Year 7, 8 and 9 are following the same CM due to classes being mixed. The Assessment Objectives will be differentiated depending on ability/year					
Key Stage Year Group	Subject	Teacher	Prograr	nme of Study	
KS3 Years 7, 8 and 9	Science	Trevor Ngawoofah	National Curr	iculum KS3 Science	
Autumn a	Autumn b	Spring a	Spring b	Summer a	Summer b
Topic(s)	Topic(s)	Topic(s)	Topic(s)	Topic(s)	Topic(s)
Chemical Reactions: The Ec	rth and the Atmosphere:	The Structure and Function of Living Things:	Space Physics:	Electricity and Electromagnetism:	Interaction and Interdependence:
Acid and Alkalis	The Rock Cycle	Nutrition and Digestion	Earth and Our Solar System	Static Electricity and Magnetism	Relationships in Ecosystems
Assessment Tasks	Assessment Tasks	Assessment Tasks	Assessment Tasks	Assessment Task	Assessment Tasks
Year 7 * Research acids, alkalis and neutral substances. * Carry out a practical investigation to test the strength of various acids and alkalis using a range of indicators. * Apply knowledge to compare indicators to decide the most reliable and safest. (HIGHER) * Carry out a practical to demonstrate a neutralisation reaction. * Research and give examples and uses of neutralisation reactions. * Apply knowledge to identify the strengths of acids and alkalis needed for neutralisation to happen. (HIGHER) * Carry out practical investigations to observe and describe reactions between acids and metals/ acids and metal carbonates/ acids and metal oxides * Use word equations to represent chemical reactions (HIGHER)	Ils: I the structure of the Earth g each key part. Dare the elements that e Earth and the Earth's ohere. In how the Earth's ohere has changed over out a practical to ate the properties of at types of rocks. The formation of different f rocks. knowledge on the on of different rocks to operties. (HIGHER) In the stages in the rock the opportunity to visit a o observe rock features.	Key Skills: * Describe what a balanced diet is and research the functions of each food group within the human body as well examples of food they are found in. * Carry out a practical using food tests to identify key nutrients in different types of food. * Apply knowledge on food tests to identify food groups within unknown food samples. (HIGHER) * Prepare a balanced meal labelling the nutrients. * Compare diseases caused by eating an unbalanced diet including obesity, starvation and deficiency diseases. * Model the organs within the digestive system and explain their functions. * Model the different types of digestive enzymes and how they break up carbohydrates, fats and proteins. (HIGHER LEVEL)	Key Skills: * Model the order of planets in our solar system. * Research key features about each planet and relate features such as temperature and length of a year to their distance from the sun. *Define mass and weight and use equations to calculate weight. (HIGHER) *Use equations to calculate weight on different planets. (HIGHER) * Research other celestial bodies such as dwarf planets. * Explain the causes of our seasons and compare seasons in the Northern Hemisphere with the Southern Hemisphere. * Describe the effect of the moon on our tides. * Research methods used to observe our solar system and other galaxies in the Universe. *Have the opportunity to visit Jodrell Bank Observatory/ Catalyst Museum. (TBC)	Key Skills: * Carry out a practical to investigate series and parallel circuits. * Carry out a practical to investigate current and voltage in circuits. Use equations to calculate voltage, current and resistance.(HIGHER) * Define static electricity and give examples. * Carry out a practical to investigate examples of static electricity. * Compare which objects will repel or attract each other due to electrostatic forces. * Carry out a practical to investigate magnets and magnetic fields and represent magnetic fields by drawing simple labelled diagrams. * Explain permanent and non- permanent magnets giving examples. *Carry out a practical to investigate the properties of electromagnets and compare factors affecting the strength of electromagnets. (HIGHER) *Have the opportunity to visit Jodrell Bank Observatory/ Catalyst Museum. (TBC)	Key Skills: * Define ecosystems, habitats and environment giving examples of each. * Research how organisms are adapted to survive in different environments including extreme environments. (HIGHER) * Carry out a practical to investigate choice chambers. * Model food chains and food webs and describe the characteristics of organisms within each trophic level. * Interpret food chains and food webs to describe the impacts of change in the population of one organism on the populations of other organisms. (HIGHER) * Model predator -prey cycles and compare the adaptations of each. * Carry out a practical to investigate the distribution of organisms within a habitat. * Have the opportunity to visit a zoo. (TBC)

