

Year 7 Science

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Working Scientifically – An Introduction

Science, Year 7, unit 1 of 13

What previous learning am I building on?		What am I learning that is new?	
KS2 – Working Scientifically		By the end of this unit, I will start to be able to: <ul style="list-style-type: none"> • select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate • use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety • make and record observations and measurements using a range of methods for different investigations, including tables and graphs • interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions • present reasoned explanations, including explaining data in relation to predictions and hypotheses • evaluate data, showing awareness of potential sources of random and systematic error 	
Learning Journey – lesson title and main activities			
1 Hazards and Safety <ul style="list-style-type: none"> • To know the main safety rules for a classroom laboratory • To recognize the hazard symbols and what they mean • To explain why hazard symbols and lab rules are important 			
2 Asking Scientific Questions <ul style="list-style-type: none"> • State some questions that can be investigated. • Identify independent, dependent, and control variables. • Explain that some questions can be investigated and others cannot. 			
3 Equipment and Bunsen Burners <ul style="list-style-type: none"> • The know the names for some standard lab apparatus • To draw 2D symbols for lab apparatus • The be able to use a Bunsen Burner safely 			
4 Planning investigations <ul style="list-style-type: none"> • Describe how to write a plan for an investigation. • Recognise what makes data accurate and precise. • Identify risks in an experiment and write an appropriate risk assessment for an investigation 			
5 Recording Data <ul style="list-style-type: none"> • State an example of how data can be recorded. • Calculate a mean from three repeat measurements. Present data appropriately as tables and graphs.			
6 Analysing Data <ul style="list-style-type: none"> • List what should be included in a conclusion. • Interpret data to draw conclusions. • Plot data on a graph and draw the line of best fit. 			
7 Evaluating Data <ul style="list-style-type: none"> • State how to evaluate data. • Suggest one improvement to an investigation. • Describe the stages in evaluating data. 			
8. Summary Lesson - Practical lessons with problem graphs, summarising the learning over this unit.			
How will I be assessed at the end of this unit?			
Year 7 baseline Scientific Baseline Vocabulary assessment			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Understand the meaning of scientific keywords associated with Scientific Enquiry/Investigations.	Satchel One quiz. Reviewing lesson content with flashcards made from required retrieval content.	Consult your teacher. You can seek additional assistance by making good use of platforms like BBC Bitesize, Seneca, or Cognito.	BBC Bitesize, Seneca, or Cognito

Forces

Science, Year 7, unit 2 of 13

What previous learning am I building on?	What am I learning that is new?		
KS2 curriculum: “find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching”	<p>By the end of this unit, I will:</p> <p>Understand that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>Know the effects of air resistance, water resistance and friction, that act between moving surfaces</p> <p>Be able to predict whether 2 magnets will attract or repel each other, depending on which poles are facing</p>		
Learning Journey – lesson title and main activities			
<p>1 Forces Introduction Diagrams: Represent different forces and their sizes using arrows on an image Practical: Forces carousel</p>			
<p>2 Squashing and Stretching Writing: Describe how forces deform objects, explaining how solid surfaces provide a support force Practical: Hooke’s Law</p>			
<p>3 Drag and Friction Writing: Produce a paragraph about contact forces Practical: Identifying the factors that affect frictional force</p>			
<p>4 Gravity Calculations: use mass, weight and gravitational field strength</p>			
<p>5 Balanced and Unbalanced Forces Calculations: Work out resultant forces from force diagrams</p>			
<p>6 Forces summary Key words: Be able to define key words from this unit, such as <i>unbalanced</i>, <i>equilibrium</i> and <i>accelerations</i></p>			
How will I be assessed at the end of this unit?			
A knowledge-based retrieval quiz will be administered at the end of this unit. The essential information will be provided in advance. Summative assessment – through end of topic assessment			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Understand the meaning of scientific keywords in lessons. Listen attentively in lesson. Read and use scientific keywords to answer questions in full sentences.	Satchel One quiz. Seneca Learning revision for retrieval quiz. Reviewing lesson content with flashcards made from required retrieval content.	You can deepen your understanding and challenge yourself by going over materials in revision guide or on platforms like BBC Bitesize, Seneca, and Cognito. You should explore literature focused on forces.	Consult your teacher. You can seek additional assistance by making good use of platforms like BBC Bitesize, Seneca, or Cognito. Access textbooks available on Kerboodle. Locate pertinent books in the library.

