



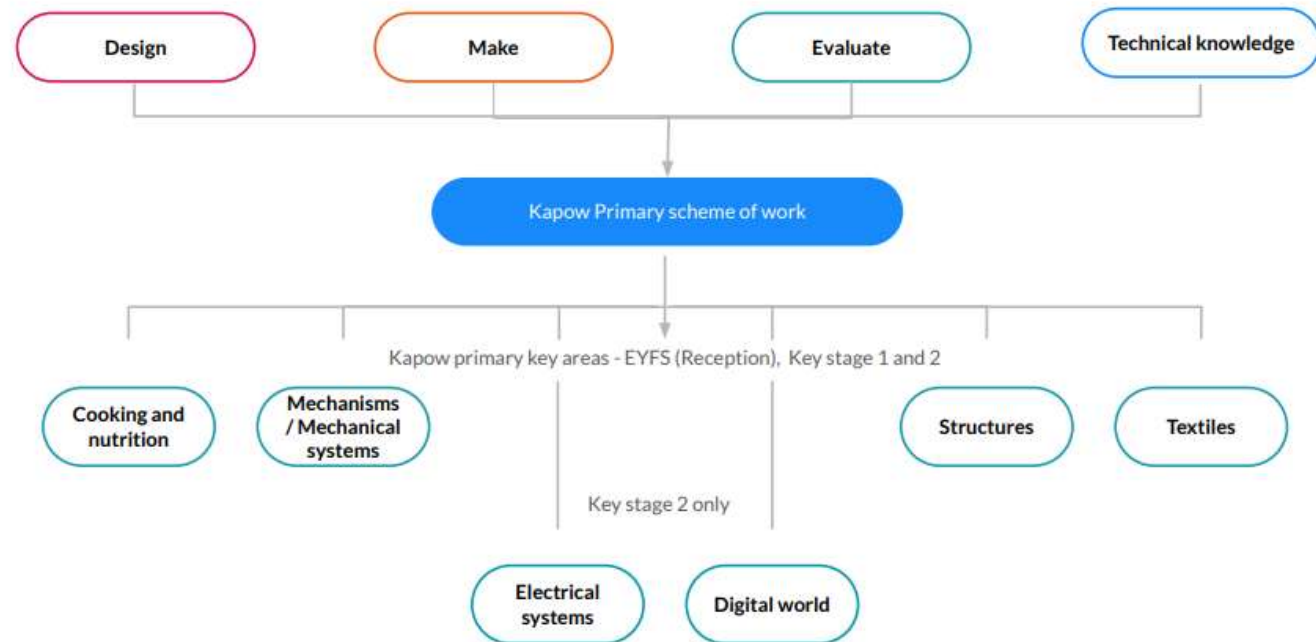
Design and Technology Skills Progression

At Kildwick School, we are using the Kapow scheme of work to deliver the Design and Technology curriculum.

This diagram shows how National Curriculum aims are met by the four areas art in the Kapow scheme: design, make, evaluate and technical knowledge.

The 6 key areas: cooking and nutrition, mechanisms and mechanical systems, electrical systems, digital world, structure and textiles, are broken down into a skill progression from EYFS to year 6 with key vocabulary listed.

How is the Design and technology scheme of work organised?



Component: Cooking and nutrition

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> To know how to chop fruit and vegetables safely to make a smoothie. To be able to identify if a food is a fruit or a vegetable. To describing the appearance and taste of fruit and vegetables. 	<ul style="list-style-type: none"> To know how to chop fruit and vegetables safely to make a smoothie. To be able to identify if a food is a fruit or a vegetable knowing that a fruit has seeds and a vegetable does not. To know where and how fruits and vegetables grow To know how to slicing food safely using the bridge or claw grip. To describing the appearance, taste, texture and smell of fruit and vegetables. To know that fruits grow on trees or vines. To know that vegetables can grow either above or below ground. 	<ul style="list-style-type: none"> To know that not all fruits and vegetables can be grown in the UK. To know that vegetables and fruit grow in certain seasons. To know that cooking instructions are known as a 'recipe'. To know that imported food is food which has been brought into the country. To know that exported food is food which has been sent to another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that the amount of an ingredient in a recipe is known as the 'quantity.' To know that it is important to use oven gloves when removing hot food from an oven. To know the following cooking techniques: sieving, creaming, rubbing method, cooling 	<ul style="list-style-type: none"> To know how to follow a recipe, including using the correct quantities of each ingredient. To know how to adapt a recipe and plan a menu for an occasion. To know that many countries have 'national dishes' which are recipes associated with that country. To know that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. 			
<p>Key Vocabulary</p> <p>fruit vegetable appearance taste</p>	<p>Key Vocabulary</p> <p>claw grip vines bridge slicing appearance texture</p>	<p>Key Vocabulary</p> <p>sieving creaming quantity</p>	<p>Key Vocabulary</p> <p>recipe adapting insecticides national dishes</p>			

