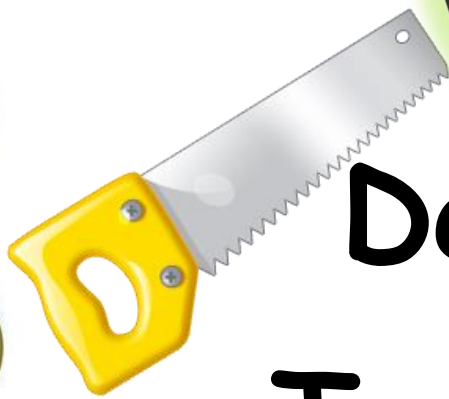


Newbald Primary School



Design & Technology Framework

(Including a progression in
knowledge & Skills)

Design Focus



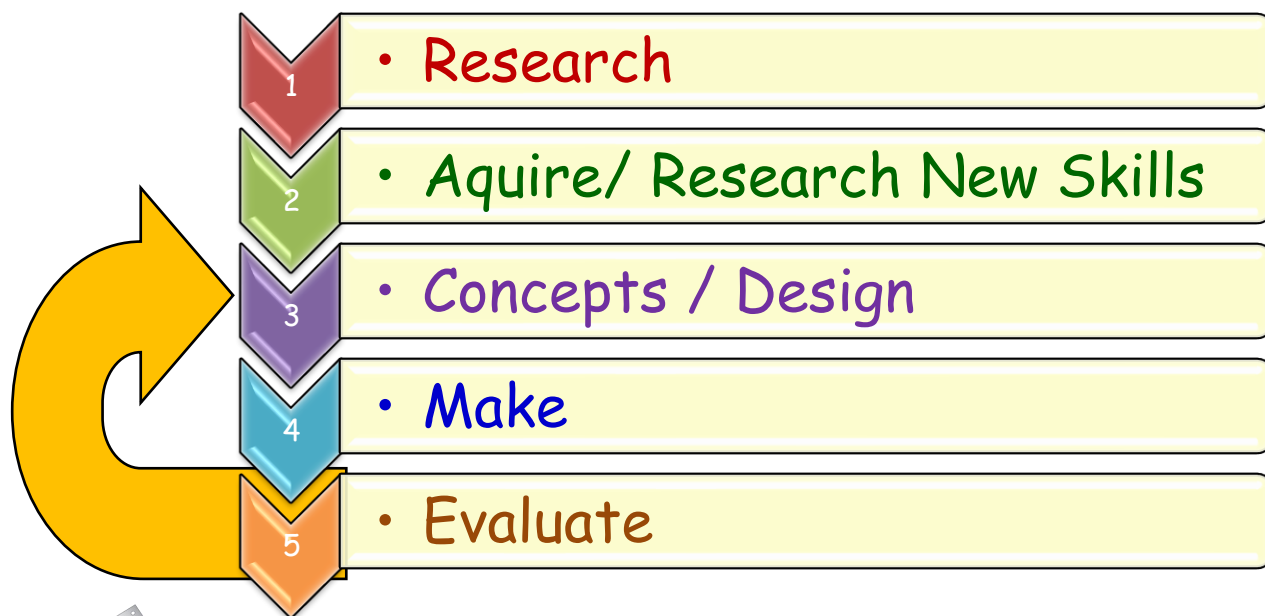
Throughout the year there will be 3 Design and Technology weeks. (Usually after each half term to enable cross curricular links with either half term's topics) Each design week will have a different focus. **One** of the three D&T projects each year should be a group task.

- Food and Drink Technology
- Construction Including Structures, Mechanisms and Control Technology
- Constructing with Textiles



The Design Process

Each project, regardless of focus, can follow a simple process in design.



The design process never ends and, in theory, the project should inform new designs that improve upon the made products. In the Design and Technology units of study at Newbald, children are encouraged to create further designs after evaluation as a task to show what they have learnt from following the design process.

Exemplar Design Project



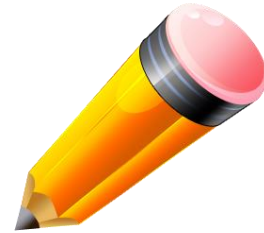
Research

- I can identify the Design Brief
- I can think about who my product will be designed for.
- I can consider the needs of the person my product will be designed for.
- I can research Existing Products
- I can evaluate Existing Products
- I know about the history of the product
- I know about designers who have designed similar products
- I can conduct relevant market research



Research / Acquire New Skills

- I can research methods of etc.
- I know health and safety rules for using new tools
- I can use new tools
- I can make test models
- I can evaluate my test model



Concepts and Design

- I can create many annotated concepts
- I can draw a technical drawing of a final design from different views and include measurements.
- I can annotate my designs



Making

- I can make my product
- I can evaluate and plan during the making process
- I can continue to evaluate and plan during the making process

Evaluation

- I can evaluate my final product
- I can evaluate my product against the Design Brief
- I can consider other people's evaluations of my product
- I can use what I have learnt to create further designs





Design and Technology Individuality

Each individual or group should have a different outcome to others in the class. The design brief or task should be not be too confining for children, but should be an opportunity to extend their ideas. They can then design freely using the new skills they have acquired. They can then make individual products or items that can be reflected upon and evaluated. One way of achieving this is to expand the title of the project or make it a question. For example, instead of teddy bears, where everyone would create a bear, it could be cuddly animals. The children are much freer to be creative.

Design and Technology National Curriculum Aims

At Newbald Primary School, we aim to ensure that all pupils:

- 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.



Design and Technology in the Foundation Stage

***Updated to include the EYFS 2021 statements**

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas.

The table below demonstrates which statements from the 2020 Development Matters are prerequisite skills for DT within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for DT.

The most relevant statements for DT are taken from the following areas of learning:

- Physical Development
- Expressive Arts and Design

Design & Technology			
Three and Four-Year-Olds	Personal, Social and Emotional Development		• 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.
	Physical Development		• Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors.
	Understanding the World		• Explore how things work.
	Expressive Arts and Design		• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • 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.
Reception	Physical Development		• Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills.
ELG	Physical Development	Fine Motor Skills	• Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	• 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.

Design and Technology in the Foundation Stage (continued)

In the foundation stage (Including nursery children) the children will continue to undertake rich cross curricular activities to assist in their progress working towards the achievement of statements as outlined in the 'Development Matters' document. The children will also be assessed against these learning statements.

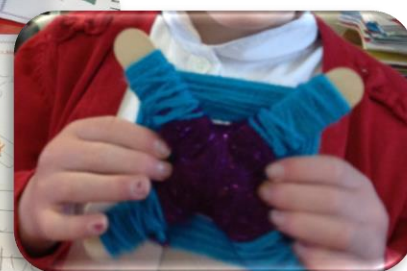
Although the children will not be expected to undertake Design and Technology projects to the extent of KS1, they will be expected to complete extended design projects. Each project will follow the design process of

- Research
- Design
- Make
- Evaluate



These projects will take place during the school's design and technology weeks (usually the week following a half term break) The three topics covered throughout each year will be a balance of the main areas of Design and Technology including a construction project, a textile topic and a healthy food topic. The food topic will focus on savoury food and preparation of food. The children will be encouraged to explore materials and tools throughout all of these projects.

Although some tasks will be verbal communication (such as evaluating) every effort will be to increase the formalities of recording each stage of work. Photographic evidence of work (or video files of verbal work) will be taken, collected and stored in the shared area.



Key Stage 1 (National Curriculum)

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:

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.

