

Bincombe Valley Primary School

Year 5/6 Cycle A Composites and Components

When?	Composite	Components	Disciplinary Knowledge / Working Scientifically	Golden Threads	Vocabulary
Autumn 1	Evolution and Inheritance	- To know why there are differences within a species. - To know the inheritance of characteristics in plants and animals. - To know and explain why adaptation is necessary. - To know how natural selection affects population size. - To know the theory of evolution. - To know evidence that can be used for evolution. Taps Experiment- Fossil Habitats.	TAPS- Fossil Habitats https://pstt.org.uk/unique-resources/taps/?sft_type_of_resource=plan&sft_age_ranges=nine-twelve&sft_taps_topics=living-things-habitats-and-evolution Group factors Evaluate the degree of trust and pose new questions for further enquiry Consider evidence used to inform theories.	Change	- adaption - characteristics - DNA - environment - evolution - evolve - food chain - fossils - genes - genetics - habitats - Inherit - Inheritance - natural selection - offspring - parent - reproduction - species - suited - variation - Change - Pattern - Relationships
Autumn 2	Light	- To know that light appears to travel in straight lines - To know how we see - To know how shadows change - To know what affects the angle of the reflected ray - To know and explain how a periscope works. - To know how mirrors are helpful Taps Experiment- Investigating Shadows	Taps-Investigating Shadows https://pstt.org.uk/unique-resources/taps/?sft_type_of_resource=plan&sft_age_ranges=nine-twelve&sft_taps_topics=light-and-sound Use evidence to form conclusions. Draw scientific diagrams. Questioning Record results as a line graph.	Change Pattern	- Light beam - Reflection - Spectrum - Rainbow - Colour - Light travelling - Light direction - Shiny surface - Reflective surface - Absorbent surface - Light ray
Spring 1	Classifying Big and Small	- To know and explain how organisms are classified using the Linnaean system. - To know and classify the cold-blooded vertebrate groups using their common characteristics. - To know and classify the warm-blooded vertebrate groups using their common characteristics. - To know and classify invertebrates.	Gather data Record data Classify data Present data in a variety of ways to help answer questions. Report on findings from enquiries	Change Pattern Variation Categorisation	- Conifer - Exoskeleton - fern - fish - flowering - plant - insect

		5. To know and describe how the plant kingdom is organised (based on shared characteristics). 6. To know, describe and classify microorganisms.	Oral and written explanations Present of results and conclusions. Produce a working classification key.		• invertebrate • amphibian • binomial • system • bird • characteristic • classify • classification • key • cold-blooded
Spring 2	Circuits, batteries and switches	1. To know and use recognised symbols for electrical components. 2. To predict and present results for electrical circuits. 3. To know a link between the number of components and resistance. 4. To know ways to change voltage within an electrical circuit 5. To know and investigate how voltage affects bulb brightness 6. To know about circuits and components to a practical TAPS Experiment- Conductive Dough	Taps-Conductive Dough https://pstt.org.uk/unique-resources/taps/? sft type of resource=plan& sft age ranges=nine-twelve& sft taps topics=animals-including-humans Use standardised symbols when drawing diagrams Explain results using scientific knowledge. Design a results table. Plan an enquiry.	Change Variation	• ammeter • appliance • battery • bulb • buzzer • cell • circuit • circuit diagram • component • current • electricity • motor • power source • resistance • switch • voltage • voltmeter • wire
Summer 1	Circulation and exercise	1. To know factors that affect our health and how to reduce their negative impact. 2. To know the key structures and purpose of the circulatory system. 3. To know the key roles of blood. 4. To know the relationship between animal size and heart rate. 5. To know the relationship between exercise and heart rate 6. To know the relationship between heart rate and fitness. TAPS Experiment- Heart Rate Pose	TAPS- Heart Rate Pose https://pstt.org.uk/unique-resources/taps/? sft type of resource=plan& sft age ranges=nine-twelve& sft taps topics=animals-including-humans Evaluate sources of information. Evaluate a model. Interpret patterns in data Write a method. Draw a line graph.	Change Pattern	• balanced diet • blood • bloodstream • blood vessels • carbon dioxide • circulatory system • diet • drug • exercise • fitness • health • heart • heart rate • lifestyle • lungs • mass • nutrient • oxygen • pulse • pump (verb) • rate • resting heart rate

					• transport • water
Summer 2	Making Connections	Are some sunglasses safer than others? 1. To revise the units <i>Circulation and health</i> and <i>Light and reflection</i>. 2. To revise the units <i>Light and reflection</i> and <i>Circuits, batteries and switches</i>. 3. To revise the units <i>Light and reflection</i> and <i>Circulation and health</i>. 4. To revise the units <i>Classifying big and small, Evolution and inheritance, Light and reflection</i> and <i>Circulation and health</i>. 5. To revise the units <i>Light and reflection</i> and <i>Circulation and health</i>.	Plan a comparative test. Gather and record data. Conclude and evaluate the investigation. Use further data to inform a conclusion. Report on findings in the form of an advert.	Change Pattern Variation Categorisation	• adaptation • amphibian • bar chart • bird • bulb • characteristic • circuit • circuit diagram • classify • component • conclusion • control variable • electrical circuit • evaluate • evidence • fish • habitat • health • inherit • insect • invertebrate • lifestyle • light ray • light source • luminous • mammal • method • opaque • predict • reflection • refute • reptile • support • translucent • transparent • trustworthy • ultraviolet • unit • variable • vertebrate