Design and technology overview – 2 year cycle

	Autumn term	Spring	Summer
FS1 and 2 Cycle A and B	Autumn 1 – Who am I? Who Are You? (All About Me) Autumn 2 – Why Do We Celebrate? (Celebrations)	Spring 1 – Who Lives in a Land Far, Far Away? (Traditional Tales) Spring 2 – Do You Fly, Walk or Swim? (Lifecycles & Animals)	Summer 1 – What's Above Me? What's Below Me? (Growing) Summer 2 – Do You Wish You Were Here? (Travel)
Year 1/ 2 Cycle A	Structures: Freestanding structures	Food: Preparing fruit and vegetables	Mechanisms: Sliders and levers Textiles: Sewing
Year 1/ 2 Cycle B	n/a	n/a	Mechanisms: Wheels and axles
Year 3 /4 Cycle A	Structures: Shell structures using CAD	Food: Healthy and varied diet	Mechanisms: Levers and linkages Electrical systems: Programming and control
Year 3 /4 Cycle B	n/a	Textiles: 2d shape to 3d product	Electrical systems: Circuits and switches
Year 5/ 6 Cycle A	n/a	Textiles: Combining different fabric shapes using CAD	Mechanisms: Cams Mechanisms: Pulleys or gears Structures: Frame Structures
Year 5/ 6 Cycle B	Food: Culture and seasonality	n/a	Electrical systems: Monitoring and control with circuits and switches

Dalestorth Primary and Nursery School Subject Progression Overview
Subject: Design and technology

Area	FS1	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Create things similar to what they see in the environment.	Understand that ideas are the 1st step in the making process. Create a product can be made from a plan.	Create a plan/design draws together ideas to make a product Explain different ways of creating a design.	Describe how a plan/design can be created and adapted. Explain how some ways of developing, modelling and communicating ideas are more appropriate when designing	Identify how research can inform plans/design criteria which can be altered and improved.	Understand that designers make choices which can be seen in a final product	Explain how the design of a product can be revisited and re-shaped in stages and sections.	Explain how purpose and audience subsequently shapes the design of a product.
School Busy Bees Be a friend	We will work with our friends	We will work with our friends	We will work with our friends and listen to what they have to say	We will work with our friends and listen to what they have to say	We will work with our friends and listen carefully to what they have to say and consider their ideas	We will work with our friends and listen carefully to what they have to say and consider their ideas	We will make sure that when we work with a partner or in a small group that we respectfully listen to others ideas, thoughts and opinions.	We will make sure that when we work with a partner or in a small group that we respectfully listen to others ideas, thoughts and opinions.
Be you	We like to tell someone what we are pleased about	We like to tell someone what we are pleased about	We like to tell our friends what we have done well	We will share our ideas with others and tell them when we think their ideas are better	We like to share our ideas and successes with our friends and others	We like to share our ideas and successes with our friends and others.	We are proud of our ideas, methods, skills and final products and enjoy sharing with our peers	We are proud of our ideas, methods, skills and final products and enjoy sharing with our peers.
Be honest	We will tell others what they have done well	We will tell others what they have done well	We will tell others if we think they have a good idea	We will tell others if we think they have a good idea	We will share our ideas with others and tell them when we think	We will share our ideas with others and tell them when	We will be open to someone else's ideas and be honest when we	We will be open to someone else's ideas and be honest when we