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Cooking and Nutrition

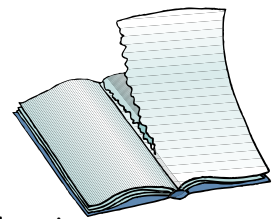
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

In Key Stage 1 the children will...

- investigate things and say how they work, what they do and what they are made of;
- plan what to make and be able to tell someone else about it;
- make things from our plans and be able to say what has or has not worked well and why;
- work with tools and equipment safely to measure and mark, cut and shape, join and combine and decorate and finish different materials;
- learn about how to use different materials and mechanisms.

Through designing, developing, planning and communication their ideas the children will...

- Follow verbal instructions
- Explain what they are making and which materials they are using
- Name the tools they are using
- Describe what they need to do next
- Select materials from a limited range that will meet the design criteria
- Select and name the tools needed to work the materials
- Select appropriate technique explaining First.....Next.....Last....
- Explore ideas by rearranging materials
- Model ideas with kits, reclaimed materials
- Select pictures to help develop ideas
- Use pictures and words to convey what they want to design and make
- Describe their models and drawings of ideas and intentions
- Use kits/reclaimed materials to develop an idea
- Use drawings to record ideas as they are developed
- Discuss their work as it progresses
- Add notes to drawings to help explanations (begin to annotate)



Throughout all Design and Technology projects the children in Key Stage 1 will have the opportunity to develop their knowledge and understanding of basic sheet materials. The children will...

- Fold, tear and cut paper and card
- Roll paper to create tubes
- Cut along lines, straight and curved
- Curl paper
- Use hole punch
- Insert paper fasteners for card linkages
- Create hinges
- Use simple pop ups
- Investigate strengthening sheet materials



Key Stage 2 (National Curriculum)

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:

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.

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

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.

In Lower Key Stage 2 the children will

- investigate and evaluate products to help generate ideas for our own work;
- make detailed plans for our ideas showing what we want to achieve and how to do it;
- use our plans to make products, evaluating and adapting our ideas as we work;
- work with tools and equipment safely and accurately to measure and mark, cut and shape, join and combine and decorate and finish different materials;
- learn about how different materials and mechanisms can be used for a purpose.

Through designing, developing, planning and communication their ideas the children will...

- Investigate similar products to the one to be made to give starting points for a design
- Draw/sketch products to help analyse and understand how products are made
- Think ahead about the order of their work and decide upon tools and materials
- Plan a sequence of actions to make a product
- Record the plan by drawing (labelled or annotated sketches) or writing
- Develop more than one design or adaptation of an initial design
- Propose realistic suggestions as to how they can achieve their design ideas
- Add notes and annotations to drawings to help explanations

Throughout all Design and Technology projects the children in Lower Key Stage 2 will have the opportunity to develop their knowledge and understanding of basic sheet materials. The children will...

- Cut slots
- Cut internal shapes
- Use lolly sticks/card to make levers and linkages
- Use linkages to make movement larger or more varied.
- Use and explore complex pop ups
- Create nets

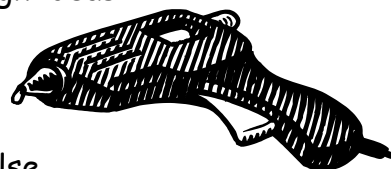


In Upper Key Stage 2 the children will

- investigate and evaluate products to help generate ideas for our own work;
- make detailed plans for our ideas showing what we want to achieve and how to do it;
- use our plans to make products, evaluating and adapting our ideas as we work;
- work with tools and equipment safely and accurately to measure and mark, cut and shape, join and combine and decorate and finish different materials;
- learn about how different materials and mechanisms can be used for a purpose.

Through designing, developing, planning and communication their ideas the children will...

- Investigate products/images to collect ideas
- Sketch and model alternative ideas
- Develop one idea in depth
- Combine modelling and drawing to refine ideas
- Plan the sequence of work using a storyboard
- Record ideas using well annotated diagrams
- Use models, kits and drawings to help formulate design ideas
- Make prototypes
- Use found information to inform decisions
- Use a computer to model ideas
- Draw plans which can be read/followed by someone else
- Give a report using correct technical vocabulary



Throughout all Design and Technology projects the children in Upper Key Stage 2 will have the opportunity to develop their knowledge and understanding of basic sheet materials. The children will...

- Cut slots
- Cut accurately and safely to a marked line
- Join and combine materials with temporary, fixed or moving joinings
- Use craft knife, cutting mat and safety ruler **under one to one** supervision
- Choose an appropriate sheet material for the purpose



Core Concepts, Progression of Skills & Assessment

Core Concepts have been selected to compliment and develop greater understanding of the design process and the three strands of Design and Technology that form the three annual Design and Technology projects. Each core concept has a progression of knowledge and skills outlining how each 'golden thread' develops and progresses through school. Please find the progression grids on the following pages.

- Design



- Make (& create)



- Evaluate



- Construction



- Textiles



- Food, drink & nutrition



Assessment

Teachers assess formatively and summatively against the guidance given in the progression grids (related to the core concepts listed above) and on the provided 'I can statements' that are given as guidance for each unit of study. Assessment for learning strategies are encouraged (including marking of work) and used to formatively assess to inform teachers to make a judgement considering all relevant concepts listed above and the progression statements related to these listed on the following pages.

Teachers use summative judgements by revisiting key learning through 'low stakes quizzes' such as using Kahoot to check on retained knowledge and understanding on key vocabulary. As each strand (e.g.: construction, textiles and food & drink) is taught teachers are aware of what has come previously and can assess and check upon prior learning at the beginning of each unit.

Assessment judgements are recorded using the school's data tracking system, Insight tracking. Teachers are expected to log judgements against each unit of study. This can be accessed by the next class teacher informing them of strengths and weaknesses as well as informing leaders about how to strategically adapt how the subject and the curriculum is taught to address strengths and weaknesses within the subject area and across the curriculum as a whole.



Progression of Knowledge and Skills (Design)



Year 1 & Year 2		Year 3 & Year 4		Year 5 & Year 6	
* have own ideas * explain what I want to do * explain what my product is for, and how it will work * use pictures and words to plan, begin to use models * design a product for myself following design criteria * research similar existing products	* have own ideas and plan what to do next * explain what I want to do and describe how I may do it * explain purpose of product, how it will work and how it will be suitable for the user * describe design using pictures, words, models, diagrams, begin to use ICT * design products for myself and others following design criteria * choose best tools and materials, and explain choices * use knowledge of existing products to produce ideas	* begin to research others' needs * show design meets a range of requirements * describe purpose of product * follow a given design criteria * have at least one idea about how to create product * create a plan which shows order, equipment and tools * describe design using an accurately labelled sketch and words * make design decisions * explain how product will work * make a prototype * begin to use computers to show design	* use research for design ideas * show design meets a range of requirements and is fit for purpose * begin to create own design criteria * have at least one idea about how to create product and suggest improvements for design. * produce a plan and explain it to others * say how realistic plan is. * include an annotated sketch * make and explain design decisions considering availability of resources * explain how product will work * make a prototype * begin to use computers to show design.	* use internet and questionnaires for research and design ideas * take a user's view into account when designing * begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose * create own design criteria * have a range of ideas * produce a logical, realistic plan and explain it to others. * use cross-sectional planning and annotated sketches * make design decisions considering time and resources. * clearly explain how parts of product will work. * model and refine design ideas by making prototypes and using pattern pieces. * use computer-aided designs	* draw on market research to inform design * use research of user's individual needs, wants, requirements for design * identify features of design that will appeal to the intended user * create own design criteria and specification * come up with innovative design ideas * follow and refine a logical plan. * use annotated sketches, cross-sectional planning and exploded diagrams * make design decisions, considering, resources and cost * clearly explain how parts of design will work, and how they are fit for purpose * independently model and refine design ideas by making prototypes and using pattern pieces * use computer-aided designs



