall that there are about 100 different elements which are shown in the periodic table.

Describe what a compound is and how they are represented.				
Describe how compounds are formed and separated, and what this involves.				
Use the names and symbols of the first 20 elements in the periodic table, the elements in Groups 1 and 7, and other elements in the Chemistry course.				
Name compounds of these elements from formulae or symbol equations.				
Write word equations for all the chemical reactions in the Chemistry course.				
Write formulae and balanced chemical equations for all the chemical reactions in the Chemistry course.				
1.1.2 Mixtures				
Describe what a mixture is and whether the properties of each substance in the mixture are changed or unchanged.				
State the 5 processes which can be used to separate mixtures, and remember that they do not involve chemical reactions.				
For each process, state the mixture(s) it can be used to separate.				
Describe, explain and give examples of the each of these processes.				
Suggest suitable separation and purification techniques for mixtures when given information.				
1.1.3 The development of the model of the atom				
Explain what may lead to a scientific model being changed or replaced.				
Describe how the model of the atom changed as new evidence was discovered.				
Describe the roles of Niels Bohr and James Chadwick in the development of the model of the atom.				
Explain why the new evidence from the scattering experiment led to a change in the atomic model.				
Describe the difference between the plum pudding model of the atom and the nuclear model of the atom.				
1.1.4 Relative electrical charges of subatomic particles				
State the relative charges of protons, neutrons and electrons.				
Explain why atoms have no overall electrical charge.				

State what atomic number represents.				
State how atoms of different elements differ from each other.				
Use the nuclear model to describe the structure of atoms.				
1.1.5 Size and mass of atoms				
State the radius of an atom.				
State the radius of a nucleus				
State where most of the mass of an atom is.				
State the relative masses of protons, neutrons and electrons.				
State what mass number represents.				
Describe what an isotope is, how they differ from one another and how they are the same.				
Use the mass number and atomic number to calculate the number of protons, neutrons and electrons in an atom or ion.				
Relate the size of atoms to objects that can be seen.				
1.1.6 Relative atomic mass				
State what relative atomic mass is and how it is calculated.				
Calculate relative atomic mass from data given.				
1.1.7 Electronic Structure				
Describe how electrons fill up the energy levels (or 'shells') around the nucleus, starting from the lowest energy level (or innermost available shell).				
Represent the electronic structure of the first 20 elements of the periodic table in the following forms:				
1.2.1 Periodic table				
Describe how elements are arranged in the periodic table and why it is called the periodic table.				
State the name of the columns in the periodic table and why elements are placed in the same column.				
Explain how the position of an element in the periodic table is related to the arrangement of electrons in its atoms and its atomic number.				
Predict possible reactions and reactivity of elements from their positions in the periodic table.				
1.2.2 Development of the periodic table				

State how scientists initially classified elements.				
Describe problems with the early periodic table.				
Explain how Mendeleev overcame these problems.				
Explain how Mendeleev was proved right, and why the initial order based on atomic weights was not always correct.				
Describe the steps in the development of the periodic table.				
1.2.3 Metals and non-metals				
Identify where metals and non-metals appear in the periodic table.				
State the type of ion metals form.				
State the type of ion non-metals form.				
Describe the physical and chemical properties of metals.				
Describe the physical and chemical properties of non-metals				
Explain how the atomic structure of metals and non-metals relates to their position in the periodic table.				
Explain how the reactions of elements are related to the arrangement of electrons in their atoms and therefore their atomic number.				
1.2.4 Group 0 (Noble Gases)				
Explain why the noble gases (group 0) are unreactive, in terms of their outer electrons.				
Describe the trend in boiling point going down group 0.				
Predict properties from trends down the group.				
1.2.5 Group 1 (Alkali Metals)				
Describe the electronic structure of the alkali metals (group 1) and explain how their properties depend on this.				
Describe the reactions (observations and products) of the first 3 alkali metals with oxygen.				
Describe the reactions (observations and products) of the first 3 alkali metals with chlorine.				
Describe the reactions (observations and products) of the first 3 alkali metals with water.				
Explain the trend in reactivity going down the group.				
Predict properties from trends down the group.				
1.2.6 Group 7 (Halogens)				

