

## DT Overview

### EYFS

- Use one-handed tools and equipment, for example, making snips in paper with scissors.
- Explore different materials freely, in order to develop their ideas about how to use them and what to make.
- Develop their own ideas and then decide which materials to use to express them.
- Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
- Use a range of small tools, including scissors, paintbrushes and cutlery.
- Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
- Use large-muscle movements to wave flags and streamers, paint and make marks.
- Choose the right resources to carry out their own plan.
- Progress towards a more fluent style of moving, with developing control
- Explore how things work.



- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Use a range of small tools, including scissors, paintbrushes and cutlery.
- Progress towards a more fluent style of moving, with developing control
- Choose the right resources to carry out their own plan.
- Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
- Create collaboratively, sharing ideas, resources and skills.



- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.
- Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.



## Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

## Make

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

## Evaluate




- Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria




## Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

## Cooking and Nutrition

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

One	Construction and Textiles	Cooking and Nutrition	Mechanisms
	<p><u>Animal Masks / Christmas decorations</u></p>  <ul style="list-style-type: none"><li>• Use pictures and words to convey what they want to design / make.</li><li>• Explore ideas by rearranging materials.</li><li>• Select pictures to help develop ideas.</li><li>• Use mock-ups e.g. recycled material trial models to try out their ideas.</li><li>• Select materials from a limited range.</li><li>• Explain what they are making.</li><li>• Name the tools they are using.</li><li>• Start to use technical vocabulary.</li><li>• Cut out shapes which have been created by drawing round a template.</li><li>• Join materials in a variety of ways.</li></ul>	<p><u>Fruit Kebabs</u></p>  <ul style="list-style-type: none"><li>• Group familiar food products e.g. fruit and vegetables.</li><li>• Cut and chop a range of ingredients.</li><li>• Work safely and hygienically.</li><li>• Know about the need for a variety of foods in a diet.</li></ul>	<p><u>Car for Goldilocks and the 3 bears</u></p>  <ul style="list-style-type: none"><li>•</li><li>• Use pictures and words to convey what they want to design / make.</li><li>• Explore ideas by rearranging materials.</li><li>• Select pictures to help develop ideas.</li><li>• Use mock-ups e.g. recycled material trial models to try out their ideas.</li><li>• Select materials from a limited range.</li><li>• Explain what they are making.</li><li>• Name the tools they are using.</li><li>• Start to use technical vocabulary.</li><li>• Cut out shapes which have been created by drawing round a template.</li><li>• Join materials in a variety of ways.</li><li>• Decorate using a variety of techniques.</li><li>• Know some ways of making structures stronger.</li></ul>

	<ul style="list-style-type: none"> <li>Decorate using a variety of techniques.</li> <li>Know some ways of making structures stronger.</li> <li>Show how to stiffen some materials.</li> <li>Know how to make a simple structure more stable.</li> </ul>		<ul style="list-style-type: none"> <li>Show how to stiffen some materials.</li> <li>Know how to make a simple structure more stable.</li> <li>Attach wheels to a chassis using an axle.</li> <li></li> </ul>
<b>EVALUATE</b> <ul style="list-style-type: none"> <li>Explore existing products and investigate how they have been made (including teacher-made examples).</li> <li>Talk about their design as they develop and identify good and bad points.</li> <li>Say what they like and do not like about items they have made and attempt to say why.</li> </ul>			
<b>Vocabulary</b>	Plan • Prepare • Design • Materials • Ideas • Use • Template • Fast • Slow • Faster • Slower • Up • Down • Turn • Wind up • Draw • Tools • Fix • Glue • Attach • Features • Cloth • Foam • Felt • Paper • Tissue • Newspaper • Cardboard • String • Wool • Scissors • Tape • Cut • Stick • Decorate • Healthy • Unhealthy • Fruit • Vegetables • Clean • Safe • Dirty • Unsafe • Amount • Ingredients • Dietary requirements • Prefer •		
<b>Two</b>	<p><b><u>Construction and Textiles</u></b> <b><u>LS Lowry Village / Hand puppets</u></b></p>  <ul style="list-style-type: none"> <li>Propose more than one idea for their product.</li> <li>Use ICT to communicate ideas.</li> <li>Use drawings to record ideas as they are developed.</li> <li>Add notes to drawings to help explanations.</li> <li>Discuss their work as it progresses.</li> <li>Select and name the tools needed to work the materials.</li> <li>Explain which materials they are using and why.</li> <li>Start to use technical vocabulary.</li> <li>Cut out shapes which have been created by drawing round a template.</li> <li>Join materials in a variety of ways.</li> </ul>	<p><b><u>Cooking and Nutrition</u></b> <b><u>Fruit Smoothies</u></b></p>  <p>peel, grate,</p> <ul style="list-style-type: none"> <li>Cut, chop a range of ingredients.</li> <li>Work safely and hygienically.</li> <li>Know about the Eatwell Plate.</li> <li>Understand where food comes from.</li> </ul>	<p><b><u>Mechanisms</u></b> <b><u>Moving on a 2D plane</u></b></p>  <ul style="list-style-type: none"> <li>Propose more than one idea for their product.</li> <li>Use ICT to communicate ideas.</li> <li>Use drawings to record ideas as they are developed.</li> <li>Add notes to drawings to help explanations.</li> <li>Discuss their work as it progresses.</li> <li>Select and name the tools needed to work the materials.</li> <li>Explain which materials they are using and why.</li> <li>Start to use technical vocabulary.</li> <li>Cut out shapes which have been created by drawing round a template.</li> <li>Join materials in a variety of ways.</li> <li>Decorate using a variety of techniques.</li> </ul>