Progression of Knowledge and Skills (Make)



Year 1 & Year 2		Year 3 & Year 4		Year 5 & Year 6	
*explain what I'm making and why *consider what I need to do next *select tools/equipment to cut, shape, join, finish and explain choices *measure, mark out, cut and shape, with support *choose suitable materials and explain choices *try to use finishing techniques to make product look good *work in a safe and hygienic manner	*explain what I am making and why it fits the purpose *make suggestions as to what I need to do next. *join materials/components together in different ways *measure, mark out, cut and shape materials and components, with support. *describe which tools I'm using and why *choose suitable materials and explain choices depending on characteristics. *use finishing techniques to make product look good *work safely and hygienically	*select suitable tools/equipment, explain choices; begin to use them accurately * select appropriate materials, fit for purpose. * work through plan in order *consider how good product will be * begin to measure, mark out, cut and shape materials/components with some accuracy * begin to assemble, join and combine materials and components with some accuracy * begin to apply a range of finishing techniques with some accuracy	* select suitable tools and equipment, explain choices in relation to required techniques and use accurately *select appropriate materials, fit for purpose; explain choices * work through plan in order. * realise if product is going to be good quality * measure, mark out, cut and shape materials/components with some accuracy *assemble, join and combine materials and components with some accuracy *apply a range of finishing techniques with some accuracy	* use selected tools/equipment with good level of precision * produce suitable lists of tools, equipment/materials needed *select appropriate materials, fit for purpose; explain choices, considering functionality * create and follow detailed step-by-step plan * explain how product will appeal to an audience * mainly accurately measure, mark out, cut and shape materials/components *mainly accurately assemble, join and combine materials/components * mainly accurately apply a range of finishing techniques * use techniques that involve a small number of steps * begin to be resourceful with practical problems	* use selected tools and equipment precisely *produce suitable lists of tools, equipment, materials needed, considering constraints * select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics * create, follow, and adapt detailed step-by-step plans *explain how product will appeal to audience; make changes to improve quality * accurately measure, mark out, cut and shape materials/components * accurately assemble, join and combine materials/components * accurately apply a range of finishing techniques * use techniques that involve a number of steps * be resourceful with practical problems



Progression of Knowledge and Skills (Evaluate)



Year 1 & Year 2		Year 3 & Year 4		Year 5 & Year 6	
*talk about my work, linking it to what I was asked to do * talk about existing products considering: use, materials, how they work, audience, where they might be used *talk about existing products, and say what is and isn't good * talk about things that other people have made *begin to talk about what could make product better	* describe what went well, thinking about design criteria * talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion *evaluate how good existing products are *talk about what I would do differently if I were to do it again and why	* look at design criteria while designing and making *use design criteria to evaluate finished product * say what I would change to make design better *begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose * begin to understand by whom, when and where products were designed * learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products	*refer to design criteria while designing and making *use criteria to evaluate product * begin to explain how I could improve original design *evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose * discuss by whom, when and where products were designed * research whether products can be recycled or reused * know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products	*evaluate quality of design while designing and making *evaluate ideas and finished product against specification, considering purpose and appearance. *test and evaluate final product * evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose * begin to evaluate how much products cost to make and how innovative they are *research how sustainable materials are *talk about some key inventors/designers/ engineers/chefs/manufacturers of ground-breaking products	*evaluate quality of design while designing and making; is it fit for purpose? * keep checking design is best it can be. *evaluate ideas and finished product against specification, stating if it's fit for purpose *test and evaluate final product; explain what would improve it and the effect different resources may have had *do thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose *evaluate how much products cost to make and how innovative they are *research and discuss how sustainable materials are *consider the impact of products beyond their intended purpose *discuss some key inventors/designers/ engineers/chefs/manufacturers of ground-breaking products



Technical Knowledge and Skills (Construction)



Year 1 & Year 2		Year 3 & Year 4		Year 5 & Year 6	
*begin to measure and join materials, with some support *describe differences in materials *suggest ways to make material/product stronger *begin to use levers or slides	*measure materials *describe some different characteristics of materials *join materials in different ways *use joining, rolling or folding to make it stronger *use own ideas to try to make product stronger *use levers or slides *begin to understand how to use wheels and axles	*use appropriate materials *work accurately to make cuts and holes *join materials *begin to make strong structures *select appropriate tools / techniques *alter product after checking, to make it better *begin to try new/different ideas *use simple lever and linkages to create movement *use simple circuit in product *learn about how to program a computer to control product.	*measure carefully to avoid mistakes *attempt to make product strong *continue working on product even if original didn't work *make a strong, stiff structure *select most appropriate tools / techniques *explain alterations to product after checking it *grow in confidence about trying new / different ideas. *use levers and linkages to create movement *use pneumatics to create movement *use number of components in circuit *program a computer to control product	*select materials carefully, considering intended use of product and appearance *explain how product meets design criteria *measure accurately enough to ensure precision *ensure product is strong and fit for purpose *begin to reinforce and strengthen a 3D structure *refine product after testing *grow in confidence about trying new / different ideas *begin to use cams, pulleys or gears to create movement *incorporate switch into product *confidently use number of components in circuit *begin to be able to program a computer to monitor changes in environment and control product	*select materials carefully, considering intended use of the product, the aesthetics and functionality. *explain how product meets design criteria *reinforce and strengthen a 3D structure or product *refine product after testing, considering aesthetics, functionality and purpose *incorporate hydraulics and pneumatics *be confident to try new / different ideas *use cams, pulleys and gears to create movement *use different types of circuit in product *think of ways in which adding a circuit would improve product *program a computer to monitor changes in environment and control product



Technical Knowledge and Skills (Textiles) *R*

Year 1 & Year 2		Year 3 & Year 4		Year 5 & Year 6	
*measure, cut and join textiles to make a product, with some support *choose suitable textiles	*measure textiles *join textiles together to make a product, and explain how I did it *carefully cut textiles to produce accurate pieces *explain choices of textile *understand that a 3D textile structure can be made from two identical fabric shapes.	*join different textiles in different ways *choose textiles considering appearance and functionality *begin to understand that a simple fabric shape can be used to make a 3D textiles project	*think about user when choosing textiles *think about how to make product strong *begin to devise a template *explain how to join things in a different way *understand that a simple fabric shape can be used to make a 3D textiles project	*think about user and aesthetics when choosing textiles *use own template *think about how to make product strong and look better *think of a range of ways to join things *begin to understand that a single 3D textiles project can be made from a combination of fabric shapes.	*think about user's wants/needs and aesthetics when choosing textiles *make product attractive and strong *make a prototype *use a range of joining techniques *think about how product might be sold *think carefully about what would improve product *understand that a single 3D textiles project can be made from a combination of fabric shapes.