					their ideas are better	we think their ideas are better	think their idea(s) are more suitable.	think their idea(s) are more suitable.
Be brave	We will try out our ideas	We will try out our ideas	We will be confident in our ideas and try again if something goes on.	We will be confident in our ideas and try again if something goes on.	We will believe in ourselves and our ideas and not give up even when something goes wrong.	We will believe in ourselves and our ideas and not give up even when something goes wrong.	We will try out our ideas and learn that sometimes they may not work but if we believe in ourselves and not give up we will get there in the end.	We will try out our ideas and learn that sometimes they may not work but if we believe in ourselves and not give up we will get there in the end.
Be kind	We will share our ideas with an adult	We will share our ideas with an adult	We will share our ideas and ways of working with another and learn from what we have shared	We will share our ideas and ways of working with another and learn from what we have shared	We will share our ideas and ways of working with others and learn from what we have shared	We will share our ideas and ways of working with others and learn from what we have shared	We will respect that other people may have different ideas and ways of working and that we can learn from each other	We will respect that other people may have different ideas and ways of working and that we can learn from each other
Sentence starters	*I am going to*	*I am planning to use .because*	*I have designed.. The purpose of my design is--*	*I have designed The purpose of my design is*	*My design is influenced by I am meeting the design criteria by The purpose of my design is*	*My design is influenced by I am meeting the design criteria by The purpose of my design is*	*My design is influenced by I have developed a design made from …. because…. This part of my design is ….*	*My design is influenced by I have developed a design made from …. because…. This part of my design is ….*
Make	Recall how different objects can be combined carefully to make something.	Remember that tools and materials can be safely used to make things.	Understand that there is a range of different tools and materials which can be used to create a product. Understand how to join materials in different ways (glue, Sellotape, Blu-tac and sew)	Explain how some tools and materials are more useful than others when creating a product. Understand how to decorate fabric. Choose fabrics based on their suitability for a product. Understand that fabrics can be	Describe how the characteristics of tools and materials informs their use in the making process. Use simple stitching and develop weaving techniques to create a product.	Describe how the success of the making process is reliant on the accurate selection and use of appropriate tools and materials. Illustrate how to sew, using an increasing number of stitching techniques to create a product.	Summarize that a prototype is an experimental process and that preliminary versions can inform the final product. Understand how to tape, pin and join different fabrics using a range of stitching techniques to create a product.	Understand that a prototype can be refined and is a key part of the making process and can be tested out on a wide range of users so that the final product is fit for purpose. Understand how to measure, pin, cut and join fabrics using a

				joined together using a running stitch				range of stitching techniques together to create a product.
School Busy Bees Be a friend	We will make sure that we share resources and equipment.	We will make sure that we share resources and equipment	We will make sure that we share resources and equipment fairly	We will make sure that we share resources and equipment fairly	We will make sure that we share resources and equipment and show others how to use them.	We will make sure that we share resources and equipment and show others how to use them.	We will make sure that when we use resources and equipment that everyone has a turn and are supported if they are not sure how to use something.	We will make sure that when we use resources and equipment that everyone has a turn and are supported if they are not sure how to use something.
Be you	We will try our best	We will try our best	We will try our best and not give up if we come across a problem	We will try our best and not give up if we come across a problem	We will try our best and be confident that we can solve problems we may come across	We will try our best and be confident that we can solve problems we may come across	We always try to do the best and have confidence in ourselves despite the setbacks and challenges we may face.	We always try to do the best and have confidence in ourselves despite the setbacks and challenges we may face.
Be honest	We use tools carefully under adult supervision	We use tools carefully under adult supervision	We listen carefully as to how to use tools properly and safely	We listen carefully as to how to use tools properly and safely	We listen carefully as to how to use tools safely to keep ourselves and others safe	We listen carefully as to how to use tools safely to keep ourselves and others safe	We can explain to others how to use tools safely, to keep ourselves and others safe.	We can explain to others how to use tools safely, to keep ourselves and others safe.
Be brave	We will ask an adult for help.	We will ask an adult for help.	We will ask an adult for help if we are finding something is going wrong.	We will ask an adult for help if we are finding something is going wrong.	We will ask for help from a teacher or a friend if we are finding something is going wrong.	We will ask for help from a teacher or a friend if we are finding something is going wrong.	We will ask for help from our teachers and peers if something is not working and have a go at a different way of doing something to help us succeed.	We will ask for help from our teachers and peers if something is not working and have a go at a different way of doing something to help us succeed.
Be kind	We will help a friend if they ask for help.	We will help a friend if they ask for help.	We will help a friend to do something they are finding tricky.	We will help a friend to do something they are finding tricky.	We will show someone else how to do something when they have asked for help.	We will show someone else how to do something when they have asked for help	We will support others to master a skill when they have asked for kelp.	We will support others to master a skill when they have asked for kelp.

