

# Design and Technology at Copperfield

Adhesive  
Create  
Customer  
Design  
Evaluate  
Explore  
Fabric  
Flexible  
Parasol  
Pattern  
Product  
Purpose  
Research  
Rigid  
Successful  
Similarities  
Sketch  
Unsuccessful  
Waterproof  
Arch  
Balance  
Beam  
Cable  
Construct  
Design Brief/ criteria  
Feedback  
Improve  
Prototype  
Stable  
Suspension  
Truss  
Allergy  
Blend  
Chopping board  
Combine  
Healthy  
Hygienic  
Ingredient



## Subject Leadership

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### Subject Leaders at Copperfield

- Subject Leaders provide professional leadership for a subject or group of subjects to secure high-quality first teaching, a rich curriculum and the effective use of resources. The success of this will be measured by the impact on learning and progress for pupils.
- We do not expect Subject Leaders to be an 'expert' in the subject they lead. What is important is that they have the overview of what is going well and what needs to be improved – based on evidence.
- Subject leaders at Copperfield are part of both the Middle Leadership and the Copperfield Extended Leadership Teams
- Each Subject Leader has an assigned Mentor (from SLT)

### All Subject Leaders will

- Be part of our distributed leadership
- Utilise the expertise, passion, pedagogical awareness and strengths of other leadership team members
- Establish a collective responsibility for demonstrating that everyone makes a difference
- Moving the school forward through driving the implementation aspect of each subject
- Professionally develop themselves and other staff team members
- Raise standards across all aspects of the curriculum
- Enrich the curriculum
- Share knowledge, expertise, skill, passion and enthusiasm

## How does the role of Subject Leader fit into Copperfield's Ofsted Statement of Action?

The staff, pupils and school community are working on areas identified in the May 2021 Ofsted inspection.

***'Leaders are developing their plans to ensure that all areas of the curriculum are equally ambitious and well sequenced. Currently, they are focusing on science and history. Leaders should review existing wider curriculum planning to ensure that essential knowledge is explicitly identified and sequentially mapped out from Nursery to Year 6. For this reason, the transition arrangement has been applied in this case'.***

*This handbook, along with every other handbook, maps out the sequential curricular links from Nursery to Year 6.*

### ***Our Curriculum Statement***

***Copperfield has an ambitious and aspirational curriculum designed to meet each individual's needs and to give all learners the knowledge and cultural capital they need to succeed in life. Strong teachers have been appointed to key posts within the school. They are aware of national curriculum developments, and pedagogical developments, and a range of strategies are implemented to improve practice, and to better meet the needs of pupils more effectively'***

### **Our Four Drivers, making a well sequenced and ambitious curriculum.**

#### ***Ethical, informed Individuals.***

*At Copperfield we aim to build confident, open-minded individuals who feel safe and secure within a caring environment based on mutual respect where everyone is valued and is able to maximise their individual potential. Children from our community may need to develop their self-esteem, confidence and communication skills. An example of this is our comprehensive PSHE curriculum, weekly Values Assembly, and expansive Wellbeing Programme, which all support with self-esteem, independence, perseverance and self-discipline. Our curriculum will also prepare our children to successfully engage with the wider community, as we educate the children on inclusivity and British values. Our 'hands-on' approach to learning in all areas of the curriculum will ensure the children have many opportunities to practice the traits and values they are learning on a daily basis.*

#### ***Ambitious Capable Learners (Skills and Knowledge).***

*Our aim is to make learning exciting, enjoyable, relevant and appropriately challenging to build upon what learners already know. Reading is at the heart of our curriculum, it is central to all that we do. Children will read and enjoy a range of books from a myriad of genres. Enriching the children's vocabulary, knowledge and imagination. We also aim for every child to become confident and competent mathematicians, achievable through our maths mastery approach. Beyond the core subjects, the children's knowledge and awareness of how the wider curriculum, such as the arts, humanities, and sports, can be applied in, and have an impact on, their community will be explored. The children will be able to recite key facts and demonstrate their learning of news skills through various forms of outcomes.*

