

All projects designed to last 4-6 weeks (6-9 lessons), depending on grouping/ ability level		Assessment 1A Sept 1 st -24 th Oct	Assessment 1B Nov 3 rd -19 th Dec	Assessment 2A 6 th Jan-12 th Feb	Assessment 2B 23 rd Feb-26 th Mar	Assessment 3A 13 th Apr-21 st May	Assessment 3B 1 st June-17 th July
Year 7	Name of Theme	Working scientifically Particles and their behaviour	Elements, atoms and compounds Reactions Acids and alkali	Space Force	Light Sound	Body Systems Cells	Reproduction
	Rough dates	1/9-20/10	3/11-15/12	5/1-9/2	23/2-23/3	13/4-18/5	1/6-13/7
	Description	<p>1. Variables: Write down the variables linked to things you can investigate in everyday life</p> <p>2. Planning: Plan an investigation including a risk assessment or an activity you do at home</p> <p>3. Collecting data: Collect data at home e.g. timing how long the take to do certain activities.</p> <p>4. Analysing data: Describe the different relationships from the graphs</p> <p>5. Evaluating data: Write a paragraph explaining ways to evaluate food data information correctly or stating reasons why this is</p>	<p>1. Elements: Prepare a dating profile for an element, imagining it was a person.</p> <p>2. Atoms: Write a short paragraph to explain why the new composition of coins is better, using properties of the different metals to explain your answer.</p> <p>3. Compounds: Calcium is a soft grey metal that reacts quickly with water. Our bones contain calcium but they are not grey in colour and do not react with water. Write a paragraph to explain why this is</p> <p>4. Compounds: Here is a list of three compounds:</p>	<p>1. Make a model of a satellite</p> <p>2. Research the benefits and costs of space travel</p> <p>3. Write an account describing the changes on Earth from the view of a tourist</p> <p>4. Write a summary form the information of what people see during a lunar or solar eclipse</p> <p>5. Research the application of springs</p> <p>6. Write an article about how to design sportswear</p> <p>7. Write a holiday brochure for a trip to another planet</p>	<p>1. Types of materials: list 10 different material showing if they are opaque, transparent or translucent</p> <p>2. Light diagrams: complete the diagrams given to you</p> <p>3. Refraction: identify the equipment that uses lenses at home</p> <p>4. Eye: research the eye</p> <p>5. Colour: write a guide telling police how to collect accurate witness statements for crimes committed in yellow street light.</p> <p>6. Types of waves: List 10 examples of longitudinal or transverse waves</p>	<p>1. Research the microscope</p> <p>2. Complete the summary table for animal and plant cells</p> <p>3. Draw and label a specialised cell</p> <p>4. Draw a red blood cell and explain how oxygen enters them</p> <p>5. Write a report on cells that have been looked at so far</p> <p>6. Create a table to describe the 7 life processes</p> <p>7. Write 3 test questions on the exchange of gas</p> <p>8. For a chosen animal explain how the animal achieved support,</p>	<p>1. Produce an information leaflet outlining the changes that happen during puberty</p> <p>2. Produce a crossword with as many names of the parts of the reproductive system</p> <p>3. WebQuest: fertility treatment</p> <p>4. Write an account of the development of a baby</p> <p>5. Make up 5 exam questions about the topic so far</p> <p>6. Write an account that describes the process of insect or wind pollination</p> <p>7. Label diagrams of fertilisation of a plant and germination of a seed</p>