Sentence starters	*I will need*	*I am using … because*	*It is important that I* *I am using … because*	*It is important that I* *I am using … because*	*I have made a change to my design because*	*I have made a change to my design because*	*I have realised … so …*	*I have realised … so …*
<u>Evaluate</u>	Describe the purpose of their creation	Give an opinion about what they have made.	Evaluate their product so it can improved.	Evaluate their ideas and products against a set of design criteria	Evaluate a product to inform any changes required to make the product more effective.	Understand that your own evaluation and the views of others can lead to modifications to the criteria and the creation of a new and improved design.	Explain that products have evolved over time as a result of constant evaluation and modification in line with the changing world.	Summarize how evaluation of past and present DT leads to an understanding about its impact on modern day life.
School Busy Bees Be a friend	We can tell an adult what someone else has done well	We can tell an adult what someone else has done well	We can tell a partner what we think they have done well	We can tell a partner what we think they have done well	We can share with a group what we think others have done well	We can share with a group what we think others have done well	We can share someone else's successes with others.	We can share someone else's successes with others.
Be you	We can tell an adult what we have done well	We can tell an adult what we have done well	We can tell a partner what we have done well	We can tell a partner what we have done well	We can share with a group what we have done well	We can share with a group what we have done well	We share our successes within and out of school.	We share our successes within and out of school.
Be honest	We will tell others what they have done well	We will tell others what they have done well	We will tell others if we think they have a good idea	We will tell others if we think they have a good idea	We will share our ideas with others and tell them when we think their ideas are better	We will share our ideas with others and tell them when we think their ideas are better	We will be open to someone else's ideas and be honest when we think their idea(s) are more suitable.	We will be open to someone else's ideas and be honest when we think their idea(s) are more suitable.
Be brave	We can try out our ideas in a different way another time	We can try out our ideas in a different way another time	We will be confident in our ideas and try again if something goes wrong	We will be confident in our ideas and try again if something goes wrong	We will believe in ourselves and our ideas and not give up even when something goes wrong.	We will believe in ourselves and our ideas and not give up even when something goes	We will try out our ideas and learn that sometimes they may not work but if we believe in ourselves and not give up we can do better next time.	We will try out our ideas and learn that sometimes they may not work but if we believe in ourselves and not give up we can do better next time.
Be kind	We will tell others what we like about what they have made	We will tell others what we like about what they have made	We will tell others what we like about what they have designed and made	We will tell others what we like about what they have designed and made	We will evaluate what others have designed and made and offer an idea about what they could do	We will evaluate what others have designed and made and offer an idea about what they could do	We will evaluate others designs or final products and offer constructive feedback which will help and	We will evaluate others designs or final products and offer constructive feedback which will help and

					differently next time	differently next time	support our partner(s)	support our partner(s)
Sentence starters	*I am really happy with*	*I am really happy with*	*It would be even better if* *I am pleased with my final product because* *If I made it again I would…..* *It meets my design brief because …*	*It would be even better if* *I am pleased with my final product because*	*I am pleased with my final product because* *One area I found challenging was*	*I am pleased with my final product because* *One area I found challenging was*	*Evaluating my product I would change .. because ….* *My biggest success was*	*Evaluating my product I would change .. because ….* *My biggest success was*
Technical knowledge	Show how to join construction pieces together.	Show how to join construction pieces together to build and balance. Understand how to correctly hold a pair of scissors.	Explain how to build structures, exploring how they can be made stronger, stiffer and more stable. With support measure, cut and shape different materials. Use a basic stitch to join pieces of fabric.	Investigate and use mechanisms in their products. Use running stitch to join different fabrics.	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Use running stitch and weaving techniques with increasing skill.	Apply their understanding of computing to program, monitor and control their products. Use an increasing range of stitching in order to join pieces of fabric.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Tape and pin fabric in the joining process.	Use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Demonstrate how to stitch, cut, pin, measure accurately in creating products.
School Busy Bees Be a friend	We will tell to help our friends and if we can't we will tell an adult they need help	We will tell to help our friends and if we can't we will tell an adult they need help	We will help someone who asks for help	We will help someone who asks for help	We will help our friends when they don't know how to do something or don't know what the next step should be.	We will help our friends when they don't know how to do something or don't know what the next step should be.	We will help our friends when they ask for help in mastering a new skill or are stuck as to what to do next.	We will help our friends when they ask for help in mastering a new skill or are stuck as to what to do next.
Be you	We will try our best	We will try our best	We will try our best and not give up if we come across a problem	We will try our best and not give up if we come across a problem	We will try our best and be confident that we can solve problems we may come across	We will try our best and be confident that we can solve problems we may come across	We always try to do the best and have confidence in ourselves despite the setbacks and	We always try to do the best and have confidence in ourselves despite the setbacks and