Technical Knowledge and Skills (Food, Drink and Nutrition)



Year 1 & Year 2		Year 3 & Year 4		Year 5 & Year 6	
*describe textures *wash hands & clean surfaces *think of interesting ways to decorate food *say where some foods come from, (i.e. plant or animal) *describe differences between some food groups (i.e. sweet, vegetable etc.) *discuss how fruit and vegetables are healthy *cut, peel and grate safely, with support	*explain hygiene and keep a hygienic kitchen *describe properties of ingredients and importance of varied diet *say where food comes from (animal, underground etc.) *describe how food is farmed, home-grown, caught *draw eat well plate; explain there are groups of food *describe "five a day" *cut, peel and grate with increasing confidence	*carefully select ingredients *use equipment safely *make product look attractive *think about how to grow plants to use in cooking *begin to understand food comes from UK and wider world *describe how healthy diet= variety/balance of food/drinks *explain how food and drink are needed for active/healthy bodies. *prepare hot drinks safely and hygienically *grow in confidence understanding branding of food and drink products	*explain how to be safe/hygienic *think about presenting product in interesting/attractive ways *understand ingredients can be fresh, pre-cooked or processed *begin to understand about food being grown, reared or caught in the UK or wider world *describe eat well plate and how a healthy diet=variety / balance of food and drinks *explain importance of food and drink for active, healthy bodies *prepare and cook some dishes safely and hygienically *use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading and baking	*explain how to be safe / hygienic and follow own guidelines *present product well - interesting, attractive, fit for purpose *begin to understand seasonality of foods *understand food can be grown, reared or caught in the UK and the wider world *describe how recipes can be adapted to change appearance, taste, texture, aroma *explain how there are different substances in food / drink needed for health *prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source *use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	*understand a recipe can be adapted by adding / substituting ingredients *explain seasonality of foods *present product to a high standard to make the product interesting and aesthetically attractive *learn about food processing methods *name some types of food that are grown, reared or caught in the UK or wider world *adapt recipes to change appearance, taste, texture or aroma. *describe some of the different substances in food and drink, and how they can affect health *prepare and cook a variety of dishes safely and hygienically including, where appropriate, the use of heat source. *use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.



Newbald Primary School

Units of Study Overview

Key: Construction & Engineering

Textiles

Food, Drink & Nutrition



	Class1 Nursery & Reception	Class2 Year 1 & Year 2	Class3 Year 3 & Year 4	Class4 Year 5 & Year 6
Cycle 1 Autumn Term	Design a space craft for a specific character, astronaut or alien.	Cuddly Polar Animals	World War 2 - Make do and Mend	World War 1 - Creating Savoury Meals Using Rations
Cycle 1 Spring Term	Sewn Julia Donaldson Characters / Textile Collage	Great Fire of London Fire Engines	Roman Bread	Creating a Greek / Trojan Horse Cam Toy
Cycle 1 Summer Term	Prepare food for a picnic at the seaside (Preparing Ingredients fruit/Vegetables)	A Healthy Scottish Meal (A Balanced Diet)	Medieval Catapults	Textile Maps
Cycle 2 Autumn Term	World Flag Cushions	Australian Bunting	Victorian Samplers	Savoury Meal inspired by Europe e.g. Spaghetti / pasta bolognaise
Cycle 2 Spring Term	Traditional Tales 'Gingerbread Man'	Fruit Smoothies & Savoury Starters	Indian Meal & Brand of Tea	Tudor Houses
Cycle 2 Summer Term	Design Homes for Well Known Characters (e.g. the three little pigs)	Create invention using pneumatic systems & levers (Construction)	Electrical Lighthouses	Sewn 60s Tie- dye products (e.g. tote bag)



Newbald Primary School
Foundation Stage: Nursery & Reception

Project: Design a space craft for a specific character, astronaut or alien.

Cycle: 2

Term: Autumn Term

D&T Focus: Construction

Topic Link: Space



Research

Research and experiment with making three dimensional constructions including making test models out of different materials such as card. The children should create a design brief to design a space craft (rocket) for a specific character, astronaut or alien (this could be a given figure or toy).

Design

Design a space craft (rocket) for a specific character, astronaut or alien (this could be a given figure or toy). Children will need to consider the needs of the character / figure and plan taking into account of its needs e.g. the craft will need to hold the weight of the figure or it will need a closed area to breathe etc.

Make

Make a space craft (rocket) using a variety of skills including cutting a variety of materials and joining (including gluing) a variety of materials to create a sturdy structure.

Evaluate

Evaluate the success of the product (house / home) by testing it (Possibly using a fan or hair dryer to simulate the effects of travelling through space) (Both the testing and verbal evaluation could be recorded) Evaluate what has been done well and what could be improved. Evaluation of how closely the model has kept to the design should also be considered.







Newbald Primary School
Foundation Stage: Nursery & Reception

Project: Sewn Julia Donaldson Characters / Textile
Collage

Term: Spring Term

D&T Focus: Textiles

Topic Link: Julia Donaldson

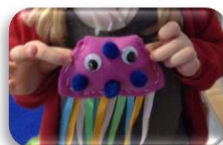


Research

Research Julia Donaldson characters e.g. tiddler, what the ladybird heard, the Gruffalo etc. Look at existing collages. Ask the children to say which ones they like and why they like them. Ask the children to experiment with a variety of fabrics to create pictures and explain which fabrics would work best for the project and which ones would not. Ask children to experiment with joining fabrics together. Would glue work? What about staples or simple stitching?

Design

Design how to create part of a class collage (for a school display) by focussing on one chosen creature or character. Decide on the different parts e.g. different fabrics etc.



Make

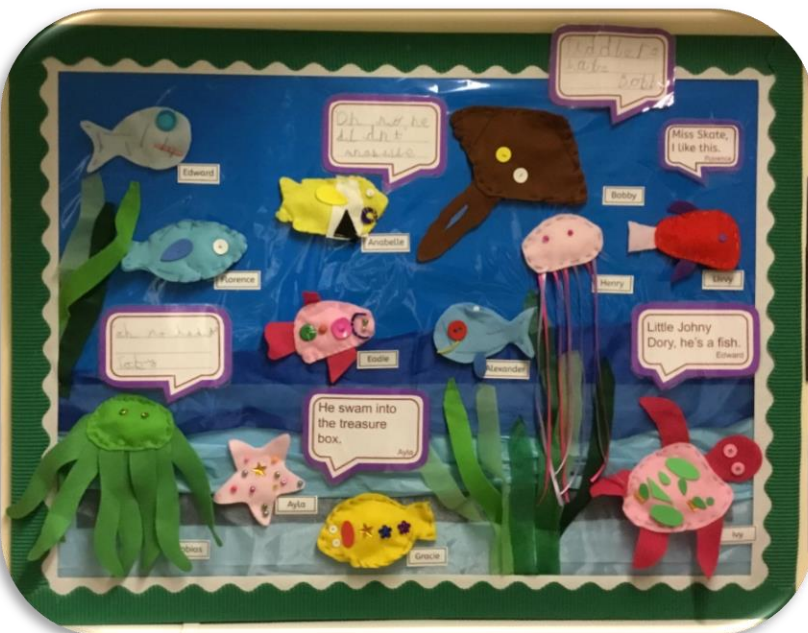
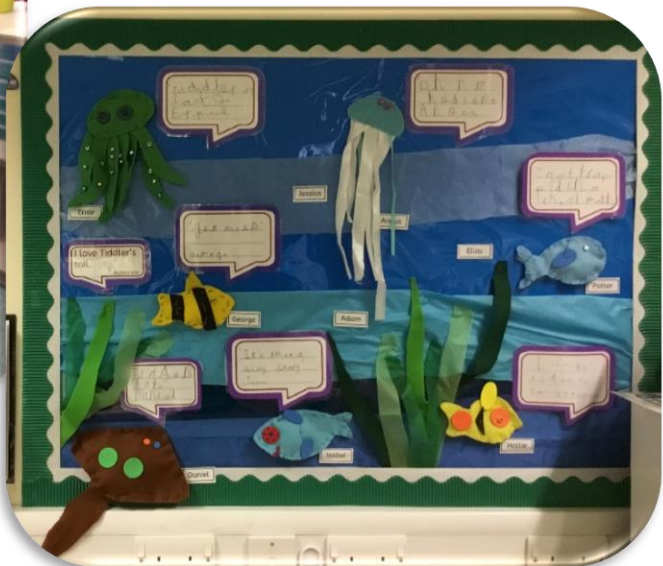
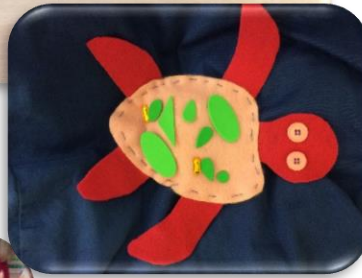
Make a Julia Donaldson character by experimenting with different fabrics, cutting fabrics, exploring different textures of fabric and additions to the fabric e.g. buttons. Explore the use of glue with the fabric. Experiment with different ways of joining or sticking fabrics (and decorations) i.e. glue.