		<p>important</p> <p>6. States of mater: Design a detail poster with explanatory notes on the three states of matter, discussing the properties of each and giving examples for each along with examples of materials that are harder to classify</p> <p>7. Boiling water: Prepare a fact sheet on different ways the boiling point of water can be changed</p> <p>8. Evaporation: Use your knowledge of evaporation to prepare a leaflet for households on how they can dry their washing most efficiently.</p> <p>9. Gas pressure</p>	<p>Na₂O,FeO,Al₂O₃ Give the names of these compounds and list the number of atoms of each element found within each compound.</p> <p>5. Chemical reactions: Produce a poster showing the signs of a chemical reaction.</p> <p>6. Elements: Research the colours of the flames some metals produce. How is this useful for making fireworks?</p> <p>7. Alternative fuels: Produce a leaflet on alternative fuels for cars.</p> <p>8. Hydrogen peroxide: Carry out research on the compound hydrogen</p> <p>9. E xothermic and endothermic worksheet</p> <p>10. Hazard symbols: Write a report on the hazard symbols you can find on chemical bottles around the home.</p> <p>11. pH testing: Produce a leaflet explaining why pH testing is important for farmers</p> <p>12. Neutralisation: Write an article in a newspaper magazine 'Pearly whites monthly' about the science behind why dentists suggest chewing gum after meals, using your knowledge of Neutralisation.</p> <p>13. Acids in soil: What are the acids present in soils? What is the name of the base used to neutralise</p>	<p>8. List different situations at home where forces are balanced or unbalanced.</p>	<p>7. Supersonic waves: research what is meant by this</p> <p>8. Pitch: write a paragraph explaining how high pitched alarms can be used to deter teens</p> <p>9. Dangers of loud music: create a leaflet looking at the dangers of loud music</p> <p>10. Ultrasound: prepare a summary sheet about what they have learnt</p>	<p>movement and protection</p> <p>9. Write a short paragraph about how different joints work in the body</p> <p>10. Write a paragraph how antagonistic muscles are used</p>	
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Year 8

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	Name of Theme	The periodic table Metals and acids	The Earth Particles and their behaviour	Energy Motion	Light Sound	Ecosystems	Adaptations Body systems
	Rough dates	1/9-20/10	3/11-12/12	5/1-9/2	23/2-23/3	13/4-18/5	1/6-13/7
	Description	<ol style="list-style-type: none"> Metals and non-metals: Find five items in your home and decide if they are made of metals or non-metals. Write down their properties that have helped you come to this conclusion Periodic table: Write a paragraph on the history of the periodic table Group 1 elements: Write a paragraph to explain why a group 1 element would not be suitable choice to make saucepans from Risks of chlorine: Produce a leaflet or a swimming club to explain the advantages and risks of adding chlorine to water Group 0 elements: Draw a humorous cartoon of the noble gases near other elements showing and explain why they are considered to be noble Naming salts: produce 	<ol style="list-style-type: none"> Earth structure: Make the model of Earth that you have designed, showing the structure of the Earth Sedimentary rocks: Draw a cartoon to show a small pebble becoming part of a sedimentary rock Types of rocks: find the names of a sedimentary, igneous and metamorphic rock. Find a picture and describe them The rock cycle: produce a picture for the rock cycle The carbon cycle: Write a rhyme, rap or song to describe some of the possible routes that carbon atoms can take through the carbon cycle Climate change: Produce a leaflet for the public on the differences between greenhouse effect, global warming and climate change Composting: Write a 	<ol style="list-style-type: none"> Food: keep a diary of your activities for 24hrs and estimate your energy requirements Energy adds up: describe five energy changes that take place during a normal school day. Temperature: Investigate the temperature of different items in the home Particles: describe situations at home where energy transfer by conduction or convection and explain how the heat transfer is either helped or reduced. Energy transfer: Identify ways to reduce heat losses at home Energy resources: write a short newspaper article explaining the opening of a thermal power station in their neighbourhood 	<ol style="list-style-type: none"> Types of materials: list 10 different material showing if they are opaque, transparent or translucent Light diagrams: complete the diagrams given to you Refraction: identify the equipment that uses lenses at home Eye: research the eye Colour: write a guide telling police how to collect accurate witness statements for crimes committed in yellow street light. Types of waves: List 10 examples of longitudinal or transverse waves Supersonic waves: research what is meant by this Pitch: write a paragraph explaining how high pitched alarms can be used to deter teens Dangers of loud music: create a leaflet looking at the dangers of loud music 	<ol style="list-style-type: none"> Plants: Research the anatomy of a plant, showing how the raw materials for photosynthesis enter the plant Photosynthesis: write a summary of the key points about photosynthesis Fertilizer: write an advert for a commercial fertiliser Chemosynthesis: write a short poem about chemosynthesis Respiration: Design a poster that tracks thesun all the way through to respiration WebQuest: research food products made with microorganisms Food web: Construct a food web from a different habitat Ecosystem: Research an ecosystem of their choice 	<ol style="list-style-type: none"> Nutrients: research the traffic light system of nutritional information on food packaging Food tests: Write a report to describe how food scientists in drinks company can provide evidence that a new improved drink is nutritionally better than the existing drink Diet: keep a log of their energy intake for 24hrs Digestive system: Draw a comic strip showing the journey of Sandy the Sandwich Enzymes: draw a cartoon diagram to show how an enzyme works Drugs: Produce a leaflet about the dangers of drug abuse Alcohol: Design a poster to persuade pregnant women not to drink alcohol Smoking: Information leaflet on the dangers of smoking

