



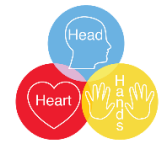
Year Two

Autumn

Crucial Knowledge- Term 1 (wheels and axels)	Expanded Knowledge	Apply/Prove
<ul style="list-style-type: none"> • Know that a mechanism are parts which work together to make movement. • Know that a wheel is a circular object which rolls. • Know that an axel is a pole that connects a pair of wheels. • Know that axels need to be attached to a chassis (a frame). • Know that a chassis is a frame upon which the rest of the vehicle is built. • Know that off-set mean that something is not mounted centrally. • Know that circular wheels mounted centrally roll in a straight path. • Design a vehicle that includes functioning wheels, axels and a chassis. • Build a moving vehicle using their knowledge of wheels, axels and chassis. • Know and use vocabulary- body, cab, chassis, wheels, axels, washer, frame, off-set, mounted centrally... 	<ul style="list-style-type: none"> • Know that a wheel is a circular object which revolves on an axis. • Know that a washer is used to secure the wheels to the axel so they don't fall off. • Know that circular wheels which are mounted off-set to one another produce and up/down movement. • Know that circular wheel mounted off-set can also produce a zig zag path of movement. • Explain what must be changed if there are operational issues. • Distinguish between fixed and freely moving axels. 	<ul style="list-style-type: none"> • Design and label a product for a use. • Identify what materials are made from. • Follow a simple plan. • Design a moving vehicle using their knowledge. • Use simple finishing techniques to improve the appearance of a product. • Use project specific vocabulary.

Spring

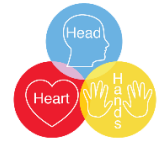
Crucial Knowledge- Term 2 (Structures)	Expanded Knowledge	Apply/ Prove
<ul style="list-style-type: none"> • Explore structures-look at photos of structures and recreate with different construction materials e.g lego, mobile, Knex etc. • Generate, develop, model and communicate their ideas through talking and drawing. • Identify positives and things to improve for existing products. • Know how to make stronger, stiffer and more stable structures. • Know that the triangle is the strongest shape. • Know different cardboard attachments- l-brace, flange, feet/tabs, slots, tie and weave. • Know that ‘scoring’ cardboard makes it easier to bend and shape. • Explore what materials products are made from. • Select from a range of materials according to their characteristics. • Learn to use a range of tools and equipment safely and appropriately. • Build structures using chosen materials with support. • Cut, shape and score materials with some accuracy. • With support, follow a simple plan. • Begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. • Evaluate their ideas and products against a design criteria. <p><u>Science aspect (Materials)</u></p> <ul style="list-style-type: none"> • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 	<ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through templates and mock-ups. • Demonstrate how to make stronger, stiffer and more stable structures. • Explain why the triangle is the strongest shape. • Identify what materials products are made from. • Select from a range of materials and components according to their characteristics. • Use a range of tools and equipment safely and appropriately. • Build structures using chosen materials with support. • Use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. • Build structures using chosen materials without support. • As they work, start to identify strengths and possible changes they might make to refine their existing design 	<ul style="list-style-type: none"> • Design and label a product for a use. • Identify what materials are made from. • Discuss what makes a triangle the strongest shape. • Demonstrate how to attach cardboard using attachment techniques. • Explain and demonstrate how to make a structure stronger. • Demonstrate using equipment safety and with some accuracy. • With support, build a structure for a purpose. • Follow a simple plan. • Explain choices being made during the building process. • Use simple finishing techniques to improve the appearance of a product.



<ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Describe the simple physical properties of a variety of everyday materials. Identify and compare the suitability of a variety of everyday materials for particular uses. Work scientifically to perform simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket?' 	<p><u>Science aspect (Materials)</u></p> <ul style="list-style-type: none"> Find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam. 	
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Summer

Crucial Knowledge- Term 3 (Food)	Expanded Knowledge	Apply/Prove
<ul style="list-style-type: none"> Discuss positives and things to improve for existing products. Understand the need to be safe and hygienic whilst working with food. Recap what ingredients products are made from and where they come from. Know the different food groups and explain the importance of a varied diet. Know some consequences which occur if a varied diet is not achieved (obesity, more likely to catch diseases). Know some different ways foods can be prepared for consumption- combined, assembled, chilled, baked and frozen. Know that utensils mean tools used within a kitchen. Use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures. Combine and assemble ingredients. Measuring and weighing ingredients using measuring cups. Explore a range of tools (peelers, cutters, blunt knives, whisk, masher, graters etc). With support, cut, peel and grate ingredients. 	<ul style="list-style-type: none"> Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from. 	<ul style="list-style-type: none"> Name the different food groups. Explain the importance of a varied diet. Discuss some consequences of not having a varied diet. Group foods into different food groups. Demonstrate good hygiene when working with food. Demonstrate how to use different hand tools. Follow a simple recipe.



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| <ul style="list-style-type: none">• Design and make a healthy snack.• With support, follow a simple recipe.• Evaluate their products and ideas against their simple design criteria. | | |
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