



Design & Technology

Lytchett Matravers Primary School's D&T Curriculum Intent

At LMPS we aim to inspire children in Design and Technology using creativity and imagination. Pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world, they explore this further through their mathematics, science, geography, history and art topics to develop a broad range of subject knowledge.

In KS1, our designers and technicians will...

- 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

- 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.

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

- 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.

In KS2, our designers and technicians will...

- 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.

- 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.

- 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.

- 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.



Design and technology CURRICULUM –

EYFS

Year 1

Year 2

Intent

Our designers and technicians in the Early Years Foundation Stage are curious and can talk about their ideas and designs they have created.

Our designers and technicians in Year 1 are curious and excited to explore toys and how they work and apply this knowledge to their own designs.

Our designers and technicians in Year 2 are curious and excited to explore their own ideas and use a success criteria and prior knowledge to develop their ideas and designs.

Planning Considerations

Continuous provision in construction zones to allow to develop their creativity and building skills.
Continuous provision for designing ideas, construction zone design book.
Exploring time to explore technology, toys and the world around them.

Do they understand the method for making the product?
Do they understand what materials and components are and what their uses are?
Give time to explore similar and existing products.
Show design criteria, do they understand that they need this to influence their designs?

Can they measure accurately?
Do they understand basic shapes?
Demonstrate how to assemble and combine materials.
Do they understand how the product is made?
Give time to explore similar and existing products.
Show design criteria, do they understand that they need this to influence their designs?
Give time to create a mock up and explore how they can improve the product/ their skills.

Skills

- Begin to create simplistic designs and discuss what they have designed.
- To use different materials and textures.
- To use different techniques for joining materials when constructing. (Additions: treasury tags)
- Understand that their work can be made better and beginning to understand how.

- Beginning to design and communicate ideas by drawing and talking about how to make their products.
- Talks about likes and dislikes of existing products.
- Uses a range of materials and textiles.
- Measures marks out, shapes and cuts out most materials.
- Talk about likes and dislikes of current products.
- Talk and write how to make their products better.

- Working with a range of story context e.g. imaginary industry and wider environment.
- Generate ideas by drawing on personal experiences.
- Model ideas by exploring components and materials.
- Assembles and joins materials using a simple running stitch.
- Talks about likes and dislikes of existing products and give reasons.

Knowledge

Our designers and technicians...

- Work with a range of story context e.g. story based, playground.
- Say if they have made something for themselves or others.
- Understand that work can be made better.

Our designers and technicians

- Work with a range of story context e.g. story based, playground. State what products they are designing and making and able to describe what they are used for.
- Say whether products are for themselves or others.
- Use existing knowledge of products to generate their own original ideas.
- Plans by suggesting what to do next.

Our designers and technicians...

- Say how the products work and how they are suitable for intended users.
- Use a simple success criteria to develop their ideas.
- State what products they are designing and making and able to describe what they are used for.
- Plans by suggesting what to do next.
- Explains their choices.
- Uses a success criteria to make choices and judgements about their product.

Our Pupil Promise... key opportunities and experiences for all of our pupils

To be given the opportunity to explore tools and materials.

To weave a blanket.

To design and make a mini beast puppet.



Design and technology CURRICULUM –

Year 3

Year 4

Year 5

Intent

Our designers and technicians in year 3 are curious and can talk about their own ideas and use a success criteria they have created and prior knowledge to develop their ideas and designs.

Our designers and technicians in Year 4 are curious and excited to explore different designers and products and use this knowledge as well as prior knowledge to create a success criteria and initial design ideas.

Our designers and technicians in Year 5 are curious and excited to explore different designers and products, interviews they have conducted and use this knowledge as well as prior knowledge to create a success criteria and initial design ideas.

Planning Considerations

Do they understand how the product is made?
Model how children should fully explain what material choices etc they have made and why?
Do children understand what a design criteria is and how to generate one?
Do they understand the design contexts i.e. is it for industry, home or leisure?
Who is the user what are their needs?
How are they going to gather information? Do some children require a template?

Do they understand how the products are made?
Model how children should fully explain what material choices etc they have made and why?
Allow partner talk time to discuss and develop ideas.
How are they going to gather information?
Do some children require a template?
Do they know who the user is and what their needs are?

Do they understand how the products are made?
Model how children should fully explain what material choices etc they have made and why?
Do they understand the purpose of the product?
Do they know who the user is and what their needs are?
How are they going to gather information? Do some children require a template?

Skills

- Describe the purpose of the products.
- Indicate the design features of their product.
- Model using prototypes.
- Use annotated diagrams and some computer aided design packages to develop and communicate ideas.
- Uses a wide range of materials.
- Able to apply some simple finishing techniques.
- Identify strengths and weaknesses of what they have made.
- Uses design criteria to evaluate what they have made.

- Develop their own success criteria and use this to inform their ideas.
- Model using prototypes and pattern pieces.
- Create realistic ideas with a focus on the needs of the user.
- Selects materials suitable for the task.
- Able to apply several finishing techniques.
- Investigate and analyse how well their product has been designed and made.
- Use their design criteria to evaluate and improve completed task.

- Describe the purpose of the products. Indicate the design features of their product.
- Develop a design specification to guide their thinking.
- Able to apply several finishing techniques including those from art and design sessions.
- Use techniques that involve resourcefulness when trying to problem solve during the process of making.
- Evaluate their ideas and products against their original design specification.
- Critically evaluate the quality of the design, manufacture and fit for purpose of product.

Knowledge

Our designers and technicians...

- Develop their own success criteria and uses it to evaluate what they have made.
- Gather information about the wants or needs of individuals or groups.
- Work confidently within a range of contexts, such as home, school, leisure and industry
- Orders main stages of making logically.
- Recognise successful designers who have been influential in the design industry.

Our designers and technicians...

- Make design decisions with availability of resources in mind.
- Share and clarify ideas through discussion
- Indicate the design features of their product.
- Consider the views of others including the intended users of the product.
- Describe the purpose of the products.

Our designers and technicians...

- Make design decisions based on cost, time and resource constraints
- Carry out research and interviews of intended users to find out their wants, needs and preferences.
- Formulates a step by step plan for the designing and making process.
- Produces a list of tools and materials suitable for completing.

Our Pupil Promise... key opportunities and experiences for all of our pupils

To make a stone age round house
DT Christmas craft day

To make and design money containers
DT Christmas craft day

To make and design a bag using recycled materials.
DT Christmas craft day.



Design and technology CURRICULUM –

Year 6

Intent

Our designers and technicians in the Year 6 are curious and can talk about Our designers and technicians in Year 5 are curious and excited to explore different designers and products , interviews they have conducted and use this knowledge as well as prior knowledge to create a success criteria and initial design ideas.

Planning Considerations

Do they understand how the products are made?
 Model how children should fully explain what material choices etc they have made and why?
 Problem solving how can they repair/ fix something during the making process?
 Costings? Do they understand how much the product costs to make?
 Spreadsheets

Skills

Our designers and technicians...

- Select tools and equipment suitable to the tasks. Selects materials and components suitable to the task.
- Use a wide range of materials and components e.g. textiles, mechanical, construction kits, electrical and food ingredients.
- Measures, marks out, cuts and shapes materials and components with some accuracy. Using a range of materials and components.
- Able to accurately apply several finishing techniques including those from art and design sessions.
- Use techniques that involve resourcefulness, resilience and innovation when trying to solve a problem during the process of making.

Knowledge

- Explain their choices, giving evidence.
- Formulate a step by step plan for the designing and making process.
- Explain next steps in their learning drawing on their prior experience.
- Procedures for safety and hygiene