	Year 8	Year 8		× 0
Year 8	* Model the structure of the Earth	* Describe what a balanced diet is		Year 8
	labelling and explaining each	and research the functions of each	Year 8	* Carry out a practice
* Research and compare a range	key part.	food group within the human body as		series and parallel cir
of acids, alkalis and neutral	* Compare the elements that	well examples of food they are found	* Model the order of planets in	compare how curren
substances and identify substances	form the Earth and the Earth's	i <mark>n.</mark>	our solar system including the	changes in series and
as acidic, alkaline and neutral.	atmosphere making links	* Carry out a practical using food tests	position of asteroids, comets	CICUIIS.
* Carry out a practical to test the	botwoon them	to identify key nutrients in different	and dwarf plants.	ourrent and resistance
strength of various acids and alkalis	* Evolgin how the Earth's	types of food.	* Research key features about	
using a range of indicators and	explain now me cann's	* Use detailed knowledge of food tests	each planet and other	type questions (HIGH
analyse the effectiveness of	dimosphere has changed over	to carry out a problem-solving	celestial bodies and use	* Define static electric
different indicators	time by analysing data.	practical investigation.	subject knowledge to relate	examples explaining
* Carry out a practical to	* Outline the stages in the carbon	* Prepare a balanced meal labelling	features such as temperature	movement of electro
demonstrate a neutralisation	cycle explaining the link to	the numeric and evaluate the extern	and length of a year to their	an object to become
	Global Warming. (HIGHER)	identifying ways to add further	distance from the sun.	static electricity.
	* Carry out a practical to		* Define gravity and mass and	* Carry out a practice
*write a word equation/ symbol	investigate the properties of	*Calculate the energy requirements of	use equations to calculate	examples of static ele
equation to demonstrate the	different types of rocks.	various people depending on age	now gravity changes on	explaining their appli
reactions. (HIGHER)	*Model the formation of different	and gender. (HIGHER)	alfferent planets in space.	* Compare which ob
* To research and give examples	types of rocks making links	* Compare diseases caused by eating	Explain the causes of our	or attract each other
and uses of neutralisation reactions	between the properties of	an unbalanced diet including obesity,	in the Northern Hemisphere	electrostatic forces.
explaining the importance of the	different types of rocks and how	starvation and deficiency diseases	with the Southern Hemisphere	* Carry out a practice
neutralisation reactions in each	they were formed.	and make links with where globally	* Describe the effect of the	magnetic fields and i
example.	Research the uses of focks and	certain diseases are more prevalent.	moon on our tides.	magnetic fields by dr
*Apply knowledge on neutralisation		(HIGHER)	* Investigate how sound and	labelled diagrams ide
reactions to complete problem	*Explain the stages in the rock	* Identify diseased linked to an	light would travel in space.	the field strength is th
solving tasks/ to answer open ended	cycle by linking together the	unbalanced diet when given a range	(HIGHER)	*Carry out a practice
questions. (HIGHER)	formation of each type of rock.	of symptoms.	* Define a light year and apply	the properties of elec
*Carry out practical investigations to	* Apply knowledge to complete	* Model the organs within the	knowledge to complete a	and compare racion
investigate reactions between goids	open ended questions on the	digestive system and explain their	problem solving task.	knowledge to explain
investigate reactions between acids	<mark>rock cycle. (HIGHER)</mark>	functions.	* Research methods used to	transformers work (H
and metals/ acids and metal		* Model the different types of digestive	observe our solar system and	* Research a range o
carbonates/ acids and metal	*Have the opportunity to visit a	carbohydrates, fats and proteins	other galaxies in the Universe.	magnets including co
oxides/ combustion reactions and	cave to observe rock features.	Identify where in the digestive system		(HIGHER)
displacement reactions.	(TBC)	each enzyme is produced	*Opportunity to visit Jodrell	*Have the opportunit
* Use word equations and symbol			Bank Observatory/ Catalyst	Bank Observatory/ C
equations to represent chemical			Museum (TBC)	(TBC)
reactions. (HIGHER)				

al to investigate				
cuits and				
it and voltage				
d parallel				

Iculate voltage, e and to answer exam IER) city and give how the ons can cause e charged with

al to investigate ectricity cation. jects will repel due to

al to investigate represent rawing accurate entifying where e strongest. al to investigate stromagnets s affecting the agnets. Apply n how IGHER) of uses of ompasses.

ty to visit Jodrell Catalyst Museum.