The Universe

Science, Year 7, unit 3 of 13

What previous learning am I building on?	What am I learning that is new?		
<p><u>KS2 spec:</u></p> <ul style="list-style-type: none"> describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon relative to the Earth describe the Sun, Earth and Moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	<p>By the end of this unit, I will:</p> <p>Understand:</p> <ul style="list-style-type: none"> Why we have seasons. Why the moon has phases <p>Know:</p> <ul style="list-style-type: none"> What a light year is. What the universe consists of. What the Solar System is. <p>Be able to:</p> <ul style="list-style-type: none"> Draw a scale diagram Calculate means and ranges. 		
Learning Journey – lesson title and main activities			
<p>1 The Night Sky Describe: The structure of the universe Discuss: The consequences of light travelling at a finite speed. What is a light year?</p>			
<p>2 The Solar System Diagrams: Draw and label a scale model of the solar system. Write: Produce a short paragraph about differences in the inner and outer planets.</p>			
<p>3 The Earth Discuss: Pupils to be able to explain why we have seasons (relating to the tilt of the Earth's axis).</p>			
<p>4 The Moon Diagrams: Be able to label images showing the different phases of the moon. Annotate these to explain what is happening in each.</p>			
<p>5 Enrichment lesson Data analysis: Task on the solar system.</p>			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Through reading and using scientific keywords to answer questions in full sentences.	Satchel One quiz. Seneca Learning revision for retrieval quiz. Reviewing lesson content with flashcards made from required retrieval content.	Review content in revision guide or on BBC Bitesize, Seneca, Cognito. Read factual 'Space' books.	Use websites such as BBC Bitesize/Seneca/Cognito Find relevant books in the library Use the textbook on Kerboodle Speak to the teacher

Earth's Structure

Science, Year 7, unit 4 of 13

What previous learning am I building on?	What am I learning that is new?		
KS2 National Curriculum Comparing and grouping different kinds of rocks on the basis of their appearance and simple physical properties	KS3 National Curriculum Know: Earth and atmosphere unit includes the composition of the Earth, the structure of the Earth and the rock cycle and the formation of igneous, sedimentary and metamorphic rocks		
Learning Journey – lesson title and main activities			
<p>1 The structure of the Earth</p> <p>Discussion: Name the layers of the Earth and give brief details about them</p>			
<p>2 Sedimentary rocks</p> <p>Diagrams: Create annotated pictures to detail each stage in the formation of a sedimentary rock Practical: Modelling sedimentary rock formation</p>			
<p>3 Igneous and metamorphic rocks</p> <p>Write: Explain why igneous and metamorphic rocks have particular properties based on how they were formed. Practical: What determines crystal size in igneous rock?</p>			
<p>4 The rock cycle</p> <p>Diagrams: Use the rock cycle to explain how the material in rocks is recycled. <i>Stretch:</i> Suggest similarities and differences between the rock cycle and everyday physical and chemical properties. Practical: Modelling the rock cycle</p>			
<p>5 Ceramics</p> <p>Information presentation: List the properties of ceramics and explain why properties of ceramics make them suitable for their uses.</p>			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Learning the meaning of keywords.	Make a model showing the structure of the Earth, as described in your activity sheet. Draw a cartoon strip to show how a small pebble that was loosened by weathering goes on to form part of a new sedimentary rock.	You can deepen your understanding and challenge yourself by going over materials in revision guide or on platforms like BBC Bitesize, Seneca, and Cognito. You should explore literature focused on forces.	Speak to you teacher Use Seneca/Cognito Find relevant books in the library Use the textbook on Kerboodle