		<p>a worksheet to teach other students how to name the salts produced when metals and acids react</p> <p>7. Metals: write a paragraph to explain why some metals lose shine over time but gold does not</p> <p>8. Reactivity series: Write a mnemonic to help you remember the reactivity series of metals</p> <p>9. History of metal extraction: Write an article for a newspaper about the history of metal extraction, linking to historical periods</p> <p>10. Polymers: Write a newspaper article about a polymer of your choice</p> <p>11. Composite materials: Make a model of a composite material</p>	<p>short paragraph explaining why it is better to compost kitchen waste rather than send it to landfill</p>	<p>7. Work: Describe five machines that have made their lives easier or more interesting</p>	<p>10. Ultrasound: prepare a summary sheet about what they have learnt</p>		
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Year 9

	Name of Theme						
	Rough dates	8/9-20/10	3/11-15/12	5/1-9/2	23/2-23/3		
	Description	<p>BIOLOGY</p> <ol style="list-style-type: none"> Leaves: Research why leaves come in different colours, why are they not just green? Selective breeding: complete the questions on selective breeding Extinction: research 3 endangered species and explain how they may become extinct Genes and variation: match the keywords to the correct statements Creating new varieties W/S <p>PHYSICS</p> <ol style="list-style-type: none"> Write a paragraph summarising how a generator works find out more about parallel circuits by experiment and research / develop role play to explain changes that occur in parallel circuits 	<p>BIOLOGY</p> <ol style="list-style-type: none"> Smoking: create a leaflet to deter people from smoking The effects of alcohol: Produce a leaflet for 6th form students telling them about alcohol and its effect <p>PHYSICS</p> <ol style="list-style-type: none"> Make spider diagram, research Sankey diagrams energy diagram for the train Create a rhyme, rap to help remember the order of the EM spectrum draw a cartoon to show nuclear fusion occurring in stars <p>CHEMISTRY</p> <ol style="list-style-type: none"> Chemistry ISA revision and preparation 	<p>BIOLOGY</p> <ol style="list-style-type: none"> Bee project (Lower): Half term project (summer) Teach us a lesson (Higher): Half term project <p>PHYSICS</p> <ol style="list-style-type: none"> Physics ISA revision and preparation <p>CHEMISTRY</p> <ol style="list-style-type: none"> Burning fuels: Exam questions Metals: Research what group 1 metals and transition metals are including examples Reactivity series crossword 	<p>BIOLOGY</p> <ol style="list-style-type: none"> Biology ISA revision and preparation <p>PHYSICS</p> <ol style="list-style-type: none"> Fracking project <p>CHEMISTRY</p> <ol style="list-style-type: none"> Separating substances: create a leaflet aimed at year 7 pupils describing the different separating techniques Weathering: Write a poem called "weathering" which includes the key words used in class 	<p>Year 9 start their GCSE course after the Easter holidays. This is a new GCSE course. Homework will be put on the website</p>	

		CHEMISTRY 1. Periodic table: write a paragraph explaining the history of the periodic table 2. Salt water: write a plan of how you would separate salt water from pure water on a desert island					
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