							challenges we may face.	challenges we may face.
Be honest.	We will ask an adult for help.	We will ask an adult for help.	We will ask an adult for help if we don't know how to use a tool or how to do something	We will ask an adult for help if we don't know how to use a tool or how to do something	We will ask for help from an adult or a friend if we don't know how to us a tool or how to do something	We will ask for help from an adult or a friend if we don't know how to us a tool or how to do something	We will ask an adult or a friend if we are unsure of how to use a tool or are unsure as how to carry out a skill.	We will ask an adult or a friend if we are unsure of how to use a tool or are unsure as how to carry out a skill.
Be brave	We will have a go at new things	We will have a go at new things	We will have a go at trying out something new even if we feel nervous after we have watched someone else have a go	We will have a go at trying out something new even if we feel nervous after we have watched someone else have a go	We will have a go at trying out something new even if we feel nervous	We will have a go at trying out something new even if we feel nervous	We will have a go at a new skill or an unfamiliar piece of equipment even if we are a bit nervous at first.	We will have a go at a new skill or an unfamiliar piece of equipment even if we are a bit nervous at first.
Be kind	We will help a friend if they ask for help.	We will help a friend if they ask for help.	We will help a friend to do something they are finding tricky.	We will help a friend to do something they are finding tricky.	We will show someone else how to do something when they have asked for help.	We will show someone else how to do something when they have asked for help	We will support others to master a skill when they have asked for kelp.	We will support others to master a skill when they have asked for kelp.
Food and nutrition	Understand that there are lots of different foods	Classify that there are healthy and unhealthy foods. .	Explain that food can contribute towards a healthy diet. Identify that food comes from different sources.	Understand that food choices have an impact on health. Explain that some food sources are more readily available in different countries and different climates.	Classify food into groups and explain how each group can contribute towards a balanced diet. Understand that food has a limited lifespan without intervention and that there are methods which can prolong and preserve food.	Explain how your own food choices have a direct impact on your own health. Demonstrate a range of techniques that can be used in preparing and cooking different types of food.	Identify that it can be a challenge to apply knowledge of a healthy diet where for a number of factors, food or a range of food is limited. Summarize that there are different processes that food goes through to get to the final product and that there are complexities which impact on the distribution of this food.	Explain that globally health can be adversely impacted when food choices are limited due to environmental and social circumstances beyond an individual's control. Understand that not all countries have the necessary infrastructure to support food processes and distribution and