	<ul style="list-style-type: none"><li>Decorate using a variety of techniques.</li><li>Know some ways of making structures stronger.</li><li>Show how to stiffen some materials.</li><li>Know how to make a simple structure more stable.</li><li>Attach wheels to a chassis using an axle.</li><li>Know some different ways of making things move in a 2-D plane.</li></ul>		<ul style="list-style-type: none"><li>Know some ways of making structures stronger.</li><li>Show how to stiffen some materials.</li><li>Know how to make a simple structure more stable.</li><li>Know some different ways of making things move in a 2-D plane.</li></ul>
	EVALUATE <ul style="list-style-type: none"><li>Decide how existing products do / do not achieve their purpose.</li><li>Discuss how closely their finished product meets their own design criteria.</li></ul>		
Vocabulary	<ul style="list-style-type: none"><li>Plan • Prepare • Design • Materials • Ideas • Use • Model • Development • Market Research • Survey • Template • Fast • Slow • Faster • Slower • Up • Down • Turn • Wind up • Draw • Sketch • Tools • Fix • Attach • Features • Brick • Wood • Stone • Cloth • Metal • Foam • Felt • Paper • Tissue • Newspaper • Cardboard • String • Wool • Clay • Scissors • Glue • Tape • Cut • Stick • Decorate • Healthy • Unhealthy • Source • Fruit • Vegetables • Clean • Safe • Dirty • Unsafe • Amount • Ingredients • Recipe • Weight • Nutrients • Vegetarian • Dietary requirements • Change • Improve • Prefer • Useful • Unsuccessful • Future • Progress • modify</li></ul>		

**Aim of the unit:** (From the National Curriculum) – KS2

**Design**

- 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
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

**Make**

- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- 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

**Evaluate**

- Investigate and analyse a range of existing products
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- Understand how key events and individuals in design and technology have helped shape the world

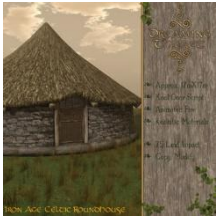

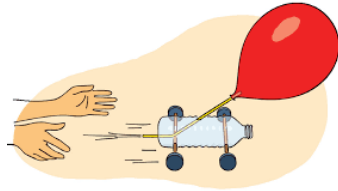
**Technical knowledge**

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]



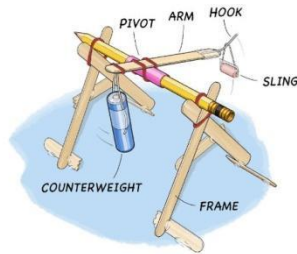
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- Apply their understanding of computing to program, monitor and control their products.