Year 8 * Define ecosystems, habitats and environment giving examples of each. * Research how organism: are adapted to survive in different environments including extreme environments. * Carry out a practical to investigate choice chambers evaluating on the reliability and validity of the data recorded. * Model food chains and food webs and describe the characteristics of organisms within each trophic level. * Use pyramids of numbers and biomass to represent changes between trophic levels. (HIGHER) * Interpret food chains and food webs to describe the impacts of change in the population of one organism on the populations of other organisms. *Model predator –prey cycles and compare the adaptations of each. Explain the reasons for changes in the population size of predators and prey. * Carry out a practical to investigate the distribution of organisms within a habitat. Calculate the percentage cover. (HIGHER)

* Have the opportunity to visit a zoo. (TBC)

	No en O	V a an O	V a am O	
Year 9	Year 9	Year 9	Year 9	Year 9
* Compare a range of acids, alkalis	* Model the structure of the Earth	* Describe what a balanced diet is	* Model the order of planets in	* Carry out a practic
and neutral substances and identify	and label each key part adding	and research the functions of each	our solar system including the	series and parallel c
substances as acidic, alkaline and	detailed descriptions.	rood group within the human body as	position of asterolas, comets	* Carry out a practic
neutral	* Compare the elements that	in well examples of food mey dre found	* Model the structure of the	current and voltage
* Carpy out a practical to tost the	form the Earth and the Earth's	* Carpy out a practical using food tosts	Universe, researching different	in circuits.
Carry out a practical to test the	atmosphere.	to identify key putrients in different	types of adjavies	Apply knowledge o
strength of various acids and alkalis	* Explain how the Earth's	types of food	* Person ch key features about	equations to comple
using a range of indicators and	atmosphere has changed over	* Use detailed knowledge of food tests	each planet and relate	questions and proble
analyse the effectiveness of	time by analysing data.	to carry out a problem-solving	features such as temperature	(HIGHER)
different indicators.	*Predict how the composition of	practical investigation and write a	and length of a year to their	* Define static electr
*Use detailed subject knowledge on	agses in the atmosphere will	report to explain findings	distance from the sun	examples explaining
indicators to complete a problem-	change in the future and link to	* Apply knowledge on food tests to	* Research other celestial	the movement of ele
solving investigation.		explain how to carry out reliable and	bodies such as dwarf planets	cause an object to I
* Carry out a practical to	key events and numan activities.	valid investigations to identify food	and apply knowledge to	charged with static
demonstrate a neutralisation	(HIGHER)	aroups in specified food.	explain why Pluto is no longer	* Carry out a practic
reaction and write a word	* Explain the stages in the carbon	* Prepare a balanced meal labelling	classed as a dwarf planet.	examples of static e
equation (symbol equation to	cycle and discuss the causes and	the nutrients and evaluate the extent	* Explain the causes of our	explaining their app
demonstrate the reactions and	impacts of increasing Carbon	to which the meal is balanced.	seasons and compare seasons	predict which objec
	Dioxide levels	identifying ways to add further	in the Northern Hemisphere	attract each other o
palance mem. (HIGHER)	* Carry out a practical to	nutrition.	with the Southern Hemisphere.	electrostatic forces.
* Research and give examples and	investigate the properties of	*Calculate the energy requirements of	* Describe the effect of the	* Carry out a practic
uses of neutralisation reactions	different types of rocks.	various people depending on age	moon on our tides and apply	magnets and magn
explaining the importance of the	*Model the formation of different	and gender based on the analysis of	knowledge to answer open	represent magnetic
neutralisation reaction in each	types of rocks adding detailed	data.	ended questions.	accurate labelled d
example.	descriptions of each stage	* Compare diseases caused by eating	* Investigate how sound and	identifying where the
* For given examples, identify the pH	* Make a link between the	an unbalanced diet including obesity,	light would travel in space	the strongest and us
of substances needed for		starvations and deficiency diseases	using equations to calculate	label the direction o
neutralisation to happen.	properties of different types of	and link these diseases to lifestyle	<mark>speed. (HIGHER</mark>)	field.
*Apply knowledge to complete	rocks and how they were formed.	choices/ prevalence in less	* Define a light year.	*Carry out a practic
open ended questions showing an	Identity locations around the UK	economically developed countries	* Define gravity and calculate	the properties of ele
in-depth understanding (HIGHER)	where different rock types are	compared to more economically	how gravity changes on	and compare facto
*Carry out practical investigations to	found as part of a problem	developed countries.	different planets in space.	strength of electrom
investigate reactions between goids	solving activity.	* Apply knowledge to identify	Rearrange equations to	different factors incr
	* Research the uses of rocks and	diseases linked to an unbalanced diet	calculate mass or gravity on	different factors incr
and metals/ acias and metal	link the use to their properties.	when given a range of symptoms.	different planets. (HIGHER)	* Posograph a range
carbonates/ acids and metal	*Explain the stages in the rock	(HIGHER)	* Research methods used to	magnets including of
oxides/ compustion reactions,	cycle by linking together the	* Model the organs within the	observe our solar system and	explain how compa
displacement reactions and thermal	formation of each type of rock	digestive system and explain their	other galaxies in the Universe.	(HIGHER)
decomposition reactions.	*Apply knowledge to complete	tunctions comparing adaptations of	Compare the advantages and	
* Use word equations and symbol	higher level exam questions	the small intestine and explain how	disadvantages of each.	*Have the opportun
equations to represent chemical		this links to the better absorption of	* Consider the theory of the Big	Bank Observatory/ C
reactions and balance a range of		nutrients. (HIGHER)	Bang and evidence that can	
symbol equations. (HIGHER)		model the different types of digestive	support or reture the theory.	
	Have the opportunity to visit a	enzymes and now they break up	*Opportunity to visit looks"	
	cave to observe rock teatures.	carbonyarates, tats and proteins.	Bank Observatory/ Catalyst	
	(TBC)	identify where in the digestive system	museum (TBC)	
		each enzyme is produced.		
		Carry out an investigation to		
		investigate the effect of different		
		activity. (HIGHEK)		