Evaluate

Evaluate the effect of the individual item saying what they like about it and how it could be improved.







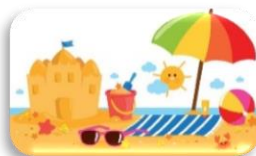
Newbald Primary School Foundation Stage: Nursery & Reception

Project: Prepare food for a picnic at the seaside (Preparing Ingredients fruit/Vegetables)

Term: Summer Term

D&T Focus: Food

Topic Link: Beside the Seaside



Research

Research foods typically taken to the seaside in picnics and research where ingredients used to make items, such as some fruit and vegetables, are sown, grown and harvested. Visit the garden area at school and talk with the gardening club about how fruit and vegetables are grown. Taste a variety of healthy fruit and vegetables and identify them. Rate / evaluate the taste of each item with a view of including them as ingredients for a healthy picnic ideas eg: coleslaw, healthy wrap etc

Design

Design something to be included in a healthy picnic eg: coleslaw, healthy wrap etc. This should be influenced by tasting any possible ingredients. (See research).

Make

Make something to be included in a healthy picnic eg: coleslaw, healthy wrap etc. Children should learn how to prepare food safely and hygienically. The children should experience peeling, grating, chopping, slicing and mixing.

Evaluate

Evaluate the success of the food that has been prepared by tasting and rating how well each part has been prepared and how tasty the overall effect was. Children should evaluate how healthy their prepared food was.







Newbald Primary School
Foundation Stage: Nursery & Reception
Project: World Flag Cushions

Term: Autumn Term
D&T Focus: Textiles
Topic Link: The World



Research

Research flags and look at some sewn cushions and sewn / textile flags. Ask the children to say which ones they like and why they like them. Ask the children to experiment with a variety of fabrics and explain which fabrics would work best for their cushion / flag design and which ones would not. Ask children to experiment with joining fabrics together. Would glue work? What about staples or simple stitching?

Design

Design a simple flag cushion. (2 pieces of felt with decoration on front). Children should consider size when designing. Children can consider how to attach the 2 parts of cushion experimenting with running stitch and overstretch. Children can experiment with how to attach decoration(s)

Make

Make a flag cushion by experimenting with different fabrics, cutting fabrics, exploring different textures of fabric and additions to the fabric e.g. buttons, sequins etc. Explore the use of glue with the fabric. Experiment with different ways of joining or sticking fabrics (and decorations) i.e. glue & simple stitches.

Evaluate

Evaluate the effect of the cushion saying what they like about it and how it could be improved. Children could use dolls or toys as part of testing their product.







Newbald Primary School Foundation Stage: Nursery & Reception



Project: Traditional Tales 'Gingerbread Man'

Term: Spring Term

D&T Focus: Food

Topic Link: Traditional Tales



Research

Research foods develop a food vocabulary using taste, smell, texture and feel. Look at typical food groups and separate different types of familiar food products e.g. fruit & vegetables and bread & cereals, dairy, etc. Discuss the need for a variety of foods in a diet. Evaluate existing gingerbread people Ask the children to say which ones they like and why they like them. Taste a variety of potential ingredients that could be used to in the children's gingerbread or traditional character design. Rate / evaluate the taste of each item with a view of including them as ingredients for their own designs.

Design

Design a biscuit traditional tales character such as a gingerbread person. Children can consider adapting a basic gingerbread recipe by adding in ingredients such as cherries or chocolate chips. Children draw decoration to make the characters recognisable and consider foods that can be used to replicate the design. This should be influenced by tasting any possible ingredients. (See research).

Make

Make the gingerbread character. Children should learn how to prepare food safely and hygienically. The children should experience weighing ingredients, measuring (non statutory measures) eg spoon or cups), mixing and baking.

Evaluate

Evaluate the success of the food that has been prepared by tasting and rating how well each part has been prepared and how tasty the overall effect was. The children could discuss how closely their finished product meet their design.







Newbald Primary School
Foundation Stage: Nursery & Reception

Project: Design Homes for Well Known Characters (e.g. the three little pigs)

Term: Summer Term

D&T Focus: Construction

Topic Link: Houses & Homes



Research

Research and experiment with making three dimensional constructions including making test models out of different materials such as card. The children should create a design brief to design a house (or home) for a well-known character such as the three little pigs taking into account of needs e.g. needs to be able to withstand a gust of wind.



Design

Design a house (or home) for a well-known character such as the three little pigs taking into account of needs e.g. needs to be able to withstand a gust of wind.

Make

Make a house (or home) using a variety of skills including cutting a variety of materials and joining (including gluing) a variety of materials to create a sturdy structure.



Evaluate

Evaluate the success of the product (house / home) by testing it (Possibly using a fan or hair dryer to simulate the gust of wind) (Both the testing and verbal evaluation could be recorded) Evaluate what has been done well and what could be improved.







Newbald Primary School
Year 1 & 2

Project: Cuddly Polar Animals

Cycle 2:

Term: Autumn Term

D&T Focus: Textiles

Topic Link: Polar Regions



- I can research animals that live in the polar regions
- I can I can research and evaluate existing cuddly animals to produce ideas
- I can research sewing techniques needed to create my animal
- I can design products for myself and others following design criteria
- I can explain how my product will be suitable for a chosen person
- I can design using pictures, words, models, diagrams, begin to use ICT
- I can measure, cut and join textiles to make a product, with some support
- I can choose suitable textiles
- I can add annotations to my designs considering joining techniques and materials
- I can decorate fabrics using a range of techniques e.g. fabric pens / paints, printing, making stitches as patterns, using buttons, attaching contrasting fabric pieces as detail.
- I can join fabrics by using a neat **running stitch** or over sewing (over stitch)
- I can decorate fabrics with buttons, beads, sequins, braids and or ribbons
- I can begin to understand and use seam allowance
- I can begin to understand that a 3D textile structure can be made from two identical fabric shapes.
- I can begin to use pins to temporarily hold fabric
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can talk about what I would do differently if I were to do it again and why