Describe the electronic structure of the halogens (group 7) and explain how their properties depend on this.				
State the type of element the halogens are and describe what their molecules consist of.				
Describe the type of compounds formed when they react with metals				
Describe the type of compounds formed when they react with non-metals				
Explain the trend in reactivity going down the group.				
Explain displacement reactions involving halogens and solutions of their salts.				
Predict properties from trends down the group.				
1.3.1 Comparison of transition metals with group 1 elements (Chemistry only)				
State what the transition elements are.				
Describe the difference compared with group 1 in melting points, strength, hardness and reactivity with oxygen, water and halogens.				
Give examples of general properties with reference to Cr, Mn, Fe, Co, Ni, Cu.				
1.3.2 Typical properties of transition metals (Chemistry only)				
Describe the typical properties of transition elements.				
Give examples of general properties with reference to compounds of Cr, Mn, Fe, Co, Ni, Cu.				

Target(s)



YEAR 10 TrilogY Science - Physics - Term 1

By the end of this unit, I will be able to:



Key Vocabulary

Atomic structure

- Write down what a radioactive substance is.
- Write down the types of radiation given out from a radioactive substance.
- Write down what happens when a radioactive source emits radiation (radioactive decay).
- Write down the different types of radiation emitted by radioactive sources.
- Describe how the nuclear model of the atom was established.
- Explain why the 'plum pudding' model of the atom was rejected.
- Describe what conclusions were made about the atom from experimental evidence.
- Explain why the nuclear model was accepted.
- Write down what an isotope is.
- Describe how the nucleus of an atom changes when it emits an alpha particle or a beta particle.
- Represent the emission of an alpha particle from the nucleus.
- Represent the emission of a beta particle from the nucleus.
- Write down how far each type of radiation can travel in air.
- Describe how different materials absorb alpha, beta, and gamma radiation.
- Describe the ionising power of alpha, beta and gamma radiation.
- Explain why alpha, beta, and gamma radiation are dangerous.
- Write down what the half-life of a radioactive source means.
- Write down what the count rate from a radioactive source means.
- Describe what radioactive isotopes are used for in medicine.
- Describe how to choose a radioactive isotope for a particular job.
- Describe what type of nuclear radiation be used for medical imaging.
- Explain how to use radioactivity to destroy cancer cells.
- State what nuclear fission is.
- Explain the difference between spontaneous fission and induced fission.
- State what a chain reaction is.
- Describe how a chain reaction in a nuclear reactor is controlled.
- State what nuclear fusion is.
- Describe how nuclei can be made to fuse together.
- Describe where the Sun's energy comes from.
- Explain why it is difficult to make a nuclear fusion reactor.
- State what radon gas is and why it is dangerous.
- Describe how safe nuclear reactors are.
- Explain why nuclear waste is dangerous.

Electricity

- Describe how electric circuits are shown as diagrams.
- Write down the difference between a battery and a cell.
- Describe what determines the size of an electric current.
- Calculate the size of an electric current from the charge flow and the time taken.
- Write down what is meant by potential difference.
- Write down what resistance is and what its unit is.
- Write down Ohm's law.
- Describe what happens when you reverse the potential difference across a resistor.
- Describe what happens to the resistance of a filament lamp as its temperature increases.

Ammeter: an instrument for measuring the size of a current. It is put into a circuit in series with other components.

Ampere (amps, A): the unit of electric current. One ampere is a flow of 1 coulomb of charge per second.

Battery: a number of electrical cells in series.

Charge: a conserved property of some particles (e.g. electron, proton) which causes them to exert a force on each other.

Component: a part of something e.g. a lamp might be a component of an electric circuit.

Diode: a non-ohmic conductor that has a much higher resistance in one direction (its reverse direction) than in the other direction (its forward direction).

Discharge: to remove an electric charge by conduction.

Earthed: connected to earth so that any electrostatic charges can flow away.