								that this impacts on the ability to make food choices.
Key vocabulary			**Food: Preparing fruit and vegetables** Flesh, skin, seed, pip, core, slicing, peeling, cutting, juicing, fruit and vegetable names, utensil names, sensory vocabulary. **Structures: Freestanding structures** Freestanding structure, framework, weak, strong, base, surface, straight, curved, design, make, evaluate **Mechanisms: Sliders and levers** Slider, lever, pivot, mechanism **Mechanisms: Wheels and axles** Vehicle, wheel, axle, axle holder, chassis, body, assemble **Textiles: Templates and joining techniques** Sewing, fraying, running stitch		**Food: Healthy and Varied Diet** Utensils, techniques, texture, appearance, preference, fresh, savoury, processed, harvested, seasonal **Structures: Shell structures using CAD** Shell structure, three-dimensional, net, vertex, edge, scoring, tabs, corrugating, ribbing, laminating, **Mechanisms: Levers and linkages** Mechanism, lever, linkage, pivot, linear, oscillating, reciprocating **Electrical systems (circuits, programming and control)** microcontroller, input / output, code program, microcontroller, input, output, code, series circuit, light emitting diode **Textiles: 2d shape to 3D product** Specific stitch names (running, back, blanket, oversew) templates, seam, seam allowance, prototype, functional, aesthetics, pattern pieces		**Food: Culture and seasonality** Gluten, dairy, allergy, nutrients, nutrition, intolerance, source, seasonality, combine, fold, knead, rubbing in, baking, ration, portion **Structures: Frame Structures** Frame structure, stiffen, strengthen, reinforce, triangulation, stability, specification, prototype **Mechanisms: Cams** Cam, snail cam, off-centre cam, peg cam, pear shaped cam, follower, axle, shaft, crank, housing, rotation, rotary, oscillation, reciprocating **Mechanisms: Pulleys or gears** Pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor **Electrical systems: Monitoring and control with circuits and switches** Names of switches and components, input device, output device, sensor, monitor, control, program, flowchart **Textiles: Combining different fabric shapes using CAD** Textile names & wadding, reinforce, right side, wrong side, hem, pinking shears	
Sticky knowledge	These skills will be practiced and refined during high quality continuous and enhanced provision. This will include • 3D structures/box modelling • Cooking and baking activities		**Food: Preparing fruit and vegetables** **Comparing localities (Spring A) – making a fruit salad** Children will know what assorted fruits and vegetables are called, and know		**Food: Healthy and Varied Diet (Research influential chefs)** **Geography (Spring A) – Which European country would you choose to live in? European Banquet**		**Food: Culture and seasonality (Research influential wartime chefs and rationing)** **WW2 (Autumn B) – Ration meals** To ensure that everyone in the country would have enough to eat, the	

	• Construction – large and small equipment. • Moving pictures These will link to the termly topics and children's areas of interest.	where it is grown and when it can be harvested. They will be able to name the different parts of the fruits and vegetables. They will be able to discuss basic food hygiene practices. Fruits are edible seeds from plants or trees. Vegetables are plants used for food. Pith is the soft white lining inside fruit such as oranges Salad is a cold dish. **Structures: Freestanding structures – Great Fire of London (Autumn A) – Making a house** A freestanding structure is one that stands on its own base without being attached to anything else. A frame structure is made from thin components e.g. a tent frame. The stability of a structure means how likely it is to fall over if a force is applied to it. A buttress is a structure added to a wall, tower or framework to make it more stable and/or reinforce **Mechanisms: Sliders and lever Seasons (Summer A) - Moving under the sea pictures** **Challenge – has** lever is a rigid bar which moves around a pivot A slider is a rigid bar which moves backwards and forwards along a straight line. It does NOT have a pivot point. **Mechanisms: Wheels and axles Significant Women (Summer B) – Moving vehicles** An axle is a rod that enables a wheel to rotate.	The bridge and claw techniques for cutting vegetables are distinctly different. Children will be able to explain and demonstrate both safely. Harvesting refers to the time in which food is ready to be collected to be stored or used. It can refer to the collected of fruits, vegetables, crops and fish. Processed foods are those which have been changed in some way to enable them to be eaten. It is important to follow rules for hygienic food preparation. Children will be able to identify the key points and explain why they are important. (Cleanliness, correct preparation techniques, using utensils safely, which foods can be eaten raw and which can't etc.) Children will be able to explain the different food groups and ratios which make a balanced diet, referring to the Eatwell Plate. **Structures: Shell structures using CAD (Research famous architects) History (Autumn A) - How did life in Britain change from the Stone Age to the Roman invasions? Gift boxes for Christmas** A shell structure is a hollow structure with a thin outer covering An edge is where two surfaces meet at an angle. A net is the flat or opened out shape of an object, such as a box. Scoring is where we cut a line or mark into sheet material to make it easier to fold. We can stiffen or strengthen sheet materials by: laminating, corrugating or ribbing.	government introduced rationing in 1940. When rubbing flour and fat together, we should keep our hands and the ingredients cool to stop the fat from melting. 'Rubbing in' is when we rub dry ingredients together with fat, lifting to put air into the mixture so that it resembles breadcrumbs. Kneading is when we pull and squeeze dough to make it smooth. Unleavened bread is flat bread where yeast has not been added. **Structures: Frame Structures Antarctic Exploration (Spring B) Making a cargo crane** **Frame structures are made from these components, such as a tent frame.** Triangles are useful shapes in construction as they help to increase rigidity. When we use triangular shapes to strengthen a structure, it is called triangulation. A strut refers to a part of a construction that is under compression Tension occurs when a force pulls on a material of structure. **Mechanisms (pulleys or gears) sticky knowledge** **Anglo Saxons and Vikings (Autumn A) making a Viking working boat** A pulley is a grooved wheel over which a drive belt can run. A gear is a wheel with teeth around its circumference. Some people think this is a cog, but the cogs are actually the teeth themselves. The rotational speed of a product can be changed by the use of pulleys or gears.

