



## Curriculum Learning Guide

**DT**

How is DT taught at Low Ash?

DT - end of year group expectations:  
Nursery EYFS  
Coverage:

Age related Expectations Nursery

**Designing-**  
Purposeful and functional  
Based on design criteria  
(generate ideas/model and communicate ideas/draw/make templates & use of It where appropriate)

**Making-**  
Using tools and equipment  
Cutting/shaping/joining/finishing)  
Selection of materials according to their characteristics

**Evaluation-**  
Of Existing products  
Of ideas against design criteria

**Technical Knowledge**  
Building structures  
Strengthening  
Explore mechanisms (wheels/axles/levers/slides)

**Food Technology-**  
Preparing food  
Understanding a healthy and varied diet  
Understanding where food comes from

- Talk about what they are making
- Pencil sketching (plans) for design builds

- Uses various construction materials
- Beginning to construct, stack blocks vertically and horizontally, making enclosures and creating spaces
- Experiments with blocks
- Realises tools can be used for a purpose

- Discuss if it worked

- Stick
- Stack

- Simple chopping of soft fruit under close supervision
- Tasting a variety of foods

Greater depth Nursery

- Clear communication
- Ideas generated from suggestions made or examples given.

- Competent use of tools and materials to produce a model with plan in mind

- Suggest how to improve models

- Trial and error observed when selecting ways to join materials (not just those suggested)

- Holds food carefully when chopping

DT - end of year group expectations:  
 Reception EYFS  
 Coverage:

Age related Expectations Reception

Designing-  
 Purposeful and functional  
 Based on design criteria  
 (generate ideas/model and communicate ideas/draw/make templates & use of It where appropriate)

Making-  
 Using tools and equipment  
 Cutting/shaping/joining/finishing)  
 Selection of materials according to their characteristics

Evaluation-  
 Of Existing products  
 Of ideas against design criteria

Technical Knowledge  
 Building structures  
 Strengthening  
 Explore mechanisms (wheels/axles/levers/slides)

Food Technology-  
 Preparing food  
 Understanding a healthy and varied diet  
 Understanding where food comes from

- Discuss and plan before building
- Pencil sketch design
- Decide what materials to use

- Joins construction pieces together to build and balance.
- Realises tools are used for a purpose
- Constructs with a purpose in mind
- Uses simple tools safely and appropriately

- Can talk about and evaluate their models. Did they work? Did they go wrong? How could they make it better?

- Explore structures
- Trial and error
- Can we stop it breaking?

- Simple chopping of soft fruit under close supervision
- Tasting a variety of foods
- Understanding of healthy and unhealthy foods

Greater depth Reception

- Clear design and materials specifically selected for a task

- Understands the need for safety when using tools
- Selects appropriate joining materials for task in hand

- Can alter design as needed during construction to improve end result

- Understands need for secure base when tower building

- Recognises how to use tool safely.
- Understands why we need to eat healthily.

DT - end of year group expectations:

Year 1

Coverage:

Age related Expectations Year 1

Designing-  
Purposeful and functional  
Based on design criteria  
(generate ideas/model and communicate ideas/draw/make templates & use of It where appropriate)

Making-  
Using tools and equipment  
(Cutting/shaping/joining/finishing)  
Selection of materials according to their characteristics

Evaluation-  
Of Existing products  
Of ideas against design criteria

Technical Knowledge  
Building structures  
Strengthening  
Explore mechanisms  
(wheels/axles/levers/slides)

Food Technology-  
Preparing food  
Understanding a healthy and varied diet  
Understanding where food comes from

- Use own ideas to design
- Explain own ideas
- Design product that moves
- Make a simple plan before making

- Use own ideas
- Make moving product
- Choose appropriate resources and tools

- Describe how something works
- Explain what works well/not so well in their product

- Make a model stronger

- Cut food safety

Greater Depth Year 1

- Relate ideas to examples they have seen
- Consider who would enjoy their design

- Explain why a certain tool is the best for a task
- Develop and embellish moving product.

- Relate evaluation to products used
- Compare products and discuss strengths and weaknesses

- Ability to use technical vocabulary to reasoning

- Understand how to keep themselves safe

DT - end of year group expectations:  
 Year 2  
 Coverage:

Age related Expectations Year 2

<p>Designing-          Purposeful and functional          Based on design criteria          (generate ideas/model and communicate ideas/draw/make templates &amp; use of It where appropriate)</p>	<p>Making-          Using tools and equipment          (Cutting/shaping/joining/finishing)          Selection of materials according to their characteristics</p>	<p>Evaluation-          Of Existing products          Of ideas against design criteria</p>	<p>Technical Knowledge          Building structures          Strengthening          Explore mechanisms          (wheels/axles/levers/slides)</p>	<p>Food Technology-          Preparing food          Understanding a healthy and varied diet          Understanding where food comes from</p>
<ul style="list-style-type: none"> <li>• Think of an idea then plan</li> <li>• Explain why then have chosen specific textiles</li> </ul>	<ul style="list-style-type: none"> <li>• Choose own tools and materials and explain why they have been chosen</li> <li>• Joining in different ways</li> <li>• Measuring materials</li> </ul>	<ul style="list-style-type: none"> <li>• Explain what worked</li> </ul>	<ul style="list-style-type: none"> <li>• Make a model stronger and more stable</li> <li>• Use wheels and axles when appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• Weigh ingredients</li> <li>• Describe the ingredients used when making a dish or cake</li> </ul>