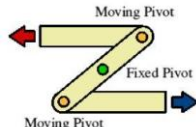
#### **Cooking and Nutrition**


- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Three	<p><b>Constructions and Textiles</b> <b><u>Round houses/Christmas Decorations</u></b></p>  <ul style="list-style-type: none"> <li>• Develop more than one design or adaptation of an initial design.</li> <li>• Plan a sequence of actions to make a product.</li> <li>• Think ahead about the order of their work and decide upon tools and materials.</li> <li>• Propose realistic suggestions as to how they can achieve their design ideas.</li> <li>• Select from a range of tools for cutting, shaping, joining and finishing.</li> <li>• Use tools with accuracy.</li> <li>• Select from materials according to their functional properties.</li> <li>• Use appropriate finishing techniques.</li> <li>• Use an increasingly appropriate technical vocabulary for tools materials and their properties.</li> <li>• Prototype a product.</li> <li>• Strengthen frames with diagonal struts.</li> </ul>	<p><b>Cooking and Nutrition</b> <b><u>Thai Green Curry</u></b></p>  <ul style="list-style-type: none"> <li>• Follow instructions / recipes.</li> <li>• Join and combine a range of ingredients.</li> <li>• Begin to understand the food groups on the Eatwell Plate.</li> </ul>	<p><b>Mechanisms</b> <b><u>Moving Monsters</u></b></p>  <ul style="list-style-type: none"> <li>• Develop more than one design or adaptation of an initial design.</li> <li>• Plan a sequence of actions to make a product.</li> <li>• Think ahead about the order of their work and decide upon tools and materials.</li> <li>• Propose realistic suggestions as to how they can achieve their design ideas.</li> <li>• Select from a range of tools for cutting, shaping, joining and finishing.</li> <li>• Use tools with accuracy.</li> <li>• Select from materials according to their functional properties.</li> <li>• Use appropriate finishing techniques.</li> <li>• Use an increasingly appropriate technical vocabulary for tools materials and their properties.</li> <li>• Understand seam allowance.</li> <li>• Prototype a product.</li> <li>• Sew on buttons and make loops.</li> <li>• Strengthen frames with diagonal struts.</li> <li>• Measure and mark square section, strip and dowel accurately to 1cm.</li> <li>• Use linkages to make movement larger or more varied.</li> </ul>
-------	---	---	---



	<ul style="list-style-type: none"> <li>Measure and mark square section, strip and dowel accurately to 1cm.</li> </ul>		
	<p><b>EVALUATE</b></p> <ul style="list-style-type: none"> <li>Investigate similar products to the one to be made to give starting points for a design.</li> <li>Research needs of user.</li> <li>Decide which design idea to develop.</li> <li>Consider and explain how the finished product could be improved.</li> <li>Discuss how well the finished product meets the user's design criteria.</li> <li>Investigate key events and individuals in design and technology.</li> </ul>		
<b>Vocabulary</b>	<p>Plan • Organise • Initial ideas • Prototype Criteria • Diagrams • Labels • Annotate • Brief • Product • Purpose • Application • Constraints • Materials • Mould • Form • Shape • Adhesive • Presentation • Machine made • Dimensions • Durable • Healthy • Unhealthy • Balanced • Vitamins • Nutrition • Healthy eating • Hygiene • Diet • Cross contamination • Storage • Presentation • Taste • Flavour • Assess • Edit • Improve • Alter • Develop • Test • Analyse • Effective • Fit for purpose • Design criteria • Alternatives • Models • Quality • Function • Functionality</p>		
<b>Four</b>	<p><b>Construction and textiles</b> <b>Roman Shields / Christmas Decorations</b></p>  <ul style="list-style-type: none"> <li>Record the plan by drawing using annotated sketches.</li> <li>Use prototypes to develop and share ideas.</li> <li>Consider aesthetic qualities of materials chosen.</li> <li>Use CAD where appropriate.</li> <li>Prepare pattern pieces as templates for their design.</li> <li>Select from techniques for different parts of the process.</li> </ul>	<p><b>Cooking and Nutrition</b> <b>Chicken Fajitas</b></p>  <ul style="list-style-type: none"> <li>Make healthy eating choices – use the Eatwell plate.</li> <li>Understand seasonality.</li> <li>Know where and how ingredients are reared and caught.</li> <li>Prepare and cook using different cooking techniques</li> </ul>	<p><b>Mechanisms</b> <b>Trebuchet</b></p>  <ul style="list-style-type: none"> <li>Record the plan by drawing using annotated sketches.</li> <li>Use prototypes to develop and share ideas.</li> <li>Consider aesthetic qualities of materials chosen.</li> <li>Prepare pattern pieces as templates for their design.</li> <li>Select from techniques for different parts of the process.</li> <li>Use an increasingly appropriate technical vocabulary for tools materials and their properties.</li> <li>Prototype a product.</li> <li>Strengthen frames with diagonal struts.</li> </ul>