Component: mechanisms and mechanical systems

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> To understand that for a wheel to move it must be attached to a rotating axle. To know that a slider mechanism moves an object from side to side. To know the features of a ferris wheel include the wheel, frame, pods, a base an axle and an axle holder. 	<ul style="list-style-type: none"> To understand that for a wheel to move it must be attached to a rotating axle. To know that an axle moves within an axle holder which is fixed to the vehicle or toy. To know that the frame of a vehicle (chassis) needs to be balanced. To know that designing a vehicle includes wheels, axles and axle holders, that when combined, will allow the wheels to move. To know that a slider mechanism moves an object from side to side and it has a slider, slots, guides and an object. To know that bridges and guides are bits of card that purposefully restrict the movement of the slider. To know the features of a ferris wheel include the wheel, frame, pods, a base an axle and an axle holder. 		<ul style="list-style-type: none"> To be able to measure, mark, cut and assemble with increasing accuracy. To make a model based on a chosen design. To understand that kinetic energy is the energy that something (object/person) has by being in motion. To know that aesthetics means how an object or product looks in design and technology. To know that a birds-eye view means a view from a high angle (as if a bird in flight). Designing a shape that reduces air resistance. To know how to make a slingshot car. 			Not taught in Y6 as part of the rolling program.
<p>Key Vocabulary</p> <ul style="list-style-type: none"> axle frame wheel 	<p>Key Vocabulary</p> <ul style="list-style-type: none"> axle rotate axle holders frame slider mechanism wheels 		<p>Key Vocabulary</p> <ul style="list-style-type: none"> air resistance aesthetics birds eye view kinetic energy 			

Component: digital world

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> Not taught in EYFS 	<ul style="list-style-type: none"> Not taught in KS1 		<ul style="list-style-type: none"> To know that a micro:bit is a pocket-sized, codeable computer. To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. To write a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm. To use a micro:bit as part of a wearable technology designed to fit purpose. 			<ul style="list-style-type: none"> Not taught in Y6 as part of rolling programme.
			<p>Key Vocabulary micro: bit programming loop control monitor algorithm wearable technology</p>			

Component: structures

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> To make stable structures from folded paper, card, tape and glue. To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses). To know that shapes and structures with wide, flat bases or legs are the most stable. 	<ul style="list-style-type: none"> To create joints and structures from paper/card and tape. To make stable structures from folded paper, card, tape and glue. To follow instructions to cut and assemble the supporting structure of a windmill. To make functioning turbines and axles which are assembled into a main supporting structure. To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses). To know that shapes and structures with wide, flat bases or legs are the most stable. To understand that the shape of a structure affects its strength. 	<ul style="list-style-type: none"> To make a range of different shaped beam bridges. To use triangles to create truss bridges that span a given distance and support a load. To build a wooden bridge structure. To independently measure and mark wood accurately. To understand how to carry and use a saw safely. To identify where a structure needs reinforcement and using card corners for support. To understand how triangles can be used to reinforce bridges. To understand the difference between arch, beam, truss and suspension bridges. 	<ul style="list-style-type: none"> To build a range of play apparatus structures drawing upon new and prior knowledge of structures. To measure, mark and cut wood to create a range of structures. To use a range of materials to reinforce and add decoration to structures. To understand what a 'footprint plan' is. To know that a prototype is a cheap model to test a design idea. 			
<p>Key Vocabulary windmills cylinders</p>	<p>Key Vocabulary windmills cylinders stable</p>	<p>Key Vocabulary suspension bridge beam truss saw reinforce</p>	<p>Key Vocabulary prototype footprint plan prototype mark reinforce</p>			

Component: textiles						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> To cut fabric neatly with scissors. To use joining methods to decorate a puppet. 	<ul style="list-style-type: none"> To select and cut fabrics for sewing. To decorate a pouch using fabric glue or running stitch. To be able to thread a needle. To sew running stitch, with evenly spaced, neat, even stitches to join fabric. To cut fabric neatly with scissors. To use joining methods to decorate a puppet. To know that there are various temporary methods of joining fabric by using staples, glue or pins. To understand the importance of tying a knot after sewing the final stitch. 		<ul style="list-style-type: none"> To follow a design criteria to create a cushion or Egyptian collar. To thread needles with greater independence. To tie knots with greater independence. To sew cross stitch and blanket stitch to join fabric. To know how to complete design ideas with stuffing and sewing the edges (Cushions) or embellishing the collars based on design ideas (Egyptian collars). To measure, mark and cut fabric accurately and independently. To create strong and secure blanket stitches when joining fabric. To use appliqué to attach pieces of fabric decoration. 			Not taught in Y6 as part of 3 year rolling program.
Key Vocabulary fabric joining	Key Vocabulary fabric decorate running stitch		Key Vocabulary cross stitch blanket stitch thread needles applique embellishing			