Particles

Science, Year 7, unit 5 of 13

What previous learning am I building on?	What am I learning that is new?		
	By the end of this unit, I will: <ul style="list-style-type: none"> - Understand how state changes occur based on the particle model - Be able to draw the particles in a solid, liquid and gas, and explain their arrangement and motion - Know that materials are made up of particles. 		
Learning Journey – lesson title and main activities			
1 Particles and Density Practical: Using a Eureka Can to work out the density of a substance			
2 Melting and Solidifying Diagrams: Drawing particle models and hypothesising how this connects to a real-world example			
3 Finding Melting Point Practical: Cooling curves for stearic acid			
4 Boiling Numeracy: Plotting graphs and drawing conclusions. Introduce bubbles (wrt boiling) - higher tier concept.			
5 Evaporating and Condensing Discussion: How does boiling differ from evaporation?			
6 Diffusion Practical: Diffusing permanganate through water or a scent through air			
7 Gas Pressure Six-mark question: Why can some substances be compressed?			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my numeracy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Drawing graphs, density calculations, using a formula	Literacy-based homework which describes the content of the lesson in a new format	Write practicals in a formalised way to identify the key skills required. This may be literacy, numeracy, scientific method or others.	Use websites such as BBC Bitesize/Seneca/Cognito Find relevant books in the library Use the textbook on Kerboodle Speak to the teacher

Separating Mixtures

Science, Year 7, unit 6 of 13

What previous learning am I building on?		What am I learning that is new?	
<p>KS2: States of Matter: solids, liquids, and gases. Mixing and Dissolving: Some substances dissolve in water while others do not. Separation Techniques: filtering and sieving. Fair Testing & Observations</p> <p>KS3: Understanding of the particle model, working scientifically.</p>		<ul style="list-style-type: none"> - Understanding mixture and pure substances. - Separation techniques and how they work. - Practical skills and scientific enquiry 	
Learning Journey – lesson title and main activities			
<p>1 Substances and Mixtures Scientific enquiry: How can we separate out iron (metal) and sulfur (non-metal)? Pupil-led discussion. Practical: Use of magnets to separate iron and sulfur. <i>Introduction to use of melting / boiling point to determine purity.</i></p>			
<p>2 Separating Solutions Key words: solvent, solute, solution, soluble, insoluble. Diagrams: Particle model diagram of dissolving is introduced. Practical: dissolving substances in water vs acetone. The solvent will affect the solubility of the solute.</p>			
<p>3 Solubility Scientific enquiry: How can we get more sugar (solute) to dissolve in a saturated cup of tea (solvent)? Pupil-led discussion Practical: Pupils will measure the time it takes for sugar to dissolve in solution at different temperatures. Draw a bar graph of results (graph skills, discrete data).</p>			
<p>4 Filtering and Evaporating Scaffolded scientific enquiry: Plan how to separate out the sand, and recover the salt. Practical: Filtration and evaporation. Bunsen burners involved (link to first topic)</p>			
<p>5 Evaporation and Distillation Writing: Write up a method to get salt out of salty water (practical skills). Ext: design a system to keep the liquid. Drawing: Diagrams of distillation equipment (scientific model) and labelling where ‘evaporation’ and ‘condensation’ occurs.</p>			
<p>6 Chromatography Practical: Perform a chromatography experiment to discover ‘Who stole the money’? The thief used a forged cheque to pay one million pounds into a bank account, and chromatography must be used to match three suspects’ pens to the one used to write the check (scientific enquiry).</p>			
<p>7 End of Unit Revision Separation methods. Pupils are asked to explain why a puddle has disappeared overnight in terms of macroscopic observations. (Hinge question designed to surface misconceptions, e.g. the water has ‘boiled’)</p>			
How will I be assessed at the end of this unit?			
<p>There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment</p>			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
<p>Key words defined every lesson, activities matching scientific vocabulary to definitions, labelling diagrams and using key words in written work</p>	<p>Satchel One quiz. Seneca Learning revision for retrieval quiz. Reviewing lesson content with flashcards made from required retrieval content.</p>	<p>Use websites such as BBC Bitesize/Seneca/Cognito</p>	<p>Use websites such as BBC Bitesize/Seneca/Cognito</p>