#### ***Experiences to Inspire***

*Aware that children seldom explore beyond their very immediate community, our curriculum is designed to broaden the children's horizon. To inspire. The curriculum will be brought alive through hands-on experiences designed to teach and link new skills and knowledge to prior learning. Where possible, the learning will happen beyond the classroom, either on the school grounds, local community or beyond. To enhance their learning for each topic, the children will meet knowledgeable and engaging individuals (virtually or physically) whilst also immerse themselves in the worlds of craft, art, food and sport – taking the learning of skills and knowledge beyond textbooks and into real life experiences. Reach2's 11b411 has also been embedded into our curriculum, to help enrich the children's learning even further.*

#### ***Successful in Society***

*Mindful that some challenges in the local community could have an impact on the children's learning and progress, the school continues to be an outward looking school. Through using the curriculum and resources at our disposal, we openly encourage the parents to engage with, and learn from, the children's curriculum and thus better place them to progress and prosper along with their children. Termly invitations to curriculum days, parent & teacher curriculum conferences and parent workshops with keynote speakers all come together as a package of support, upskilling and development for parents. This level of support for the support network is designed to elevate the standing of education, increase parental engagement and drive progress in the community. Running throughout the curriculum are our values we embed the 6 values in everything we do.*

## Aligning INTENT, IMPLEMENTATION AND IMPACT to ensure we meet the criteria for a good quality of education in the Education Inspection Framework

### INTENT

Our curriculum is:

- deliberately ambitious
- designed to give all learners, particularly the most disadvantaged and SEND or high needs, the knowledge and cultural capital they need to succeed in life
- coherently planned and sequenced towards cumulatively sufficient knowledge and skills for future learning and employment
- broad and balanced, and allows all pupils access to the full range of subjects, throughout all years, from Nursery to Year 6
- successfully adapted to meet the needs of all learners, especially those with SEND, to develop their knowledge, skills and abilities to apply what they know and can do with increasing fluency and independence

### IMPLEMENTATION

1. Teachers have good subject knowledge of the subject(s) they teach, and leaders support those teaching outside their main areas of expertise
2. Teachers:
  - present subject matter clearly, promoting appropriate discussion about the subject matter they are teaching
  - check learners' understanding systematically
  - identify misconceptions accurately
  - provide clear, direct feedback
  - respond, and adapt their teaching as necessary
3. Teaching is designed to help learners to remember in the long-term the content they have been taught, and to integrate new knowledge into larger concepts
4. Teachers and Leaders:
  - use assessment well to help learners embed and use knowledge fluently, or to check understanding and inform teaching
  - understand the limitations of assessment, and do not use it in a way that creates unnecessary burdens for staff and learners
5. Teachers create an environment that focuses on pupils:
  - textbooks and other teaching materials that teachers select – in a way that does not create unnecessary workload for staff – reflect the school's ambitious intentions for the course of study
  - materials clearly support the intent of a coherently planned curriculum, sequenced towards cumulatively sufficient knowledge and skills for future learning and employment
6. Work given to pupils is demanding and matches the aims of the curriculum in being coherently planned and sequenced towards cumulatively sufficient knowledge
7. Reading is prioritised to allow pupils to access the full curriculum offer
8. A rigorous and sequential approach to the reading curriculum develops pupils' fluency, confidence and enjoyment in reading:
  - At all stages, reading attainment is assessed and gaps are addressed quickly and effectively for all pupils

- Reading books connect closely to the phonics knowledge pupils are taught when they are learning to read
9. The sharp focus on ensuring that younger children gain phonics knowledge and language comprehension necessary to read, and the skills to communicate, gives them the foundations for future learning
  10. Teachers ensure that their own speaking, listening, writing and reading of English support pupils in developing their language and vocabulary well

#### IMPACT

1. Pupils develop detailed knowledge and skills across the curriculum, and as a result achieve well. This is reflected in results from national tests
2. Pupils are ready for the next stage of education:
  - they have the knowledge and skills they need to go on to destinations that meet their interests and aspirations, and the course of study
  - those with SEND achieve the best possible outcomes
3. Pupils' work across the curriculum is of good quality
4. *Pupils:*
  - *read widely and often, with fluency and comprehension appropriate to their age*
  - *apply mathematical knowledge, concepts and procedures, appropriately for their age*

## Design and Technology at Copperfield Academy

### Design and Technology

#### Intent:

- At Copperfield we want all children to develop a positive attitude towards Design and Technology.
- Children will receive a design and technology curriculum which allows them to exercise their creativity through designing and making.
- Children will be taught to combine their designing and making skills with knowledge and understanding in order to design and make a product.
- Skills will be taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school.
- Evaluation will be an integral part of the design process and to allow children to adapt and improve their product, this is a key skill which they need throughout their life.
- Children's interests will be captured through theme learning, ensuring that links are made in a cross curricular way, giving children motivation and meaning for their learning.
- Children will learn basic cooking skills.