	<ul style="list-style-type: none"> <li>• Use an increasingly appropriate technical vocabulary for tools materials and their properties.</li> <li>• Understand seam allowance.</li> <li>• Prototype a product.</li> <li>• Sew on buttons and make loops.</li> <li>• Strengthen frames with diagonal struts.</li> <li>• Measure and mark square section, strip and dowel accurately to 1cm.</li> <li>• Incorporate a circuit into a model.</li> <li>• Use electrical systems such as switches bulbs and buzzers.</li> <li>• Use ICT to control products.</li> <li>• Use linkages to make movement larger or more varied.</li> </ul>		<ul style="list-style-type: none"> <li>• Measure and mark square section, strip and dowel accurately to 1cm.</li> <li>• Use linkages to make movement larger or more varied.</li> </ul>
	<b>Evaluate</b> <ul style="list-style-type: none"> <li>• Draw / sketch existing products in order to analyse and understand how products are made.</li> <li>• Identify the strengths and weaknesses of their design ideas in relation to purpose / user.</li> <li>• Consider and explain how the finished product could be improved.</li> <li>• Investigate key events and individuals in design and technology.</li> </ul>		
<b>Vocabulary</b>	Plan • Organise • Prototype • Initial ideas • Criteria • Diagrams • Labels • Annotate • Brief • Product • Consumer • Customer • Target audience • Purpose • Application • Constraints • Client • Materials • Mould • Liquid • Solid • Form • Shape • Adhesive • Mass-produce • Hand-made • Presentation • • Dimensions • Durable • Healthy • Unhealthy • Balanced • Vitamins • Disease • Nutrition • Healthy eating • Hygiene • Diet • Cross contamination • Grams • Storage • Presentation • Taste • Texture • Flavour • Disinfect • Bacteria • Assess • Edit • Improve • Alter • Outcome • Develop • Test • Analyse • Effective • Fit for purpose • Design criteria • Alternatives • Models • Quality • Function • Functionality		
<b>Five</b>	<b>Construction and Textiles</b> <u>Boats / Christmas Decorations</u>  <ul style="list-style-type: none"> <li>• Record ideas using annotated diagrams.</li> <li>• Use models, kits and drawings to help formulate design ideas.</li> <li>• Sketch and model alternative ideas.</li> </ul>	<b>Cooking and Nutrition</b> <u>Chocolate Truffles</u>	<b>Mechanisms</b>  <ul style="list-style-type: none"> <li>• Record ideas using annotated diagrams.</li> <li>• Use models, kits and drawings to help formulate design ideas.</li> <li>• Sketch and model alternative ideas.</li> <li>• Decide which design idea to develop.</li> </ul>

	<ul style="list-style-type: none"> <li>Decide which design idea to develop.</li> <li>Develop one idea in depth.</li> <li>Select from and use a wide range of tools.</li> <li>Cut accurately and safely to a marked line.</li> <li>Select from and use a wide range of materials.</li> <li>Use the correct vocabulary appropriate to the project.</li> <li>Join materials using appropriate methods.</li> <li>Create 3-D textile products using pattern pieces.</li> <li>Understand pattern layout with textiles.</li> <li>Cut strip wood, dowel, square section wood accurately to 1mm.</li> <li>Build frameworks to support mechanisms.</li> <li>Stiffen and reinforce complex structures.</li> <li>Use mechanical systems such as cams, pulleys and gears.</li> <li>Use electrical systems such as motors and switches.</li> <li>Program, monitor and control using ICT.</li> </ul>	<ul style="list-style-type: none"> <li>Join and widening</li> <li>Select and foods for a purpose.</li> <li>Know where and how ingredients are grown and processed.</li> </ul>	 <p>combine a range of ingredients. prepare particular</p>	<ul style="list-style-type: none"> <li>Develop one idea in depth.</li> <li>Select from and use a wide range of tools.</li> <li>Cut accurately and safely to a marked line.</li> <li>Select from and use a wide range of materials.</li> <li>Use the correct vocabulary appropriate to the project.</li> <li>Join materials using appropriate methods.</li> <li>Create 3-D textile products using pattern pieces.</li> <li>Understand pattern layout with textiles.</li> <li>Cut strip wood, dowel, square section wood accurately to 1mm.</li> <li>Build frameworks to support mechanisms.</li> <li>Stiffen and reinforce complex structures.</li> <li>Use mechanical systems such as cams, pulleys and gears.</li> <li>Use electrical systems such as motors and switches.</li> <li>Program, monitor and control using ICT.</li> </ul>
	<p>EVALUATE</p> <ul style="list-style-type: none"> <li>Research and evaluate existing products.</li> <li>Consider user and purpose.</li> <li>Consider and explain how the finished product could be improved related to design criteria.</li> <li>Investigate key events and individuals in design and technology.</li> </ul>			
Vocabul ary	<p>Plan • Organise • Prototype • Initial ideas • Criteria • Diagrams • Labels • Annotate • Brief • Product • Consumer • Customer • Target audience • Purpose • Application • Constraints • Client • Materials • Mould • Liquid • Solid • Form • Shape • Adhesive • Lattice • Mass-produce • Hand-made • Packaging • Presentation • Machine made • Dimensions • Durable • Healthy • Unhealthy • Balanced • Vitamins • Disease • Nutrition • Healthy eating • Hygiene • Diet • Cross contamination • Grams • Storage • Presentation • Taste • Texture • Flavour • Disinfect • Bacteria • Assess • Edit • Improve • Alter • Outcome • Develop • Test • Analyse • Effective • Fit for purpose • Design criteria • Alternatives • Models • Quality • Function • Functionality</p>			
Six	<p><b>Construction and Textiles</b> <b><u>Christmas Decorations</u></b></p>	<p><b>Cooking and Nutrition</b> <b><u>Chinese Soup</u></b></p>	<p><b>Mechanisms</b> <b><u>Interactive Board Games</u></b></p>	