Cells

Science, Year 7, unit 7 of 13

What previous learning am I building on?	What am I learning that is new?		
<p>KS2</p> <ul style="list-style-type: none"> describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals give reasons for classifying plants and animals based on specific characteristics. <p>KS3 Year 7 Particles topics - diffusion</p>	<p>By the end of this unit, I will:</p> <ul style="list-style-type: none"> Understand the role of diffusion in the movement of materials in and between cells and the structural adaptations of some unicellular organisms Know that cells are the fundamental unit of living organisms, including how to the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria and chloroplasts Be able to observe, interpret and record cell structure using a light microscope 		
Learning Journey – lesson title and main activities			
<p>1 Observing cells Writing: State what a cell is. Diagrams: Parts of the microscope Practical: Use of light microscope</p>			
<p>2 Plant and Animal Cells Writing: Identify one similarity and one difference between a plant and an animal cell by describing the components of each and their functions Practical: Cheek cells and Onion Skin</p>			
<p>3 Specialised Cells Diagrams: Show specialised features of plant and animal cells, summarising this in a table or as a model. LITERACY TASK: comparing animal cells to plant cells</p>			
<p>4 Movement of Substances in / out cells Discuss: Identify substances that move into or out of cells. Write: Produce a paragraph about the process of diffusion. Practical: How temperature affects rate of diffusion</p>			
<p>5 Unicellular organisms Diagrams: The structure of an amoeba and a euglena. Practical: Microscopes - observing Euglena</p>			
<p>6 Summative Lesson / Topic review</p>			
How will I be assessed at the end of this unit?			
<p>There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment</p>			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
<p>Comparison between plant and animal cells Description of cell adaptations Presentation of information in an accessible format</p>	<p>Making model cells Researching specialised cells</p>	<p>Calculation of magnification</p>	<p>Use websites such as BBC Bitesize/Seneca/Cognito Find relevant books in the library Use the textbook on Kerboodle Speak to the teacher</p>

Movement

Science, Year 7, unit 8 of 13

What previous learning am I building on?	What am I learning that is new?		
KS2: Builds on understanding of body systems KS3: Cells (Year 7), Forces (Year 7)	By the end of this unit, I will: Know: The hierarchical organisation of multicellular organisms Understand: the structure and functions of the human skeleton, to include support, protection, movement and making blood cells Be able to: use biomechanics to discuss the interaction between skeleton and muscles, including the measurement of force exerted by different muscles		
Learning Journey – lesson title and main activities			
1 Levels of organisation Writing: Produce a paragraph which states what is meant by a tissue, an organ, and an organ system, with examples. Include the hierarchy of organisation in a multicellular organism. Diagram: Identify the organs and their functions in organ systems.			
2 The Skeleton Diagrams: Label parts of the skeleton and the joints, describing their functions Practical: Examination of bones – looking at joint formation, strength and mass			
3 Enrichment lesson – Literacy - Different types of skeletons Writing: Apply knowledge in the context of a 6-mark question which describes the structure and function of the skeletal system			
4 Movement and joints Diagrams: Label images of different types of joints Writing: Explain how muscles produce movement around a joint.			
5 Movement and muscles Writing: Describe the function of major muscle groups and explain how antagonistic muscles cause movement about a joint. Diagrams: Use a diagram to predict the result of a muscle contraction or relaxation. Practical: Chicken wing dissection			
6 Summative / Topic Review			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Enrichment lesson with literacy focus	Summarising the contents of each lesson	Think about your daily life. When do you use different types of muscle or joints? Research muscle and joint injuries	Use websites such as BBC Bitesize/Seneca/Cognito Find relevant books in the library Use the textbook on Kerboodle Speak to the teacher

Interdependence

Science, Year 7, unit 9 of 13

What previous learning am I building on?	What am I learning that is new?
<p>KS2</p> <p>Builds on understanding of habitats, changes in an environment, food chains and adaptations along with identifying producers, predators and prey</p>	<p>By the end of this unit, I will:</p> <ul style="list-style-type: none"> - Understand the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops - Know how organisms affect, and are affected by, their environment, including the accumulation of toxic materials - Be able to describe changes in the environment which may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction

Learning Journey – lesson title and main activities

1 Food chains and webs

Diagrams: Draw and label food chains and food webs

Writing: EXT: Explain why a food web is a more accurate representation than a food chain and explain the link between food chains and the flow of energy

2 Disruption to food chains and webs

Discuss: Factors that can affect a population of organisms.

Writing: Produce an account of how toxic materials can accumulate in food chains and the effects on different populations, describing the role of insect pollinators in human food supplies

3 Population changes

Numeracy: Present population data as a graph and describe the pattern, explaining the trends and drawing detailed conclusions from data

4 Ecosystems

Discuss: What is meant by ecosystem, community, environment, habitat and niche, considering how different organisms coexist within an ecosystem

Writing: Identify niches in an ecosystem, explaining why different organisms within the same ecosystem have different niches

5 Core practical – Quadrating (sampling a field) or Heath Walk

Data analysis: Record data from sampling an ecosystem, explaining why you used the chosen sampling method.

