

Term	Autumn 1	
Year R	Exploring materials and how things have been put together	
Concept	Inspiration and Exploration	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a material is the matter from which other things can be made. Children need to know that an object is a thing that has been made from one or more materials. Children need to know that a texture is the feel, appearance or consistency of a material or object. Children need to know that the form is the shape or configuration of something. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will explore the appearance, colour, form and texture of a variety of materials. Children will explore the appearance, colour, form and texture of a variety of objects.
Vocabulary	material, object, make, made, create, texture, colour, form, shape, explore, observe, investigate	
Year 1	Exploring existing products	
Concept	Inspiration and Exploration	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that explore means to discover and find out about something. Children need to know that a material is the matter from which other things can be made. (revisiting from Year R) Children need to know that an object is a thing that has been made from one or more materials. (revisiting from Year R) Children need to know that a structure is something that has been made from different parts. Children need to know that a texture is the feel, appearance or consistency of a material or object. (revisiting from Year R) Children need to know that the form is the shape or configuration of something. (revisiting from Year R) 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to explore an existing structure and other existing products. They will use observational skills to study its material, colour, texture, form and shape, as well as how it has been made.
Vocabulary	explore, structure, product, observe, material, object, colour, texture, form, shape	
Year 2	Evaluating existing products	
Concept	Inspiration and Exploration	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that explore means to discover and find out about something. (revisiting from Year One) Children need to know that to evaluate something is to assess and reflect on the finished outcome. (revisiting from Year One) 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to evaluate different existing products based on: their effectiveness to fulfil a given purpose, their aesthetic and their function.
Vocabulary	explore, evaluate, reflect, assess, purpose, function, appeal, aesthetic	

Term	Autumn 2	
Year R	Safely using tools and exploring different techniques	
Concept	Inspiration and Exploration	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a tool is an implement used, often by hand, to carry out a particular function. Children need to know that the function of a tool or object is how well it is suited to fulfil a purpose. Children need to know that a technique is a particular way of carrying out a specific task. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn how to use tools, such as scissors and paint brushes, safely.
Vocabulary	tool, safety, technique, function, design, create	
Year 1	Exploring and improving structures	
Concept	Inspiration and Exploration	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that explore means to discover and find out about something. (revisiting from Autumn 1) Children need to know that a structure is something that has been made from different parts. (revisiting from Autumn 1) Children need to know that structures can be altered in order to make them stronger, stiffer and more stable. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to design. Children will learn how to use materials to alter the strength and stability of a structure. Children will learn how to use shapes to alter the strength and stability of a structure.
Vocabulary	structure, stronger, stiffer, stable, shape, design	
Year 2	Exploring and evaluating mechanisms	
Concept	Inspiration and Exploration	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a mechanism is a group of parts that rely on each other to work (e.g. levers, sliders, wheels and axles.) 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to identify different mechanisms. Children will learn to evaluate the effectiveness of different mechanisms within existing products.
Vocabulary	mechanism, lever, slider, wheel, axle, explore, evaluate, reflect, assess, purpose, function, appeal, aesthetic	

Term	Spring 1	
Year R	Having confidence to use tools independently	
Concept	Problem Solving and Innovation	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that independence means to do something by yourself, without help. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will develop their confidence with using tools independently.
Vocabulary	independence, activity, try	
Year 1	Designing products for themselves	
Concept	Problem Solving and Innovation	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a design is a plan that takes place before something is made. Children need to know about design criteria. Children need to know that a purpose means the reason something is made and what it is used for. Children need to know that a function is what something does. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to interpret basic design criteria and will learn how to design a product for themselves. Children will practise using their imagination in their design ideas. Children will experiment with ways to ensure their designs are appealing and aesthetically pleasing.
Vocabulary	purpose, function, appeal, aesthetic, design, make, design criteria	
Year 2	Generating their own ideas and creating templates and mock-ups	
Concept	Problem Solving and Innovation	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a design is a plan that takes place before something is made. (revisiting from Year One) Children need to know about design criteria. (revisiting from Year One) Children need to know that a purpose means the reason something is made and what it is used for. (revisiting from Year One) Children need to know that a function is what something does. (revisiting from Year One) Children need to know what a template or model is. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to design products to fulfil a purpose or solve a problem. Children will learn to design by generating their own ideas and modelling their design intentions. Children will learn to create templates and mock-up their design ideas. Children will learn to communicate their ideas verbally as well as through drawing.
Vocabulary	design, generate, develop, model, communicate, talking, drawing, template, mock-up	
Term	Spring 2	
Year R	Developing resilience and perseverance	
Concept	Problem Solving and Innovation	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that resilience is the capacity to recover from difficulty. Children need to know that perseverance is the ability to keep doing something despite difficulty or a delay in achieving the desired result. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will continue to try new activities and will learn to be resilient and persevere in the face of challenge.
Vocabulary	resilience, perseverance, challenge, difficult, problem	
Year 1	Designing products for others, based on design criteria	
Concept	Problem Solving and Innovation	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a design is a plan that takes place before something is made. (revisiting from Spring 1) Children need to know about design criteria. (revisiting from Spring 1) Children need to know that a purpose means the reason something is made and what it is used for. (revisiting from Spring 1) Children need to know that a function is what something does. (revisiting from Spring 1) 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to use design criteria to solve a problem. Children will practise designing products that fulfil design criteria for others. Children will experiment with ways to ensure their designs are appealing and aesthetically pleasing for others.
Vocabulary	purpose, function, appeal, aesthetic, design, make, design criteria	
Year 2	Generating their own ideas using ICT	
Concept	Problem Solving and Innovation	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a design is a plan that takes place before something is made. (revisiting from Year One) Children need to know about design criteria. (revisiting from Year One) Children need to know that information and communication technology (ICT) can be used to: generate ideas through research, communicate ideas, design and draw. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will practise designing products to fulfil a purpose or solve a problem. Children will learn to design by generating their own ideas and modelling their design intentions, using ICT. Children will learn to create templates and mock-up their design ideas, using ICT.
Vocabulary	design, generate, develop, model, communicate, talking, drawing, template, mock-up, ICT, research	

