

Red Lane Primary School DT Long Term Overview

End of EYFS Expectations	Key Stage 1 Expectations	Key Stage 2 Expectations
<p>Expressive Arts and Design <u>Creating with Materials</u> Children at the expected level of development will:</p> <ul style="list-style-type: none"> • 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 use of props and materials when role playing characters in narratives and stories. <p><u>Being Imaginative and Expressive</u> Children at the expected level of development will:</p> <ul style="list-style-type: none"> • Invent, adapt and recount narratives and stories with peers and their teacher; • Sing a range of well-known nursery rhymes and songs; • Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music. 	<p>Pupils should be taught:</p> <p>Design</p> <ul style="list-style-type: none"> • 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 <p>Make</p> <ul style="list-style-type: none"> • 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 <p>Evaluate</p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable 	<p>Pupils should be taught:</p> <p>Design</p> <ul style="list-style-type: none"> • 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 <p>Make</p> <ul style="list-style-type: none"> • 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 <p>Evaluate</p> <ul style="list-style-type: none"> • investigate and analyse a range of existing products

	<ul style="list-style-type: none"> • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<ul style="list-style-type: none"> • 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 <p>Technical knowledge</p> <ul style="list-style-type: none"> • 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.
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The national curriculum for art and design aims to ensure that all pupils by the end of year 6:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Curriculum Coverage

	Structures	Mechanisms	Electrical Systems	Food	Textiles
EYFS		✓		✓	
Year 1		✓			✓ Linked with Art
Year 2	✓	✓		✓	
Year 3	✓	✓			✓ Linked with Art
Year 4	✓	✓	✓	✓	
Year 5	✓	✓			✓ Linked with Art
Year 6			✓	✓	

EYFS

Nursery

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect		Food Raising aspirations			Mechanisms Exploring sounds	
Designer linked to skill		Nadiya Hussain			Alexander Graham Bell	
Outcome		Festival food tasting			Explore Walkie Talkies.	

Reception

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect		Food Raising aspirations			Mechanisms Exploring sounds	
Designer linked to skill		Nadiya Hussain			Alexander Graham Bell	
Outcome		Making Christmas bakes!			Plastic cup telephone experiment.	

Key Stage 1

Year 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect			Textiles Templates and Joining Techniques			Mechanisms Wheels and Axles
Designer linked to skill			James Fox			George Stephenson
Outcome			Case for a tablet			Push/Pull Toy (Bus)

Year 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect		Mechanisms Sliders and Levers		Food Preparing Fruit and Veg		Structures Free Standing Structures
Designer linked to skill		Samuel Crompton		Jamie Oliver		The Wright Brothers
Outcome		Christmas Card with moving character		Fruit and Veg Kebabs		Children's Playground

Lower Key Stage 2

Year 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect		Mechanisms Pneumatics	Textiles 2D shapes to 3D product			Structures Shell Structures using computer aided design (CAD)
Designer linked to skill		Richard Arkwright	Coco Chanel			Gustave Eiffel
Outcome		Moving Toy e.g Jack in the box	Soft Toy			Gift Box (cuboid)

Year 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect		Mechanisms Levers and linkages	Electrical Systems Simple circuits and switches	Food Healthy and Varied Diet		Structures Shell Structures
Designer linked to skill		James Dyson	Edith Clarke	Heston Blumenthal		Thomas Edison
Outcome		Christmas Card with moving parts	Lego We Do	Sandwiches		Money Box (cube)

Upper Key Stage 2

Year 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect		Structures Frame Structures	Textiles Combining different fabric shapes			Mechanisms Pulleys or Gears
Designer linked to skill		Isambard Kingdom Brunel	Faith Ringgold			Margaret E. Knight
Outcome		Playground Shelter	Bag – fastening, applique, embroidery			Fairground ride with gears or pulleys

Year 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
DT Aspect			Electrical Systems Complex circuits and switches	Food Celebrating culture and seasonality		
Designer linked to skill			Sir Jony Ive	Lisa Goodwin-Allen		
Outcome			Sphero	Soup		