6 Competition

Writing: State some resources that animals and plants compete for.

Data analysis: Interpret secondary data to describe trends and draw conclusions about predator–prey relationships.

7 Summative lesson / revision

How will I be assessed at the end of this unit?

There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment

How will my numeracy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Data analysis in the context of ecosystems, producing robust data and interpreting it	Summarising the contents of each lesson	Watching nature documentaries is a great place to start!	Use websites such as BBC Bitesize/Seneca/Cognito Try YouTube videos, like the one about bees from Kurzgesagt

Human Reproduction

Science, Year 7, unit 10 of 13

What previous learning am I building on?		What am I learning that is new?	
Link to previous topic Cells <ul style="list-style-type: none"> KS2 describe the changes as humans develop to old age Life Cycles – including mammals Animal Structures – including humans – comparing features		By the end of this unit, I will know: Reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta	
Learning Journey – lesson title and main activities			
1 Adolescence			
Changes both physical and emotional / boys and girls / male and female hormones			
2 Reproductive systems			
Labelling the male and female reproductive systems and link to functions			
3 Fertilisation and Implantation			
Fertilisation – what it is, where it occurs and the development of the embryo. Discussion around causes of infertility			
4 Development of the foetus			
What is meant by gestation, how long and the different stages. What happens during birth			
5 Menstrual Cycle			
Recall puberty Explanation - what is a period, what is happening to the female body and the link to hormone changes. Key words – menstruation and ovulation			
6 Enrichment lesson – literacy task link to pregnancy – a case study			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my numeracy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
	Human reproduction – structure to function of sperm cell and female reproductive system. Consolidative homework Retrieval quiz preparation		

Plant Reproduction

Science, Year 7, unit 11 of 13

What previous learning am I building on?	What am I learning that is new?		
KS2 <ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Plant reproductions - including seed dispersal • identify and describe the basic structure of a variety of common flowering plants, including trees. 	By the end of this unit, I will: <ul style="list-style-type: none"> • Understand different types of reproduction in plants • Know the functions of different parts of plants • Be able to identify key differences in flowering and non-flowering plants 		
Learning Journey – lesson title and main activities			
1 Flowers and Pollination Diagrams: Name the parts of the flower and describe pollination Practical: Flower dissection			
2 Fertilisation and germination Writing: produce an account of how fertilisation happens, and a seed and fruit are formed. Outline how germination takes place.			
3 Seed dispersal Diagrams: Label different seeds according to their dispersal method. Describe how seeds are adapted for different types of dispersal.			
4 Enrichment lesson Practical: Germination investigation, preparing, planning and undertaking			
5 Summative lesson Practical: Look at results from the germination lesson Mind maps: Create a mind map covering the material that has been in this unit			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my numeracy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Processing data on germination	Produce a labelled diagram of pollination and fertilisation Consolidating homework and retrieval quiz	Practice six-mark questions	Use websites such as BBC Bitesize/Seneca/Cognito Try YouTube videos, like the one about bees from Kurzgesagt

Elements

Science, Year 7, unit 12 of 13

What previous learning am I building on?	What am I learning that is new?		
KS2: Comparison and grouping of everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets, using knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	KS3: Know differences between atoms, elements and compounds, chemical symbols and formulae for elements and compounds, chemical reactions as the rearrangement of atoms, representing chemical reactions using formulae and using equations Be able to recall and use the chemical symbols for chemical elements		
Learning Journey – lesson title and main activities			
1 Elements Discussion: What is an element and how do we symbolise them? Teacher explanation of what elements and concept cartoon discussing the idea of different elements			
2 Atoms: Define: Write a sentence to state what atoms are Diagrams: Represent atoms using particle diagrams Key question - What are atoms?			
3 Compounds: Define: State what a compound is Diagrams: Use particle diagrams to classify a substance as an element, compound or mixture Core practical: combining iron and sulphur to form iron sulphide			
4 Chemical Formulae Scientific literacy: Name compounds using their chemical formula Practice: Use chemical formula to name the elements present and determine their relative proportions			
5 Polymers Write: describe the structure of a polymer Data analysis: Students will use a table of information about different polymers to decide which roles they could be suitable for.			
6 Revision: Recap, revision and stretch activities			
How will I be assessed at the end of this unit?			
There will be a retrieval quiz, which is primarily knowledge based. Key information will be shared ahead of time. Summative assessment – through end of topic assessment			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Students will be using the following literacy skills: predicting, making inferences, describing relationships	Activity sheet: What does a chemical formula tell us?	Use BBC bitesize and complete the homework set on time and the required standard.	Use websites such as BBC Bitesize/Seneca/Cognito Try YouTube videos from FuseSchool or Kurzgesagt