#### Implementation:

- Our DT curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to flourish to become the very best version of themselves they can possibly be.
- We will teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children.
- All teaching of DT should follow the design, make and evaluate cycle. Each stage should be rooted in technical knowledge.
- The design process should be rooted in real life, relevant contexts to give meaning to learning.
- While making, children should be given choice and a range of tools to choose freely from.
- To evaluate, children should be able to evaluate their own products against a design criteria.
- D&T to be taught in in short integrated blocks.

#### Impact (Anticipated/expected):

- Children will develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- Children will design and make a range of high-quality products for a wide range of uses/users.
- Children will critique, evaluate and test their ideas and products, and the work of others.
- Children will understand and apply the principles of nutrition and learn how to cook.
- Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

## How is Design and Technology assessed?

A Year 1 child can: Explore a range of existing products to help them to describe how something works and use this to form their own ideas, making use of a simple plan and basic tools. Develop and communicate their ideas through talking, drawing and mock-ups. Build a model, exploring how it can be made stronger, stiffer and more stable. Explore and use lever and slider mechanisms in a product. Understand and use the basic principles of a healthy and varied diet to prepare dishes. Begin to evaluate their work appropriately against design criteria. Use a range of vocabulary e.g. sliders, levers, joints, joints, ingredients, utensils.

A Year 2 child can: Investigate and evaluate the purpose of existing products that are linked to the project. Design a product that is functional and appealing to the user, whilst considering how the product can be realistically made. Build a model using appropriate materials or textiles and components including wheels and axels. Understand the principles of a healthy diet and understand where food comes from. Evaluate their products and ideas against the design criteria. Use a range of vocabulary e.g. seam, template, axel, mechanism, slicing, healthy diet.

A Year 3 child can: Investigate how existing products that are linked to the projects are assembled and what finishing techniques are used. Begin to use research to design a product that is fit for purpose and aimed at a particular group or individual. Make a product using appropriate tools to cut, shape and join materials together with some accuracy. Understand and apply the principles of a healthy and varied diet. Evaluate the product against the design criteria and begin to consider the views of others. Use a range of vocabulary e.g. net, shell structure, fastening, pattern, grating, spreading.

A Year 4 child can: Investigate a range of existing products that already use switches, levers and linkages. Generate and communicate their design ideas using annotated sketches and prototypes. Make a product using materials and electrical components that are selected for their functional properties or aesthetic qualities. To prepare and cook a predominantly savoury dish using some cooking techniques. Evaluate the finished product against the design criteria and begin to communicate their views on whether their product has worked. Use a range of vocabulary e.g. circuit, connection, linkages, pivot, appearance, texture.

A Year 5 child can: Investigate a range of existing products linked to mechanical systems and structures. Use research and existing products to generate, develop and communicate ideas through annotated sketches, diagrams and prototypes. Make a product using mechanical systems such as CAMs or structures that are more complex and have been stiffened or strengthened. To know about cooking and nutritional information whilst celebrating culture through food. Evaluate the finished product against their design criteria and whilst considering the views of others on whether their product has worked. Use a range of vocabulary e.g. CAM, rotary motion, tension, triangulation, nutrition, savoury

A Year 6 child can: Investigate a range of existing textile products and electrical systems and understand how they are appropriate for use. Make annotated sketches to create a design that considers how to realistically create their own product. Make a product using a range of appropriate tools, components and materials that fit the functional properties and aesthetic qualities of the design criteria. To understand cooking and nutritional information whilst preparing a seasonal dish. Use a range of vocabulary e.g. reinforce, functionality, switches, components, seasonality, nutrients



