St Lukes C of E primary school

Design and Technology scheme of work

Opening hearts, eyes and minds.

What we want our children to be gain from Design Technology

- To be able to make decisions about what they design and make
- To create products that they can see, touch and taste themselves
- To learn about real life products and how they can be used, how they work and why they need them
- To be resilient. To be brave enough to have a go and keep going if things don't work out the way they planned.
- To evaluate successes and failures, working out their next steps.
- To be able to co-operate and work in a team.
- To be able to listen to ideas and even if they don't agree or like them be happy to give others ideas a go. develop the creative, technical and practical expertise needed to perform everyday
- To tackle tasks confidently and to participate successfully in an increasingly technological world
- To 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
- To understand and apply the principles of nutrition and learn how to cook.

What we want to learn about.

These are ideas of learning that can be adapted to a particular theme. Be creative!

Key Stage 1
Puppets
Vehicles
Windmills
Teddy Bears picnic food
Playground equipment models
Sandwiches

Statutory requirements Key Stage one

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 such as 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, such as levers, sliders, wheels and axles, in their products.

Cooking and nutrition

Pupils should be taught to:

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

These are ideas of learning that can be adapted to a particular theme. Be creative! They are not cast in stone.

Year 3	Year 4	Year 5	Year 6
Lighthouses	Bridges	Torches	Paper mechanisms
Boxes/packaging	Story books (pop ups)	Paper mechanisms	Periscopes/alarms
Pencil cases	purses	Instruments	Fairground rides
Photo frames	kites	Chinese inventions	Chinese inventions
Moving monsters	Mini greenhouses	Bird houses	Make slippers

Food could be covered through link to geographical area of study, science or history.

Statutory Requirements Key stage two
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.

How we want to learn.

- By being creative with our learning eg linking products to what we want to learn about
- Asking key questions to focus us.
- Always start with taking things apart (disassemble).
- Learning about products across subjects eg music, English, drama, science etc
- Using objects, visits, photographs, books, interactive resources to enhance what we learn.

Key questions

These are examples and could be used to begin with but the children can choose the direction they wish to take by coming up with their own key question choices. Each new topic could begin with the children choosing 4 or 5 key questions. These questions should not be closed, think about Who? What? Where? How? Were? EG:

- What is it made from?
- Which materials would work best?
- How could I improve my product/design?
- What is the purpose of my product?
- What job do I want it to do?