Crick Project / Investigation

Year 7 Project –DNA Defenders

Core Skills Assessed (practical adjusted each year)

DNA Defenders takes its inspiration from the body's to safeguard its life defining genetic code. The project builds on the resilience of melanocytes in their protection against UV light can become cancerous and therefore the need to produce man made protective barriers. The project looks at testing some of these barriers to determine their effectiveness

Science – Yr7 Summer Term

Science, Year 7, unit 13 of 13

What previous learning am I building on?	What am I learning that is new?		
KS2- Light from the sun can be dangerous and that there are ways to protect our eyes Recognise the impact of diet, exercise, drugs and LIFESTYLE on the way their bodies function From earlier topics in Y7 - Cells / Universe and Working Scientifically	By the end of this unit, I will: - Understand [vocabulary, concepts] - Know [factual content] - Be able to [skills]		
Learning Journey – lesson title and main activities			
1 Science and fashion industry: friend or foe? Students to PREDICT the extent to which skin cells (melanocytes) can be shielded from UV light by different types of fabric – using observations only			
2 Investigation the next level of UV protection: SPF numbers Working scientifically students investigate the UV blocking by different SPF factors. Students examine the variables of the investigation, carry out a risk assessment and collect data for later analysis.			
3 Can science make a business out of UV protection? Presentation of results by producing a graph and formulate a conclusion. Use the information gathered to advise on the sale and development of SPF suncreams			
How will I be assessed at the end of this unit?			
Completion of worksheets associated with the project of the 3 lessons			
How will my literacy skills be developed?	What homework will I be set?	How can I learn more/stretch myself?	Where can I go for more help?
Students will be using the following literacy skills: predicting, making inferences, describing relationships in data			

Curriculum Road Map

KS3 Science

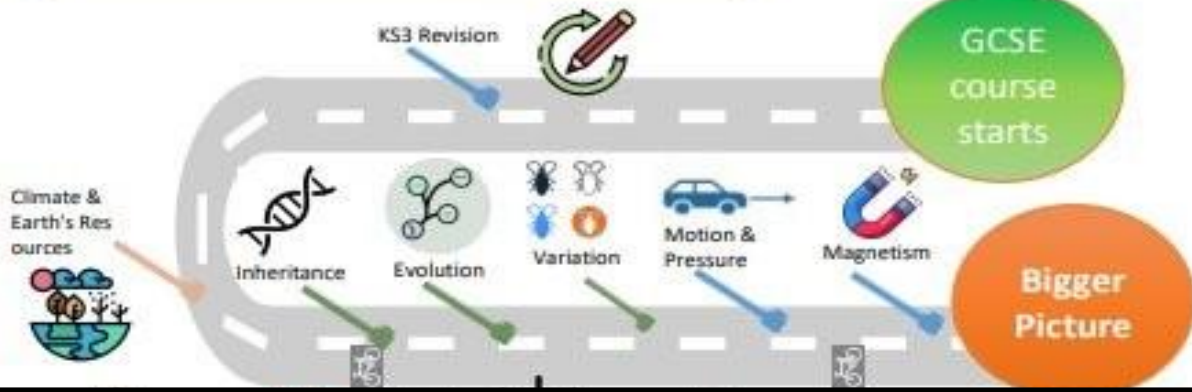
Single Attainment Target:

Students should have knowledge of scientific theories and be able to apply them in different contexts, know how to plan and carry out investigations and interpret and evaluate evidence.