Electric field: a charged object (X) creates an electric field

Describe how the current through a diode depends on the potential difference across it.					around itself, which causes a non-contact force on any other charged object in the field.
Describe what happens to the resistance of a temperature-dependent resistor as its temperature increases.					Electrons: tiny negatively charged particles that move around the nucleus of an atom.
Describe what happens to the resistance of a light-dependent resistor as the light level increases.					Induce: to create. For example, a wire in a changing magnetic field has a current in it.
Describe the current, potential difference, and resistance for each component in a series circuit.					Ion: a charged atom.
Describe the potential difference of several cells in series.					Light-dependent resistor (LDR): a resistor whose resistance depends on the intensity of the light incident on it.
Calculate the total resistance of two resistors in series.					Light-emitting diode (LED): a diode that emits light when it conducts.
Explain why adding resistors in series increases the total resistance.					Neutrons: uncharged particles of the same mass as protons. The nucleus of an atom consists of protons and neutrons.
Describe the currents and potential differences for components in a parallel circuit.					ohm (Ω): the unit for measuring electrical resistance.
Calculate the current through a resistor in a parallel circuit.					Parallel: components connected in a circuit so that the potential difference is the same across each one.
Explain why the total resistance of two resistors in parallel is less than the resistance of the smaller individual resistor.					Potential difference: a measure of the work done or energy transferred to the lamp by each coulomb of charge that passes through it. The unit of potential
Explain why adding resistors in parallel decreases the total resistance.					

				<p>difference is the volt (V).</p> <p>Protons: positively charged particles with an equal and opposite charge to that of an electron.</p> <p>Resistance: a way of saying how difficult it is for electricity to flow through something.</p> <p>Series: components connected in a circuit in such a way that the same current passes through them.</p> <p>Static electricity: unbalanced electric charges on the surface or within a material.</p> <p>Thermistor: a resistor whose resistance depends on the temperature of the thermistor.</p> <p>volt, V: the unit for measuring potential difference (voltage).</p> <p>Voltmeter: an instrument for measuring the potential difference across a component. Connected in parallel to a circuit.</p>
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Target(s)



YEAR 11 Separate Science - Physics - Term 1

By the end of this unit, I will be able:





	SUMMARISE ✓	ORGANISE ✓	RECALL ✓	TEST YOURSELF ✓	Key Vocabulary
Space					
Describe how the solar system formed.					
Describe what is meant by a protostar.					
Explain how energy is released inside the Sun.					
Explain why the Sun is stable.					
Explain why stars eventually become stable.					
Explain the stages in the life of a star.					
Describe what will eventually happen to the Sun.					
Describe what a supernova is.					
State what forces keep planets and satellites moving along their orbits.					
Identify the direction of the force on an orbiting body in a circular orbit.					
Describe how the velocity of a body in a circular orbit changes as the body moves around the orbit.					
Explain why an orbiting body needs to move at a particular speed for it to stay in a circular orbit.					
State what is meant by the red-shift of a light source.					
Explain how red-shift depends on speed.					
Explain how people know that the distant galaxies are moving away from Earth.					
Explain why people think the Earth is expanding.					
Describe what the Big Bang theory of the universe is.					
Explain why the universe is expanding.					
Waves in air fluids and solids					
Describe waves as either transverse or longitudinal, defining these waves in terms of the direction of their oscillation and energy transfer and giving examples of each					
Define waves as transfers of energy from one place to another, carrying information					
Define amplitude, wavelength, frequency, period and wave speed and Identify them where appropriate on diagrams					
State examples of methods of measuring wave speeds in different media and Identify the suitability of apparatus of measuring frequency and wavelength					
Calculate wave speed, frequency or wavelength by applying, but not recalling, the equation: $[v = f\lambda]$ and calculate wave period by recalling and applying the equation: $[T = 1/f]$					
Identify amplitude and wavelength from given diagrams					
Describe a method to measure the speed of sound waves in air					
Describe a method to measure the speed of ripples on a water surface					
Required practical 20: make observations to identify the suitability of apparatus to measure the frequency, wavelength and speed of waves in a ripple tank and waves in a solid					
6.62. Electromagnetic waves					
Describe what electromagnetic waves are and explain how they are grouped					
List the groups of electromagnetic waves in order of wavelength					