Greater depth Year 2

<ul style="list-style-type: none"> <li>• Communicate the benefits of using select materials</li> </ul>	<ul style="list-style-type: none"> <li>• Accurate measuring</li> <li>• To alter joining methods as needed</li> </ul>	<ul style="list-style-type: none"> <li>• Explain what they would change if they carried out the activity again</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how to improve the quality of the mechanism by considering the products used</li> </ul>	<ul style="list-style-type: none"> <li>• Independent weighing</li> <li>• Understand why ingredients are used in a recipe.</li> </ul>
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DT - end of year group expectations:

Year 3

Coverage:

Age related Expectations Year 3

Designing-  
Purposeful and  
functional  
Based on design criteria  
(generate ideas/model  
and communicate ideas/  
draw/ make templates &  
use of It where  
appropriate)

Making-  
Using tools and equipment  
Cutting/shaping/ joining/  
finishing)  
Selection of materials  
according to their  
characteristics

Evaluation-  
Of Existing products  
Of ideas against  
design criteria

Technical Knowledge  
Building structures  
Strengthening  
Explore mechanisms  
(wheels/axles/levers/sl  
ides)

Food Technology-  
Preparing food  
Understanding a  
healthy and varied  
diet  
Understanding where  
food comes from

- Prove a design meets the criteria
- Design product and consider what it looks like
- Choose materials for suitability and attractiveness

- Follow a plan
- Select appropriate tools and methods for a task
- Make a product with mechanical and electrical components
- Measure and cut accurately

- Explain how to improve a finished model
- Understand why a product has/hasn't worked

- Know how to strengthen (stiffening and reinforce parts of the structure)
- Use simple IT program in the design

- Describe how food ingredients come together
- Weigh ingredients and follow a recipe
- Talk about healthy and unhealthy foods
- Know when food is ready to harvest

Greater depth Year 3

- Refer back to design criteria in planning

- Be methodical in their preparation
- Explain why each tool is appropriate for the task
- Refer to scientific knowledge where appropriate

- Refer back to design criteria to see if design brief was met
- Explain how to improve their product next time.

- Relate to previous knowledge
- Competent use of ICT

- Know what is happening to ingredients when cooked/ baked
- Follow a recipe independently
- Suggest how to make the meal healthier.

DT - end of year group expectations:  
Year 4  
Coverage:

Age related Expectations Year 4

<p>Designing- Purposeful and functional Based on design criteria (generate ideas/model and communicate ideas/draw/make templates &amp; use of It where appropriate)</p>	<p>Making- Using tools and equipment Cutting/shaping/joining/finishing) Selection of materials according to their characteristics</p>	<p>Evaluation- Of Existing products Of ideas against design criteria</p>	<p>Technical Knowledge Building structures Strengthening Explore mechanisms (wheels/axles/levers/slides)</p>	<p>Food Technology- Preparing food Understanding a healthy and varied diet Understanding where food comes from</p>
<ul style="list-style-type: none"> <li>• Design using other people's ideas</li> <li>• Produce plan and explain it</li> <li>• Adapt and alter design as you go along</li> <li>• Communicate ideas (annotated sketches &amp; drawings)</li> </ul>	<ul style="list-style-type: none"> <li>• Know which tools to use</li> <li>• Knowledge to handling tools and equipment</li> <li>• Selecting materials for best outcome</li> <li>• Measure accurately</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and suggest improvements</li> <li>• Evaluate functionality and appearance</li> <li>• Explain how original design has been improved</li> <li>• Present product in an interesting way</li> </ul>	<ul style="list-style-type: none"> <li>• Can use scientific knowledge to add switches/lights/buzzers</li> <li>• Use electrical systems to enhance product</li> <li>• Use IT to add to product</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how to be hygienic and safe when handling food</li> <li>• Bring a creative element to food product being designed</li> </ul>