## LONG TERM PLAN

Year group	Autumn	Spring	Summer
<b>Year 1</b>	<p><b>Under my Umbrella</b></p> <p>Samuel Fox designed the paragon umbrella</p> <p>The origin of an umbrella is so old that it cannot be credited to one person and is thought to have developed from the idea of a leaved shelter.</p> <p>How an umbrella is made, and the name of materials used.</p> <p>The purpose of an umbrella – sun &amp; rain</p> <p>Know why hats replaced parasols in the modern world.</p> <p>Name and describe the different types of umbrellas – classic, automatic, pocket, bubble, high wind (storm)</p>	<p><b>Bridges</b></p> <p>Name the 5 main types of bridge – Arch, Beam, Cable, Suspension, Truss</p> <p>Know the unique features and uses of different bridges</p> <p>The truss bridge is the strongest</p> <p>The suspension bridge can stretch the furthest.</p> <p>Isambard Kingdom Brunel facts and key works.</p> <p>Name materials used to construct a bridge</p>	<p><b>Super Smoothie</b></p> <p>Know the importance of working hygienically with food.</p> <p>Early smoothies were made of fruit, fruit juice and ice</p> <p>Smoothie is a thick drink made in a blender.</p> <p>Smoothies usually contain fruit, vegetables, milk, yoghurt or ice cream</p> <p>Smoothies can be a healthy choice.</p> <p>Name different fruits and vegetables</p> <p>Know where different fruits and vegetables are grown</p> <p>Understand the term 'healthy' and the importance of vitamins and minerals.</p>
<b>Year 2</b>	<p><b>Terrific Towers</b></p> <p>Circular stone tower in walls of Neolithic Jericho 8000 BC is the first known tower.</p> <p>A tower is a tall structure taller than it is wide.</p> <p>Towers are not built to be habitable but to serve other functions – observation, leisure, telecommunication</p> <p>Towers can be used to support bridges</p> <p>Towers can stand alone or be supported but other adjacent buildings</p> <p>Name some famous towers – Eiffel Tower,</p> <p>Some domestic buildings in the UK are referred to as 'tower blocks' even though they are not towers.</p>	<p><b>Wonderful World of Wool</b></p> <p>Wool is the fibre of a living animal usually a sheep</p> <p>Wool forms a protective covering that insulates against both hot and cold.</p> <p>Wool fibres are finer, softer and curlier than true hair.</p> <p>Wool initially repels water and then swells when its membrane is broken.</p> <p>Wool is highly absorbent making it an ideal material for sport socks.</p> <p>The two major kinds of cloth made from wool fibres are: worsteds and woollens</p>	<p><b>Dynamic Draw Bridges</b></p> <p>A drawbridge is a moveable bridge</p> <p>Ancient Egyptians are believed to have made the first drawbridge around 4000 years ago.</p> <p>The purpose of a drawbridge – defend cities/ castles, allow ships to pass through urbanised waterways.</p> <p>Name different types of drawbridges (bascule bridge, folding bridge, double-beam bridge)</p> <p>Name some famous drawbridges – Golden Gate &amp; Tower Bridge</p> <p>Understand the terms one-leaf and two-leaf system</p>

Year 3	Ready to Pop	You've Been Framed	I'm in Love with My Car
	<p>The first popup book was created by a monk named Matthew Paris to calculate the dates of Christian holidays for a period of several years.</p> <p>The term pop-up book is applied to a book with 3- dimensional pages.</p> <p>Design and creation of such books is sometimes referred to as 'paper engineering'</p> <p>Animated books combine three elements: story, coloured illustrations which include text and two or more animated illustrations.</p> <p>Know facts about Matthew Reinhart and his work.</p> <p>Name suitable materials for a popup book</p> <p>Understand the importance of meeting the needs of a target audience.</p>	<p>Picture frames typically protect, display and complement the art placed inside.</p> <p>One of the earliest picture frames was discovered in an Egyptian tomb. It was used to divide wall paintings from the actual wall.</p> <p>Traditionally picture frames were made of wood.</p> <p>Picture frames are generally square or rectangular – circular and oval frames are not uncommon.</p> <p>Name different types of frames – photo cube, clip frame, digital photo frame</p> <p>Name suitable materials for a photo frame and understand the concept of sustainability.</p> <p>Understand why frames are decorated.</p> <p>Know facts about the interior design company Ikea.</p>	<p>The automobile was invented and perfected in Germany and France</p> <p>Know facts about Henry Ford and how he innovated mass-production techniques</p> <p>The 1901 Mercedes, designed by Wilhelm Maybach for Daimler was the first modern motorcar.</p> <p>Know the mechanisms used to make a car move – wheels, axles</p> <p>Name similarities and differences for different types of automobiles – racing cars, rally cars, trucks</p> <p>Understand the difference between the mechanisms of a toy and regular car.</p> <p>Know how friction affects the speed of a car.</p> <p>Name materials used to create axles and wheels and know how they slot together.</p>