		The wheel can either rotate freely on the axle, or be fixed to it and turn with it. An axle holder is the component through which as axle fits and rotates. A chassis is the frame or base on which a vehicle is built. Dowel is a wooden rod used to makes axles to hold wheels. **Textiles: Templates and joining techniques** **Seasons (Summer A) – Sewing a sea creature** Sewing is when we join pieces of fabric with stitches These stitches are called a seam**.**	**Mechanisms (levers and linkages) & Electrical systems (circuits, programming and control)** **What was so special about Shakespeare? (Summer A) – Puppet theatres using Crumble (for lighting, sound or movement).** Levers are rigid bars which move around a pivot and are used in many everyday products. A pivot is the central point on which a mechanism turns or oscillates. You can have fixed or loose pivots. Linkages join levers and are used to produce the type of movement required. Microcontrollers are devices that we can program to control how an electrical product operates. A program is a sequence of instructions that can be used to control electrical components. **Textiles: 2d shape to 3D product** **Geography (Spring B) – Where would you like to explore? Making a reusable bag** Appliqué means 'applied' and describes the method of stitching/gluing patches onto fabric (originally to mend holes in worn clothes) to provide decoration. Patterns and templates are shapes drawn to exact shape and size, used to assist cutting out. A seam is a line of stitching that joins pieces of fabrics together. Seam Allowance is the extra fabric is allowed for joining together two pieces together (usually 1.5cm), and this is called a seam allowance. There are a range of sewing techniques, including back stitch, over sew stitch, blanket stitch and running stitch.	The gear or pulley that provides the input movement to the system is called the 'driver'. The one that provides the output movement is called the 'follower'. The point where two gears join together and transfer movement is called the 'mesh'. A motor spindle is the rod on the end of the motor, onto which a gear or pulley is attached. **Textiles: Combining different fabric shapes using CAD sticky knowledge** **Rainforests (Spring A) Soft toy rainforest animals** There are many different ways of creating fastening when working with textiles. These include zips, Velcro, ties, toggles, buttons, press studs and clasps. Stitches such as stem stitch, satin stitch, chain stitch and lazy daisy stitch, can all be used to add decoration to fabrics. We can temporarily hold pieces of fabric together by 'tacking' them together. This means we join them with large running stitches. A working drawing is a detailed drawing which contains all of the information on that we need to make a product, but it is updated as we make changes. **Stand-alone topic (Summer B) – Crumble** Output devices are components that produce an outcome e.g. bulbs, motors, buzzers. Input devices are components that are used to control an electrical circuit e.g. switches. A process is how a computer program controls one or more output devices. Computer control input is when a switch sends a signal to a computer control box

			Electrical systems (circuits, programming and control) **Art (Summer B) – What kind of artist are you? Making talent show buzzers and entries/ illuminated signs** Microcontrollers are devices that we can program to control how an electrical product operates. A program is a sequence of instructions that can be used to control electrical components. A system is a set of related parts or components that achieve a desired outcome. A light emitting diode is an output device that glows when electricity passes through it. Sticky knowledge about a significant technologist to be determined.	to activate a sequence of events such as a buzzer or light being used to attract attention or alert people.