Term	Summer 1	
Year R	Experimenting with colour, design, texture, form and function	
Concept	Creativity and Imagination	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a texture is the feel, appearance or consistency of a material or object. (revisiting from Autumn 1) Children need to know that the form is the shape or configuration of something. (revisiting from Autumn 1) Children need to know that the function of a tool or object is how well it is suited to fulfil a purpose. (revisiting from Autumn 2) Children need to know that a technique is a particular way of carrying out a specific task. (revisiting from Autumn 2) Children need to know that imagination is having their own, new ideas. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to design things, making use of different materials. Children will learn to experiment with colours, texture, form and function. Children will experiment with different techniques, using tools safely.
Vocabulary	colour, design, texture, form, function, shape, tools, materials, techniques, imagination, creativity	
Year 1	Making and evaluating a structure	
Concept	Creativity and Imagination	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a tool is an implement used, often by hand, to carry out a particular function. (revisiting from Year R) Children need to know that the function of a tool or object is how well it is suited to fulfil a purpose. (revisiting from Year R) Children need to know that a technique is a particular way of carrying out a specific task. (revisiting from Year R) Children need to know some of the basic properties of different materials, in order to select them, based on their characteristics. (revisiting from Science) Children need to know that to evaluate something is to assess and reflect on the finished outcome. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to select tools and equipment for given purposes. Children will experiment with tools safely and use tools to cut, shape, join and finish. Children will experiment with techniques. Children will learn to select materials and components, based on their properties. Children will learn to evaluate their own products.
Vocabulary	equipment, tool, material, component, properties, function, purpose, technique, design, make, structure, product, evaluate	
Year 2	Making and evaluating using mechanisms	
Concept	Creativity and Imagination	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a mechanism is a group of parts that rely on each other to work (e.g. levers, sliders, wheels and axles.) (revisiting from Autumn 1) Children need to know that to evaluate something is to assess and reflect on the finished outcome. (revisiting from Year One and Autumn 1) 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will practise selecting and safely using tools and equipment for construction purposes. Children will practise selecting components according to their characteristics. Children will learn to use tools and techniques to create a product involving a mechanism. Children will practise evaluating their own products.
Vocabulary	equipment, tool, material, component, purpose, technique, design, make, mechanism, product, evaluate	
Term	Summer 2	
Year R	Sharing their own creations, explaining the processes used	
Concept	Creativity and Imagination	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a process is a series of steps or actions taken to achieve an outcome or end result. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to share their creations confidently. Children will learn to discuss what they have made and explain the processes they used when making it.
Vocabulary	share, create, creation, explain, process, steps, result	
Year 1	Making and evaluating products, including food	
Concept	Creativity and Imagination	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that ingredients are the components that are used to create food. 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will learn to select ingredients based on their characteristics, e.g. taste, consistency, nutrition, colour etc.
Vocabulary	ingredients, food, recipe, instructions, characteristics	
Year 2	Making and evaluating textiles	
Concept	Creativity and Imagination	
Knowledge and Skills	<p>Crucial Knowledge:</p> <ul style="list-style-type: none"> Children need to know that a textile is a type of cloth or woven fabric. Children need to know that to evaluate something is to assess and reflect on the finished outcome. (revisiting from Year One, Autumn 1 and Summer 1) 	<p>Using Knowledge as a Skill:</p> <ul style="list-style-type: none"> Children will practise selecting and safely using tools and equipment for construction purposes. Children will practise selecting materials according to their characteristics. Children will learn to use tools and techniques to create textiles. Children will practise evaluating their own products.
Vocabulary	equipment, tool, material, component, purpose, technique, design, make, textile, fabric, product, evaluate	