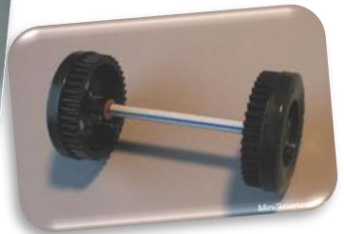


Project: Transport using axels / Great Fire of London Fire Engines

Term: Spring Term

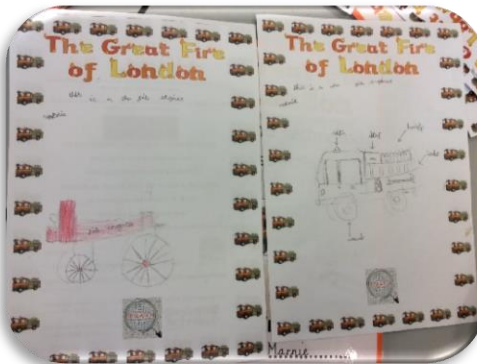
D&T Focus: Construction

Topic Link: Great Fire of London / Transport



- I can research fire engines (or transport)
- I can evaluate how good existing products (toy cars with axels and toy fire engines)
- I can explain purpose of product, how it will work and who it will be suitable for
- I can design using pictures, words, models and diagrams
- I can begin to understand how axles work
- I can investigate circuits
- I can include a circuit in my design to light a bulb e.g. (Fire engine blue light or headlights etc)
- I can design using pictures, words, models and diagrams
- design products for myself and others following design criteria
- I can describe and use a range of materials to create models with free running wheels and axles e.g. tubes, dowel, cotton reels
- I can attach wheels to a chassis using an axle
- I can join appropriately for different materials and situations e.g. glue, tape etc
- I can measure and mark out materials to be cut using a template
- I can use my own ideas to make parts of my model stronger
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can talk about what I would do differently if I were to do it again and why







Newbald Primary School Year 1 & 2

Project: A Healthy Scottish Meal (A Balanced Diet)

Term: Summer Term

D&T Focus: Food

Topic Link: An Island Home (Scotland)



- I can research foods grown, reared and typically eaten in Scotland e.g. neeps & tatties, soup, haggis, venison etc
- I can say where some food comes from (animal, underground etc.)
- I can describe how food is farmed, home-grown, caught etc
- I can use knowledge of Scottish food to produce ideas for my recipe
- I can taste and evaluate how good existing foods and food products are
- I can develop a food vocabulary using taste, smell, texture and feel
- I can identify and separate different types of familiar food products e.g. fruit, vegetables and bread
- I can design products and recipes for myself and others following design criteria
- I can design using pictures, words, models, diagrams and begin to use ICT
- I can plan and make suggestions as to what I need to do next.
- I can mix a range of ingredients
- I can work safely and hygienically explaining how to keep a hygienic kitchen
- I can draw eat well plate and I understand the need for a variety of foods in a diet
- I can describe properties of ingredients and importance of varied diet
- I can measure and weigh food items using non-statutory measures e.g. spoons, cups
- I can cut, peel and grate with increasing confidence
- I can say what I like and do not like about food items and use this to influence my design
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about what I would do differently if I were to do it again and why







Newbald Primary School Year 1 & 2

Project: Australian Bunting

Term: Autumn Term

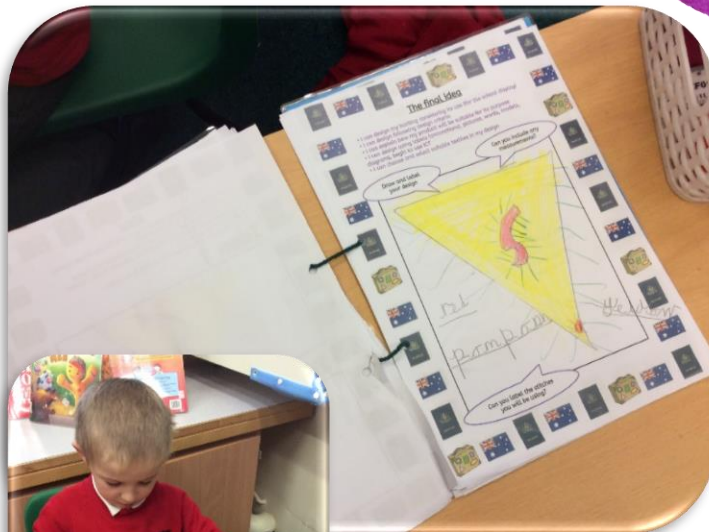
D&T Focus: Textiles

Topic Link: Australia



- I can research and evaluate bunting
- I can research iconic animals, landmarks, colours and items associated with Australia
- I can research and evaluate existing bunting and sewn products
- I can research sewing techniques needed to create my bunting (running stitch - non-punched holes - small neat stitches)
- I can design my bunting considering its use (for the school display)
- I can design following design criteria
- I can explain how my product will be suitable for its purpose
- I can design using labels (annotations), pictures, words, models, diagrams, begin to use ICT
- I can choose and select suitable textiles in my design
- I can use a paper template to help me cut a fabric shape
- I can use running stitch to join fabric
- I can join fabrics including decorative features
- I can decorate fabrics using a range of techniques e.g. fabric pens / paints, printing, making stitches as patterns, using buttons, attaching contrasting fabric pieces as detail.
- I can decorate fabrics with buttons, beads, sequins, braids and or ribbons
- I can begin to understand and use seam allowance
- I can begin to use pins to temporarily hold fabric
- I can evaluate my product
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can talk about what I would do differently if I were to do it again and why







Newbald Primary School Year 1 & 2



Project: Fruit Smoothies & Savoury Starters

Term: Spring Term

D&T Focus: Food & Drink

Topic Link: Weather & Climate



Two food projects to create a fruit smoothie and brand the invented/ designed smoothie drink considering packaging and labelling & to make a savoury small meal such as a bruschetta.

- I can research foods grown / reared in the UK and foods that need a different climate to grow, e.g. Mediterranean, tropical and foods grown in the UK (temperate)
- I can say where some food comes from (animal, underground etc.)
- I can describe how food is farmed, home-grown, caught etc
- I can name some herbs and know how to grow them.
- I can taste and evaluate how good existing foods and food products are
- I can explain what makes a diet healthy and varied and can cook a healthy balanced meal.
- I can identify and separate different types of familiar food products e.g. fruit, vegetables and bread
- I can explain where, when and how strawberries are grown in the United Kingdom.
- I can design products and recipes for myself and others following design criteria
- I can design using pictures, words, models, diagrams and begin to use ICT
- I can plan / recipe method and make suggestions as to what I need to do next.
- I can work safely and hygienically explaining how to keep a hygienic kitchen
-
- I can use kitchen tools correctly to prepare and make a tasty and nutritious drink.
- I can measure and weigh food items using non-statutory measures e.g. spoons, cups
- I can cut, peel and grate with increasing confidence
- I can develop a food vocabulary using taste, smell, texture and feel
- I can create a brand name for my drink
- I can design packaging (label) for my drink considering how products are sold and marketed
-
- I can explain when tomatoes are in season in the United Kingdom and can say where and how they are grown.
- I can say what I like and do not like about food items and use this to influence my design
- I can prepare and cook/assemble a healthy and tasty meal using tomatoes as my main ingredient.
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about what I would do differently if I were to do it again and why







Newbald Primary School Year 1 & 2



Project: Create invention using pneumatic systems & levers (Construction)