Greater depth Year 4

<ul style="list-style-type: none"> <li>• Annotated design with clear step by step instructions</li> <li>• Explaining why you need to change a design to improve the end product</li> </ul>	<ul style="list-style-type: none"> <li>• Relate back to previous scientific understanding to explain products needed and used</li> <li>• Identify measuring miscalculations and how this will effect end product.</li> </ul>	<ul style="list-style-type: none"> <li>• Use observed marketing ideas (from TV, magazines etc.) to sell own product</li> </ul>	<ul style="list-style-type: none"> <li>• Consider the user in the end product. Is it suitable for the job in which it is intended? Why? why not?</li> </ul>	<ul style="list-style-type: none"> <li>• Can explain what might happen if you do not follow hygienic practises</li> <li>• Collect ideas for end product</li> </ul>
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DT - end of year group expectations:  
Year 5  
Coverage:

Age related Expectations Year 5

<p>Designing- Purposeful and functional Based on design criteria (generate ideas/model and communicate ideas/draw/make templates &amp; use of It where appropriate)</p>	<p>Making- Using tools and equipment Cutting/shaping/joining/finishing) Selection of materials according to their characteristics</p>	<p>Evaluation- Of Existing products Of ideas against design criteria</p>	<p>Technical Knowledge Building structures Strengthening Explore mechanisms (wheels/axles/levers/slides)</p>	<p>Food Technology- Preparing food Understanding a healthy and varied diet Understanding where food comes from</p>
<ul style="list-style-type: none"> <li>• Collect information from a range of sources to come up with ideas</li> <li>• Produce a detailed step by step plan</li> <li>• Explain why the product will appeal to a certain audience</li> <li>• Design a product needing pulleys, gears or cams</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of tools and equipment competently</li> <li>• Make a prototype before final product</li> <li>• Make a product that requires pulleys, gears or cams</li> </ul>	<ul style="list-style-type: none"> <li>• Look at positive/negative features and suggest alternatives</li> <li>• Evaluate looks and function against original criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Link scientific knowledge to gears, pulley, cams in design</li> <li>• Try to use more complex IT to help enhance the quality of design</li> </ul>	<ul style="list-style-type: none"> <li>• Understand hygiene and safety in the kitchen</li> <li>• Know how to prepare a meal (by collecting ingredients first)</li> <li>• Understand seasonal foods and harvesting</li> </ul>

Greater depth Year 5

<ul style="list-style-type: none"> <li>• Consider the resources available before starting design</li> <li>• Create annotated design board</li> </ul>	<ul style="list-style-type: none"> <li>• Identify any problems with the prototype before starting real design.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a marketing questionnaire. Would your product appeal and sell? Who to?</li> </ul>	<ul style="list-style-type: none"> <li>• Create a detailed plan of design showing relevant scientific forces observed</li> </ul>	<ul style="list-style-type: none"> <li>• Consider costings when preparing a meal. Where is the best place to shop?</li> </ul>
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DT - end of year group expectations:  
Year 6  
Coverage:

Age related Expectations Year 6

<p>Designing- Purposeful and functional Based on design criteria (generate ideas/model and communicate ideas/draw/make templates &amp; use of It where appropriate)</p>	<p>Making- Using tools and equipment Cutting/shaping/joining/finishing) Selection of materials according to their characteristics</p>	<p>Evaluation- Of Existing products Of ideas against design criteria</p>	<p>Technical Knowledge Building structures Strengthening Explore mechanisms (wheels/axles/levers/slides)</p>	<p>Food Technology- Preparing food Understanding a healthy and varied diet Understanding where food comes from</p>
<ul style="list-style-type: none"> <li>• Use market research to inform plans and ideas</li> <li>• Follow up and improve original ideas</li> <li>• Justify planning and convince others</li> <li>• Demonstrate that culture and society is considered in plans and designs</li> </ul>	<ul style="list-style-type: none"> <li>• Know which tool to use for a specific task</li> <li>• Use tools correctly and safely</li> <li>• Know what each tool is used for</li> <li>• Explain why a specific tool is used and why it is the best to use</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to test and evaluate designed products</li> <li>• Explain how products should be stored and give reasons why</li> <li>• Evaluate against product criteria</li> </ul>	<ul style="list-style-type: none"> <li>• Use electrical systems correctly to enhance product</li> <li>• Know how IT products could improve product</li> <li>• Improve product using knowledge of strengthening stiffening and reinforcing</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how to store food and why</li> <li>• Work with a budget</li> <li>• Understands the difference between sweet and savoury dishes</li> </ul>

Greater Depth Year 6

<ul style="list-style-type: none"> <li>• Create fully annotated design brief. Fully explain reasoning behind design ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Always consider safety when using tools.</li> <li>• Can demonstrate how to use tools to others.</li> <li>• Independent crafting.</li> </ul>	<ul style="list-style-type: none"> <li>• Compare product with others.</li> <li>• Consider costings of product against original criteria and who would use it.</li> <li>• Does your product fully comply with design brief?</li> </ul>	<ul style="list-style-type: none"> <li>• Use technical knowledge built up through EYFS-Y6 in the making of different products to suggest and use select appropriate tools and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Market research- the best place to shop.</li> <li>• Also relate food storage to health and hygiene.</li> </ul>
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