- Plan the sequence of work.
- Devise step by step plans which can be read / followed by someone else.
- Use exploded diagrams and cross-sectional diagrams to communicate ideas.
- Make prototypes.
- Use researched information to inform decisions.
- Produce detailed lists of components / materials and tools.
- Refine their product – review and rework / improve
- Use the correct vocabulary appropriate to the project.
- Join materials using appropriate methods.
- Create 3-D textile products using pattern pieces.
- Understand pattern layout with textiles.
- Cut strip wood, dowel, square section wood accurately to 1mm.
- Build frameworks to support mechanisms.
- Stiffen and reinforce complex structures.
- Use mechanical systems such as cams, pulleys and gears.
- Use electrical systems such as motors and switches.



- Understand and apply the principles of a healthy and varied diet.
- Choose ingredients to support healthy eating choices when designing their food products.
- Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.



- Plan the sequence of work.
- Devise step by step plans which can be read / followed by someone else.
- Use exploded diagrams and cross-sectional diagrams to communicate ideas.
- Make prototypes.
- Use researched information to inform decisions.
- Produce detailed lists of ingredients / components / materials and tools.
- Refine their product – review and rework / improve
- Use the correct vocabulary appropriate to the project.
- Join materials using appropriate methods.
- Create 3-D textile products using pattern pieces.
- Understand pattern layout with textiles.
- Cut strip wood, dowel, square section wood accurately to 1mm.
- Build frameworks to support mechanisms.
- Stiffen and reinforce complex structures.
- Use mechanical systems such as cams, pulleys and gears.
- Use electrical systems such as motors and switches.
- Program, monitor and control using ICT.

	<ul style="list-style-type: none"> <li>• Program, monitor and control using ICT.</li> </ul>		
	<p>EVALUATE</p> <ul style="list-style-type: none"> <li>• Identify the strengths and weaknesses of their design ideas.</li> <li>• Report using correct technical vocabulary.</li> <li>• Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user.</li> <li>• Understand how key people have influenced design in a variety of contexts.</li> <li>• Investigate key events and individuals in design and technology.</li> </ul>		
<b>Vocabul ary</b>	<p>Plan • Organise • Prototype • Initial ideas • Criteria • Diagrams • Labels • Annotate • Brief • Product • Consumer • Customer • Target audience • Purpose • Application • Constraints • Client • Materials • Mould • Liquid • Solid • Form • Shape • Adhesive • Lattice • Mass-produce • Hand-made • Packaging • Presentation • Machine made • Dimensions • Durable • Healthy • Unhealthy • Balanced • Vitamins • Disease • Nutrition • Healthy eating • Hygiene • Diet • Cross contamination • Grams • Storage • Presentation • Taste • Texture • Flavour • Disinfect • Bacteria • Assess • Edit • Improve • Alter • Outcome • Develop • Test • Analyse • Effective • Fit for purpose • Design criteria • Alternatives • Models • Quality • Function • Functionality</p>		