Explain that because our eyes only detect a limited range of electromagnetic waves, they can only detect visible light				
HT ONLY: Explain how different wavelengths of electromagnetic radiation are reflected, refracted, absorbed or transmitted differently by different substances and types of surface				
Illustrate the refraction of a wave at the boundary between two different media by constructing ray diagrams				
HT ONLY: Describe what refraction is due to and illustrate this using wave front diagrams				
<i>Required practical activity 10: investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface.</i>				
HT ONLY: Explain how radio waves can be produced by oscillations in electrical circuits, or absorbed by electrical circuits				
Explain that changes in atoms and the nuclei of atoms can result in electromagnetic waves being generated or absorbed over a wide frequency range				
State examples of the dangers of each group of electromagnetic radiation and discuss the effects of radiation as depending on the type of radiation and the size of the dose				
State examples of the uses of each group of electromagnetic radiation, explaining why each type of electromagnetic wave is suitable for its applications				

Target(s)

**YEAR 11 - Term 1**

By the end of this unit, I will know:

	 SUMMARISE ✓	 ORGANISE ✓	 RECALL ✓	 TEST YOURSELF ✓	Key Vocabulary
Part 1					
I understand the law with regard to pornography, and I also understand the potential impact that it can have upon the psychology of the viewer (impact upon body image, porn addiction etc).					
I understand how alcohol and drugs can affect a person's capacity to consent to sexual activity; and that to have sex with a person under the influence of either can result in prosecution for sexual assault / rape.					
I understand the difference between persuasion, pressure and coercion with regard to consenting to sexual activity, and the different ways that coercive behaviour can be seen in relationships.					
I understand the ways that STIs can be transmitted between partners, the potential treatments for them, and I also understand the best ways to prevent the spread of STIs using safer sex practises.					
I understand the concept of victim blaming in relation to the issues of sexual assault and/or rape; and I also understand the issues connected with how to prove consent in relation to criminal trials.					
I understand the importance of positive, healthy relationships in connection with the desire for healthy, enjoyable sexual activity.					

Target(s)

**YEAR 11 Term 1 Spanish**

By the end of this unit, I will know:

By the end of this unit, I will be able to:**Module 5 Ciudades- Towns**

talk about different types of housing

describe my house, its rooms and furniture

talk about places in a town

ask for and understand directions

describe features of a region

use se puede and se pueden

plan what to do using the future tense

understand the geography of Spain

use si+present/future

talk about problems in a town

use the conditional

use so..so much..so many..

describe a visit in the past

use different tenses together

recognise and use idioms

talk about shops

use language for souvenir shopping

shop for clothes and presents

use demonstrative adjectives

explain preferences

Module 6 De Costumbre- Food and Festivals

describe mealtimes

talk about daily routine

understand reflexive verbs

talk about illness and injuries

ask for help at a pharmacy

use the perfect tense with illness

talk about typical foods

use quantity expressions

use the passive

compare different festivals

describe a special day

use reflexive verbs in the preterite tense

order in a restaurant

use absolute superlatives -ísimo

talk about a music festival

use expressions followed by the infinitive

Target(s)

**YEAR 11 – Term 1 GCSE Physical Education**

By the end of this unit, I will know:

**Key Vocabulary****Sports Psychology – Paper 2**

Examples of and evaluation of the types of feedback and guidance

Arousal and the inverted U theory

Application of how optimal arousal has to vary in relation to the skill/stress management techniques

Aggression and Personality

Intrinsic and extrinsic motivation, including evaluation of their merits

Health, Fitness and Well-Being

The meaning of health and fitness: Physical, Mental/Emotional and Social Health – linking participation in physical activity to exercise, sport, health and well being

The consequences of a sedentary lifestyle

Obesity and how it may affect performance in physical activity and sport

The different types of Somatotypes and their application to sport

Energy use

Reasons for having a balanced diet and the role of nutrients

The role of Carbohydrates, Fats, Protein, Vitamins and Minerals

Reasons for maintaining water balance (hydration) and further applications of the topic area

Evaluation
Guidance
Feedback
Emotion
Metabolism
Intrinsic
Extrinsic
Quantitative
Qualitative
Obesity
Somatotypes
Sedentary