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Year 5	Marble Run	Pinball Wizard	Roving Robots
	<p>Understand the importance of reinforced components.</p> <p>Know facts about George Rhoads.</p> <p>Know what a rolling ball sculpture is.</p> <p>Know the types of material that are suitable for rolling ball sculptures.</p> <p>Understand how and why we improve our designs.</p>	<p>Know the different types of pinball machines and their uses.</p> <p>Understand how mechanical pinball machines are made and work.</p> <p>Know the mechanisms used in pinball machines.</p> <p>Know facts about David Gottlieb</p> <p>Know the history of pinball machines and how they have evolved.</p> <p>Understand the angles required to allow a pinball to reach its maximum potential.</p> <p>Know the components of a pinball machine.</p> <p>Understand the build process of a pinball machine.</p>	<p>Know the functions of a robotic robot and other mechanical and electrical systems used.</p> <p>Understand the programme 'Mars Curiosity Rover Programme'.</p> <p>Understand the job of an engineer</p> <p>Know how to construct a program and how to test and troubleshoot.</p>

Year 6	Take a Seat	Hats Off to You	Great British Menu
	<p>Understand what an upholstered padded seat is, its historical origins and purpose.</p> <p>Know how a padded seat is made.</p> <p>Know which materials are suitable for seat making.</p> <p>Know facts about Robin and Lucienne Day.</p> <p>Know what a logo is and its purpose.</p> <p>Understand how to safely use equipment.</p> <p>Know the different types of seat patterns used and how they have evolved over time.</p> <p>Understand the components and uses of the Lego EV3 core set.</p> <p>Know how to write an algorithm.</p>	<p>Understand the structure of a hat</p> <p>Understand the history of a hat and how it has evolved over time.</p> <p>Know the types of material that are suitable for hat making.</p> <p>Know facts about Philip Treacy, Piers Atkinson, Nasir Mazhar, Flora McLean, Justin Smith and Noel Stewart.</p> <p>Know how to safely use equipment.</p> <p>Know facts about John Batterson and his style of hat.</p> <p>Know how to make different types of millinery.</p> <p>Know what a fashion show is and its purpose.</p>	<p>Understand what a menu is and its origins.</p> <p>Know that produce is seasonal</p> <p>Understand the need for healthy and balanced menus.</p> <p>Understand how flavours work to enhance dishes</p> <p>Know facts about Chef Escoffier and Angela Hartnett</p> <p>Understand the need for a dish to be aesthetically pleasing.</p> <p>Understand how food is manufactured and produced.</p> <p>Know how to budget for meals.</p>