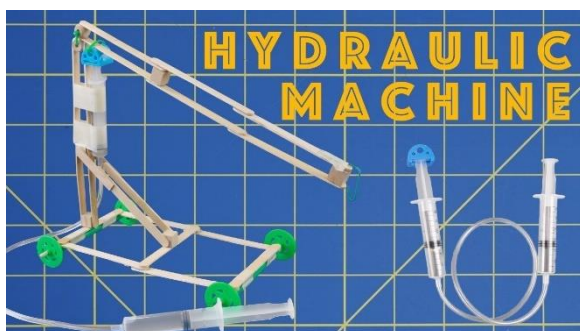
Term: Summer Term

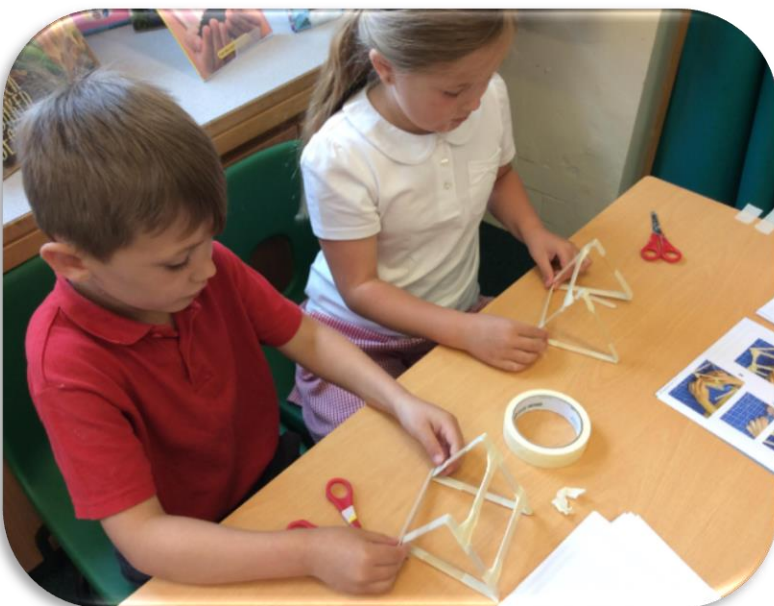
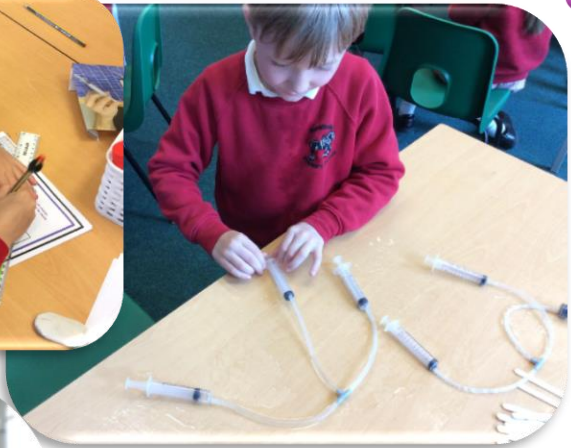
D&T Focus: Construction

Topic Link: Inventors & Inventions



- I can research existing products that use pneumatic systems, levers and linkages.
- I know how simple pneumatic mechanisms can be used to produce different types of movement
- I can investigate and comment on the effectiveness of pneumatic systems using syringes and balloons.
- I can choose best tools and materials, and explain choices
- I can use leverage systems with pneumatic systems to create movement.
- I know different ways that materials can be joined.
- I can measure materials
- I can describe some different characteristics of materials
- I can use joining, rolling or folding to make a material stronger
- I can explore my own ideas and designs using 3D modelling
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can talk about what I would do differently if I were to do it again and why







Newbald Primary School
Year 3 & 4

Project: Make do and Mend

Cycle: 2

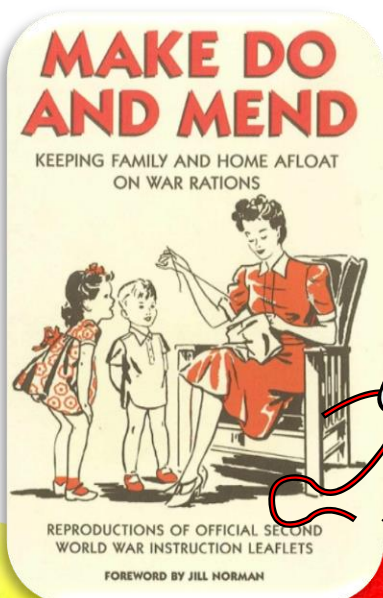
Term: Autumn Term

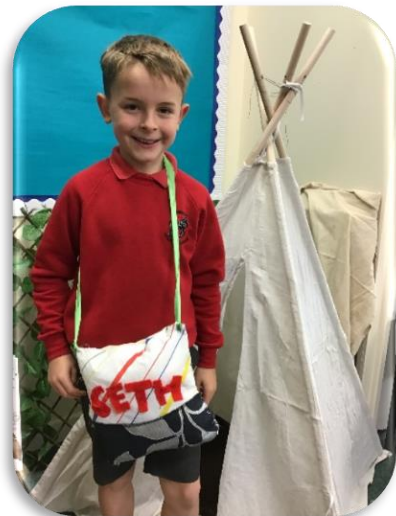
D&T Focus: Textiles

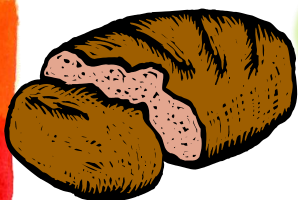
Topic Link: World War 2



- I can think about user when choosing textiles
 - I can add considered annotations to my designs considering joining techniques, materials and measurements
 - I can understand and use seam allowance
 - I can use pins to temporarily hold fabric
 - I can join fabrics using running stitch, over sewing and back stitch
 - I can explore fastenings and recreate some e.g. sew on buttons and make loops
 - I can begin to understand that a simple fabric shape can be used to make a 3D textiles project
 - I can think about how to make product strong
- I can prototype a product using a cheaper material.
- I can use appropriate decoration techniques e.g. appliqué or simple stitches
 - I can identify the strengths and weaknesses of my design ideas
 - I can decide which design idea to develop
 - I can consider and explain how the finished product could be improved
 - I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user.







Newbald Primary School Year 3 & 4

Project: Roman Bread



Term: Spring Term
D&T Focus: Food
Topic Link: Romans



- I can research how bread was made during Roman times
- I know about some chefs who have created bread recipes
- I can develop sensory vocabulary and knowledge using, smell, taste, texture and feel
- I can analyse the taste, texture, smell and appearance of a range of foods
- I know a basic recipe for bread / pasta
- I can follow instructions
- I can make healthy eating choices from and understanding of a balanced diet
- I can explain importance of food and drink for active, healthy bodies
- I know that a variety of different, and sometimes unusual, foods are used all over the world. (and I know the foods that were available to the Romans)
- I understand that ingredients can be fresh, pre-cooked or processed
- I can join and combine a range of ingredients and comment on their success.
- I can work safely and hygienically
- I can measure and weigh ingredients appropriately
- I can select and use suitable cooking equipment safely including baking equipment
- I can use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading, proofing and baking
- I can identify the strengths and weaknesses of my design ideas
- I can decide which design idea to develop
- I can consider the design criteria to evaluate product and explain how the finished product could be improved
- I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user.