<mark>ctical to investigate</mark> I<mark>l circuits.</mark> ctical to investigate ge and resistance

e on circuits and aplete exam type oblem solve.

ectricity and give ing in detail how electrons can to become tic electricity. ctical to investigate c electricity pplications and jects will repel or er due to

ctical to investigate gnetic fields and tic fields by drawing d diagrams the field strength is use compasses to n of the magnetic

etical to investigate electromagnets ctors affecting the omagnets. on explaining why ncrease the ectromagnet. ge of uses of og compasses and passes work.

tunity to visit Jodrell y/ Catalyst Museum.

Year 9 * Define ecosystems, habitats and environment giving examples of each and identify the biotic and abiotic factors in each * Research how organisms are adapted to survive in different environments including extreme environments. * Carry out a practical to investigate choice chambers evaluating on the reliability and validity of the data recorded. Link results to explaining why organisms live in specific habitats. * Model food chains and food webs and describe the characteristics of organisms within each trophic level. Interpret food chains and food webs to describe the impacts of change in the population of one organism on the populations of other organisms. * Construct and interpret pyramids of numbers, pyramids of biomass and pyramids of energy to represent the number of organisms at each tropic level. * Define bioaccumulation and research the impacts that using chemical fertilisers can have on organisms at the top of food chains. (HIGHER) *Model predator –prey cycles and compare the adaptations of each. Explain the reasons for changes in the population size of predators and prey. *Apply knowledge to plan how to investigate the distribution of organisms within an area. (HIGHER) * Have the opportunity to visit a zoo