## Design and Technology OVERVIEW

### Design and Technology Overview – Whole School

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Early Years	Unit	Knowing Me, Knowing You	Helping Hands	I Need a Hero	Turrets and Tiaras	Down at the Bottom of the Garden	In the Jungle
	Prior						
	Future						
Year 1	Unit	Under my Umbrella (Textiles) Samuel Fox		Bridges (Structures) Isambard Brunel		Super Smoothie (Cooking & Nutrition) Richard Reed	
	Prior	EYFS continuous provision		EYFS continuous provision		EYFS continuous provision	
	Future	Y2 Wonderful World of Wool		Y2 Towers and Castles		Y4 On a Roll	
Year 2	Unit	Terrific Towers (Structures) Gustave Eiffel		Wonderful World of Wool (Textiles) Edmund Cartwright		Dynamic Draw Bridges (Mechanical Systems) Joseph Strauss	
	Prior	Y1 Bridges		Y1 Under my Umbrella		Y1 Bridges	
	Future	Y3 You've Been Framed		Y4 Quizzical Quilting		Y3 Ready to Pop	
Year 3	Unit	Ready to Pop (Mechanical Systems) Matthew Reinhart		You've Been Framed (Structures) Ikea		I'm in Love with My Car (Mechanical/Electrical) Henry Ford	
	Prior	Y2 Dynamic Draw Bridges		Y2 Terrific Towers		EYFS continuous provision	
	Future	Y5 Pinball Wizard		Y5 Marble Run		Y4 Create a Buzz	
Year 4	Unit	On a Roll (Cooking and Nutrition) Nadiya Hussain		Quizzical Quilting (Textiles) Michele Walker		Create a Buzz (Mechanical/Electrical) Joseph Henry	
	Prior	Y1 Super Smoothie		Y2 Wonderful World of Wool		Y3 I'm in Love with My Car	
	Future	Y6 Great British Menu		Y6 Take a Seat		Y5 Roving Robots	
Year 5	Unit	Marble Run (Structures)		Pinball Wizard (Mechanical Systems)		Roving Robots (Computing)	
	Prior	Y3 You've Been Framed		Y3 Ready to Pop		Y4 Create a Buzz	
	Future	Y6 Hats Off to You		KS3		KS3	
Year 6	Unit	Take a Seat (Textiles)		Hats Off to You (Structures)		Great British Menu (Cooking & Nutrition)	
	Prior	Y4 Quizzical Quilting		Y5 Marble Run		Y4 On a Roll	
	Future	KS3		KS3		KS3	



KEY ASSESSMENT CRITERIA –

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>National Curriculum</b></p> <p><i>Children at the expected level of development will:</i></p> <p><i>Pupils should be taught:</i></p>	<ol style="list-style-type: none"> <li>1. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>2. Share their creations, explaining the process they have used.</li> <li>3. Make use of props and materials when role playing characters in narratives and stories.</li> </ol>	<ol style="list-style-type: none"> <li>1. design purposeful, functional, appealing products for themselves and other users based on design criteria</li> <li>2. generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</li> <li>3. select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>4. select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> <li>5. explore and evaluate a range of existing products</li> <li>6. evaluate their ideas and products against design criteria</li> <li>7. build structures, exploring how they can be made stronger, stiffer and more stable</li> <li>8. explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> <li>9. use the basic principles of a healthy and varied diet to prepare dishes</li> <li>10. understand where food comes from.</li> </ol>	<ol style="list-style-type: none"> <li>1. use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>2. generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>3. select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>4. select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> <li>5. investigate and analyse a range of existing products</li> <li>6. evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>7. understand how key events and individuals in design and technology have helped shape the world</li> <li>8. apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>9. understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>10. understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>11. apply their understanding of computing to program, monitor and control their products.</li> <li>12. understand and apply the principles of a healthy and varied diet</li> <li>13. prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</li> <li>14. understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ol>	<b>By the end of the year, children should know ...</b>			
<p><b>Knowledge and understanding</b></p> <p><b>Acquiring and applying knowledge to inform progress</b></p>	<p>Know how to create and explain the processes they have used.</p>	<p>Recognise and describe basic structures and name a range of materials and ingredients.</p> <p>Name some of the tools, techniques and their essential purpose.</p> <p>Name significant individuals and companies that have impacted the design and technology industry.</p>	<p>Recognise and construct basic structures and use a range of materials and ingredients.</p> <p>Describe the materials, components, techniques and processes they have used, using an appropriate vocabulary (for instance, they know the names of the tools/materials they use)</p> <p>Name significant individuals and companies that have impacted the design and technology industry.</p>	<p>Describe how materials and components are chosen and applied to a specific purpose.</p> <p>Demonstrate, how tools they have chosen to work with should be used effectively and with safety</p> <p>Name and describe how and why significant individuals and companies have impacted the design and technology industry.</p>	<p>Describe how materials and components are chosen and applied to a specific purpose.</p> <p>Demonstrate an understanding and use of mechanical and electrical systems</p> <p>Demonstrate, how tools they have chosen to work with should be used effectively and with safety</p> <p>Name and describe how and why significant individuals and companies have impacted the design and technology industry.</p>	<p>Describe how materials, components and computing programs are chosen and applied to a specific purpose.</p> <p>Demonstrate an understanding and use of mechanical and electrical systems</p> <p>Demonstrate, how tools they have chosen to work with should be used effectively and with safety</p> <p>Name and describe how and why significant individuals and companies have impacted the design and technology industry.</p>	<p>Describe how materials, components and computing programs are chosen and applied to a specific purpose</p> <p>Demonstrate an understanding and use of mechanical and electrical systems</p> <p>Describe the processes they are using and how they hope to achieve high quality outcomes</p> <p>Demonstrate, how tools they have chosen to work with should be used effectively and with safety</p> <p>Name and describe how and why significant individuals and companies have impacted the design and technology industry.</p>