Oracy Objectives in DT Subject Progression	
Foundation Stage	Physical: Children use gestures like pointing to parts of a model and speak with clear volume when sharing ideas. Linguistic: Children speak in full sentences using words like "because," "so," and "if," and apply topic-specific vocabulary such as "lighter," "heavier," and "join." Cognitive: Children ask simple questions and explore ideas aloud, such as "What if we used cardboard instead?" or "It might not float because it's heavier." Social-Emotional: Children take turns, listen respectfully, and respond to others in group tasks by looking at the speaker and making relevant comments.
Key Stage 1	Physical: Children speak clearly and confidently with appropriate volume, tone, and gestures to support their ideas—for example, pointing to a wheel when explaining how their vehicle moves or using a louder voice when presenting to the class. Linguistic: Children use topic-specific vocabulary and sentence structures to explain, sequence, and connect their design thinking—for example, saying "Firstly, I joined the pieces with glue because it's strong," or using words like "lighter" and "heavier" when comparing materials. Cognitive: Children ask questions, describe and explain their ideas in order, and reflect on their understanding and opinions—for example, asking "Why does this part wobble?" or explaining "I used cardboard because it's bendy and easy to cut." Social-Emotional: Children listen, respond, and contribute respectfully in group discussions, showing awareness of others and the audience—for example, saying "I agree with Mia because her idea uses strong materials," or inviting others to speak by saying "What do you think, Leo?"
Lower Key Stage 2	Physical: Children deliberately use gestures, posture, and movement to support their ideas—for example, pointing to a peer when referencing their suggestion or standing confidently when presenting a model. Linguistic: Children use precise and subject-specific vocabulary—such as "reinforced," "structure," or "mechanism"—and adapt their language to suit the audience, for example, speaking like an engineer or using persuasive phrases when pitching a design. Cognitive: Children ask thoughtful questions, build on others' ideas, and reflect on their own thinking—for example, saying "I wonder if a pulley would make it easier?" or "I used cardboard because it's flexible, like we saw in the last project." Social-Emotional: Children contribute respectfully in group discussions, recognise different roles like chairperson or timekeeper, and show empathy by inviting quieter peers to speak or giving constructive feedback, such as "I liked your idea—maybe you could make it stronger by adding a base."
Upper Key Stage 2	Physical: Children speak fluently and confidently with stage presence, adapting tone, pace, and volume to suit the context—for example, projecting their voice during a group presentation or using expressive gestures when explaining how a mechanism works. Linguistic: Children use sophisticated sentence structures and subject-specific vocabulary to express and justify their ideas—for example, saying "I believe this design is more efficient because…" or using terms like "aerodynamic," "reinforced," or "sustainable."

	Cognitive: Children construct detailed arguments, ask probing questions, and cite evidence to support their thinking—for example, referencing a previous project or historical invention to explain their design choices, or saying "That might be true, but what do you think about using pulleys instead?" Social-Emotional: Children listen actively, adapt their speech for different audiences, and respond sensitively to group dynamics—for example, using humour to engage their peers, inviting others to contribute, or changing topic when noticing confusion or disengagement.
Cross-Curricular Oracy Skills	Listening: Active listening during design brief explanations, peer feedback sessions, and collaborative planning discussions to ensure understanding and effective teamwork. Speaking: Clear articulation of design choices, construction strategies, and reflections on what worked well or could be improved. Reasoning: Making connections between design decisions and outcomes—explaining cause and effect, such as why a structure collapsed or why a material was more suitable. Presenting: Sharing learning through model demonstrations, peer coaching during build stages, and presenting final products to an audience with confidence and clarity.