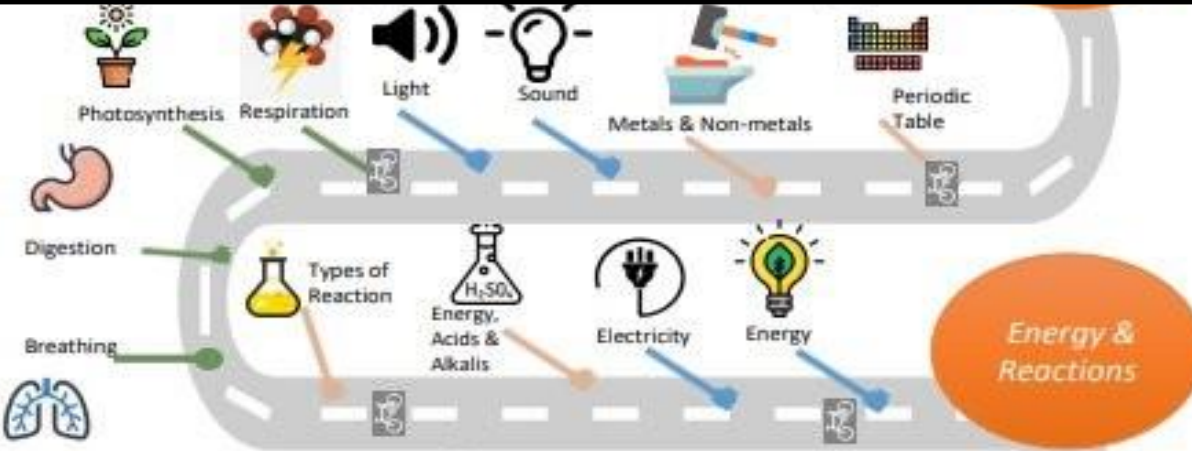


Triple or Combined Science

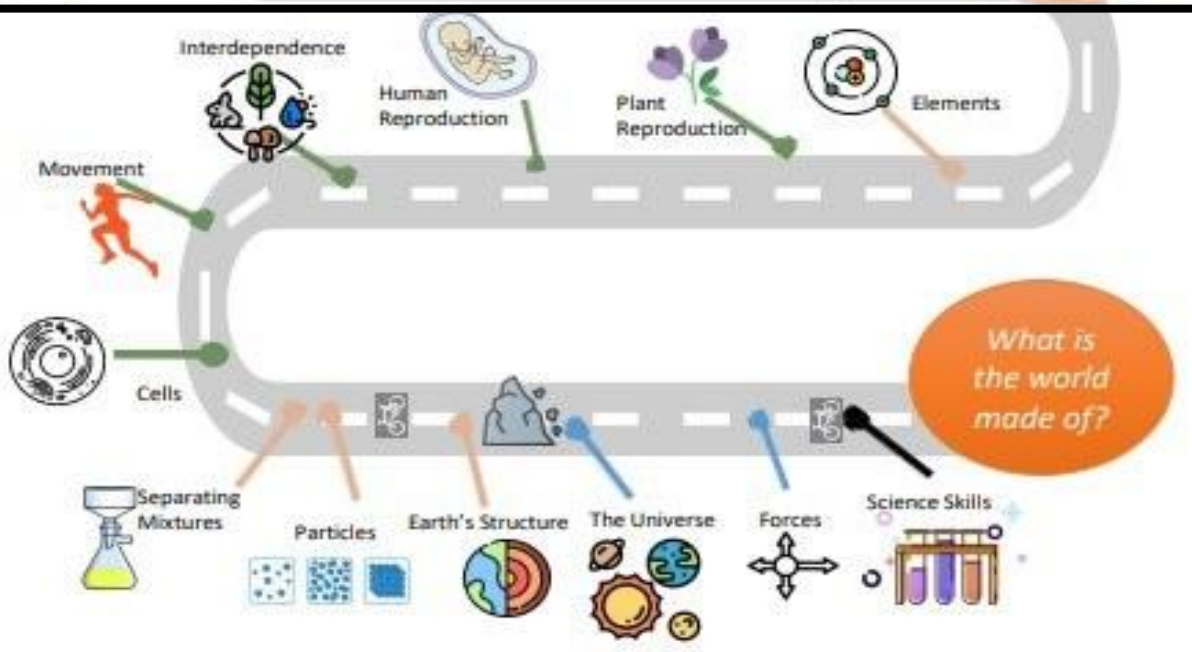
GCSE course starts



Y 9



Y 8



Y 7