## VOCABULARY PROGRESSION

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Adhesive	Aesthetic	Animated	Artisan	Cross sectional diagrams	Applique
Create	Architect	Consumer	Consumed	Design element	Cultural
Customer	Durability	Exploded drawing	Cost	Gravity	Embellishments
Design	Free Standing	Function	Flavour	Incline	Foam
Evaluate	Horizontal	Illustration	Flow chart	Kinetic	Graphics
Explore	Mock-up	Linkages	Grind	Reinforce	Logo
Fabric	Model	Process	Knead	Trajectory	Quality Control
Flexible	Specification	Rotating wheel or spring	Pestle & mortar	Viability	Padded
Parasol	Stable	Scale	Profit	Velocity	Print
Pattern	Strength	Sliders	Proving	Arcade	Quarter scale
Product	Structure	Storyboard	Raising	Machine	Traditional
Purpose	Technical drawing	Accuracy	Scoring	Obstacle	Upholstered
Research	Three Dimensional	Adaptation	Shaping	Pinball	Upholsters
Rigid	Vertical	Appealing	Soda	Tabletop	Wadding
Successful	Dye	Bench hook	Staple food	Target audience	Apparel
Similarities	Felt	Butt joint	Wheat	Automatic	Brim
Sketch	Fibres	Clamp	Yeast	Engineer	Complex Structures
Unsuccessful	Fleece	Concept	Alter	Landing site	Construction
Waterproof	Functionality	Dimensions	Availability	Mechanical	Milliner
Arch	Insulate	Hardwood	Cloth	Preliminary	Pattern Pieces
Balance	Loom	Interior Design	Cotton	Programable	Product Design
Beam	Market research	Join	Configurations	Robotic	Reinforce
Cable	Natural/synthetic	Mitred butt joint	Fashion	Rover	Stiffen
Construct	Originality	Modify	Finish	Sequential plan	Style
Design Brief/ criteria	Plait	Risk assessment	Geometric	Troubleshoot	Cuisine
Feedback	Pre spun	Safety Goggles	Hexagon		Dish
Improve	Raw	Softwood	Panel		Food preparation
Prototype	Spin	Technique	Quilt		Garnish
Stable	Stitch (names of stitches)	Timber	Quilted		Grate
Suspension	Template	Axle	Quilters		Menu
Truss	Thimble	Analyse	Reflect		Processed
Allergy	Weave	Annotated diagram	Sew		Reared
Blend	Worsted	Automobile	Tessellate		Review
Chopping board	Wool	Chassis	Textile		Savoury
Combine	Woollen	Compare	Texture		Seasoning
Healthy	Bascale Bridge	Disassemble	Trends		Seasonality
Hygienic	Double- beam Bridge	Dismantle	Component		Simmer
Ingredient	Drawbridge	Dowel	Earth		Systematically

## OVERVIEW OF SUBJECT/MONITORING/PROGRESSION/COVERAGE AND OUTCOMES



- Has the school made the objectives of their curriculum clear for your subject?
- Does the school's curriculum for your subject align with national policy and statutory requirements?
- How do you know your curriculum is working? Can you demonstrate how you know?
- Why is the curriculum right for the children in your school at this time?
- What are the strengths of your current subject curriculum?
- What are the areas of the curriculum that might need development?
- How effectively are curriculum policies and plans translated into practice?
- Is the same importance given to all foundation subjects?
- How is the curriculum delivered across each year group and across key stages, ensuring progress in skills, knowledge and understanding from different starting points?
- How is progress and attainment measured?
- How are pupils given opportunities to apply basic skills in your subject?
- Where is the evidence of pupils' SMSC development?
- What is the impact of the curriculum in your subject on the pupils' outcomes?