Personal Development/Careers	Personal Development/Careers	Personal Development/Careers	Personal Development/Careers	Personal Development/Careers	Personal Development/Careers
Career focus: Trip to Lush store to experience alternative Science related jobs. PD Focus: Health and Well-being As part of the STEM challenge research different ways of promoting a positive mental well- being. (Bronze CREST Award : Investigating Bath Bombs)	Career focus: Trip to Lush store to experience alternative Science related jobs. PD Focus: Health and Well-being Walk outdoors to identify different rock types/ formations as part of enrichment and to highlight the positive impact on well-being of spending time outdoors. (TBC)	Career focus: Research task to find jobs of interest that are related to the food industry or the Health sector. PD Focus: Relationships Emphasis placed on social skills with the practical investigation task. Are students able to work in a group, listen to ideas and divide a task up fairly before relaying their findings back to their group?	Career focus: Trip to Jodrell Bank or the Catalyst Museum to experience Science related jobs within that sector. PD Focus: Relationships Consider the qualities needed in people who have to go on space missions. How do they avoid conflict within such a small space?	Career focus: Trip to Jodrell Bank or the Catalyst Museum to experience Science related jobs within that sector. PD Focus: Living in the wider world Consider the problems faced around the world in terms of inequalities relating to access to electricity or the internet.	Career Focus Trip to the zoo to experience alternative Science related jobs within the wildlife sector. (Include jobs within the RSPCA.) PD Focus: Living in the wider world Consider the reasons for animals becoming endangered or extinct and what we can do to prevent further cases.
Reading & Writing	Reading & Writing	Reading & Writing	Reading & Writing	Reading & Writing	Reading & Writing
 Recording research on acids and alkalis clearly spelling key words correctly. Recording observations from practical tasks clearly. Writing in full sentences with correct punctuation to answer open ended questions. 	 Writing in full sentences with correct punctuation to form conclusions and answers to open ended questions. Including correctly spelt key words in descriptions. Applying knowledge of phonics to spell out new words when reading information / methods for practical tasks. 	 Reading factual information on diseases and balanced diets, highlighting key facts and using their skills of inference. Recording observations clearly spelling key words correctly. Writing conclusions using full sentences and using connectives to include explanations. 	 Using deduction to highlight key facts within a text answer short questions. Using inference to form ideas and opinions about research or a concept/ theory. Writing in full sentences with correct punctuation to answer open ended questions. 	 Recording observations clearly spelling key words correctly. Writing conclusions using full sentences and using connectives to include explanations. Applying knowledge of phonics to spell out new words when reading information / methods for practical tasks. 	 Reading factual information on adaptations, highlighting key facts and using their skills of inference. Recording observations clearly spelling key words correctly. Writing in full sentences with correct punctuation to answer open ended questions.
Speaking & Listening	Speaking & Listening	Speaking & Listening	Speaking & Listening	Speaking & Listening	Speaking & Listening
 Listening carefully to methods ahead of practical skills. Verbally sharing ideas about practical results/ listening respectfully to the ideas of others. Presenting ideas as a group/ pair during the Bronze CREST challenge. 	 Listening carefully to methods ahead of practical skills. Verbally sharing ideas about practical results/ listening respectfully to the ideas of others. Verbally explaining the processes in their model of the rock cycle. 	 Listening attentively during verbal explanations recalling the information that has been relayed. Speaking respectfully to their peers when working as a team during the practical investigations. Including key words when verbally explaining results and 	 Presenting ideas verbally as a group/ pair during the Bronze CREST challenge. Listening attentively during verbal explanations recalling the information that has been relayed in video clips. 	 Presenting ideas verbally as a group/ pair during the Bronze CREST challenge. Listening carefully to methods ahead of practical skills. Verbally sharing ideas about practical results/ listening respectfully to the ideas of others. 	 Listening attentively during verbal explanations recalling the information that has been relayed in video clips. Verbally sharing ideas about practical results/ listening respectfully to the ideas of others.
Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning
 Problem solving: applying knowledge on neutralisation and the pH scale to identify what strength acid would be needed to neutralise a specified alkali. Reading scales accurately during practical tasks. 	 Extrapolating data in graphs to predict future changes in the atmospheric Carbon Dioxide. Reading scales accurately during practical tasks. Interpreting data to form a conclusion and support key facts. 	 Reading scales accurately during practical tasks. Using basic operations to analyse data in order to form a conclusion. Using deduction to prove or disprove a statement. 	 Using equations to calculate weight and speed. Rearranging equations to calculate mass and gravity. Interpreting and analysing data to answer questions. 	 Using equations to calculate voltage, current and resistance. Rearranging equations to calculate voltage, current and resistance. Reading scales accurately during practical tasks. 	 Using basic operations to analyse data in order to form a conclusion. Using deduction to prove or disprove a statement.
Creative Media	Creative Media	Creative Media	Creative Media	Creative Media	Creative Media

 Using ICT to complete online quizzes to assess knowledge and understanding of acids and alkalis. Using ICT to research examples of acids and alkalis. Using Power Point to record research carried out on acids and alkalis. 	 Using ICT to watch stimulations of the rock cycle. Using ICT to research the locations of different types of rock/ rock formations locally and globally. 	 Using ICT to visualise how food moves through the digestive system. Using ICT to visualise how enzymes break down large food molecules. Using SENECA to complete optional online homework/ extension tasks in class. 	 Using ICT to visualise our solar system/ position of our Galaxy within the Universe. Use ICT to research key facts about each planet and use Power point to present research. 	 Using ICT to visualise magnetic fields around magnets. Using ICT to research key facts about the uses of magnets and electromagnets. Using Power point to present research. 	 Using ICT to visualise how predators and prey interact. Using SENECA to complete optional online homework/ extension tasks in class.
--	---	--	--	---	---

KEY SKILLS:

Stating/describing processes and concepts

Modelling processes and concepts

Explaining processes and concepts/ making comparisons

Following a method to carry out practicals and record accurate observations

Applying knowledge to answer questions/ make connections

Carrying out practical investigations

Analysing data/ forming conclusions

Using equations in calculations

Evaluating the reliability and validity of results

Rearranging equations to answer questions

Applying knowledge from investigations to prove/ disprove a statement (critical thinking)

Critically analysing theories