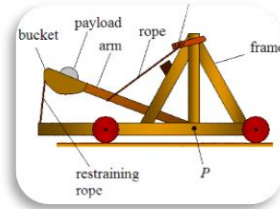
Newbald Primary School Year 3 & 4

Project: Medieval Catapults

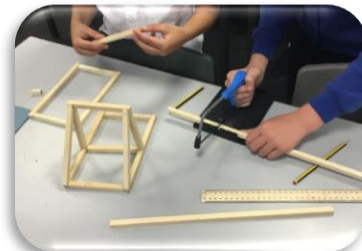
Term: Summer Term

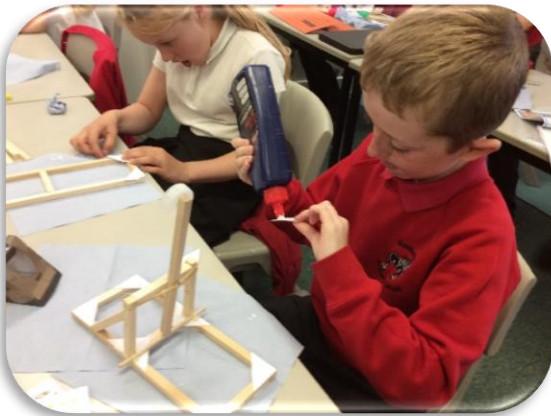
D&T Focus: Construction

Topic Link: The Middle Ages



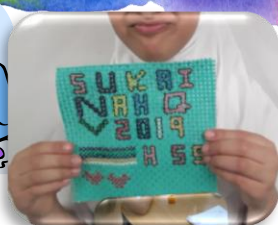
- I can know about some ground-breaking products use researching catapults used during the middle ages
- I can research and evaluate existing catapult toys & models
- I can make a prototype
- I can begin to use computers to show design.
- I can include annotations on my designs and explain design decisions considering availability of resources
- I can produce a plan and explain it including how the product will work to others (including identifying how realistic the plan is).
- I can refer to design criteria while designing and making
- I can decide which design idea to develop
- I can cut thin wood/dowel using hacksaw and bench hook
- I can create a wooden shell or frame structure
- I know and can use different methods for joining wood including a butt joint and mitre joint
- I can use levers and linkages to create movement
- I know how I can strengthen my wood joints
- I can measure and mark square selection, strip and dowel accordingly to 1cm
- I can use a cool melt glue gun with close supervision (one to one)
- I can identify the strengths and weaknesses of my design ideas
- I can consider and explain how the finished product could be improved
- I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user.
- I can begin to explain how I could improve upon my design if I were to do it again





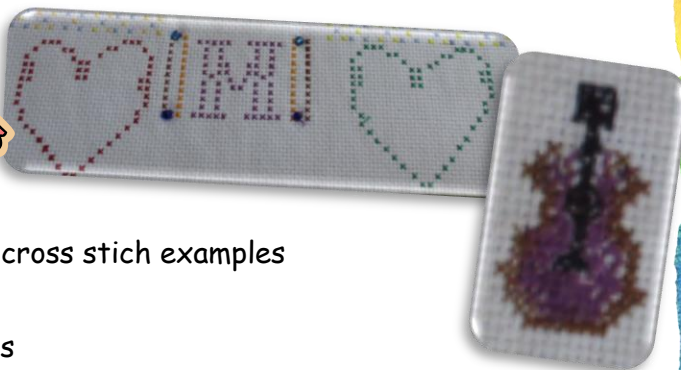


Newbald Primary School
Year 3 & 4



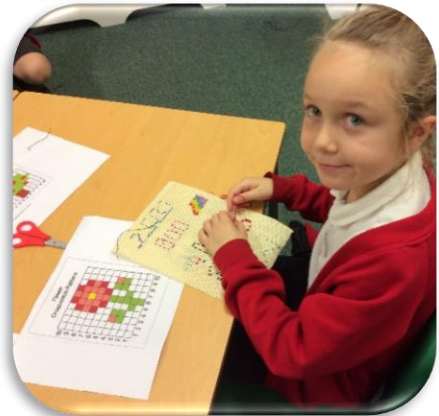
Project: Victorian Samplers

Term: Autumn Term
D&T Focus: Textiles
Topic Link: Victorians



- I can research Victorian samplers and cross stitch examples
- I can create a simple textile pattern
- I can understand the need for patterns
- I can simulate my design on the computer
- I can investigate and research ways in using textiles to create aesthetically pleasing patterns such as cross stitch, knitting or weaving
- I can think of ways that cross stitch, knitting or weaving could be incorporated into products
- I can incorporate a decorative use of textiles into a product designed specifically for someone else.
- I can use the design criteria to inform my decisions about ways to proceed
- I can justify my decisions about materials and methods of construction
- I can reflect on my work using design criteria stating how well the design fits the needs of the user
- I can identify what does and does not work in the product.
- I can make suggestions as how my design could be improved
- I can evaluate my product
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can talk about what I would do differently if I were to do it again and why







Newbald Primary School Year 3 & 4

Project: Indian Meal & Tea

Term: Spring Term

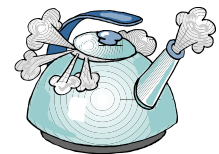
D&T Focus: Food

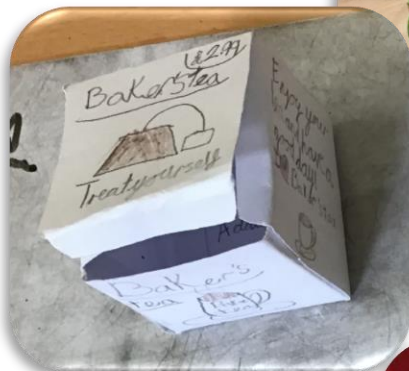
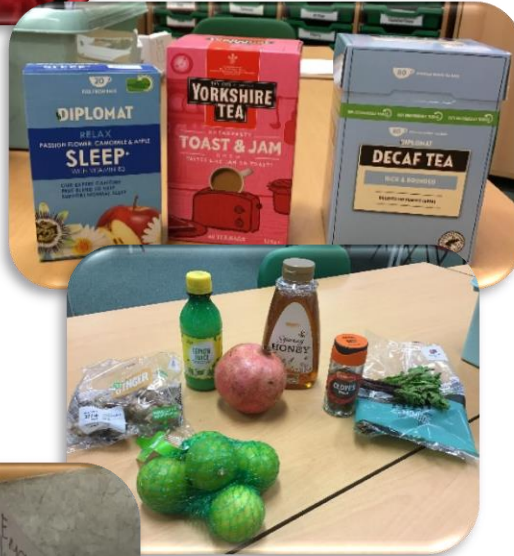
Topic Link: India



Two food projects to create a brand of tea and brand the invented/ tea recipe drink considering packaging and labelling & to make an savoury meal using Indian ingredients such as a curry (The meal will include rice)

- I can research teas and fruit teas
- I can develop sensory vocabulary and knowledge using, smell, taste, texture and feel
- I can analyse the taste, texture, smell and appearance of a range of drinks
- I can follow instructions
- I can use a kettle, with supervision, safely
- I can join and combine a range of ingredients and comment on their success.
- I can work safely and hygienically
- I can pour, measure and weigh ingredients appropriately
- I can identify the strengths and weaknesses of my design ideas
- I can decide which design idea to develop
- I can consider branding of a product and how the product could be sold
- I can create packaging for my tea product
- I can consider and explain how the finished product could be improved
- I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user.
- I can research foods grown / reared in India & I know how rice is grown
- I can say where some food comes from (animal, underground etc.) and I can describe how food is farmed, home-grown, caught etc
- I can explain what makes a diet healthy and varied and can cook a healthy balanced meal.
- I can plan / recipe method and make suggestions as to what I need to do next.
- I can prepare and cook/assemble a healthy and tasty Indian style meal that included rice.
- I can talk about my designs as they develop and identify good and bad points
- I can talk about any changes made during the making process
- I can discuss how closely my finished products meet my design criteria
- I can say what I like and do not like about items that I have made and attempt to say why
- I can talk about what I would do differently if I were to do it again and why





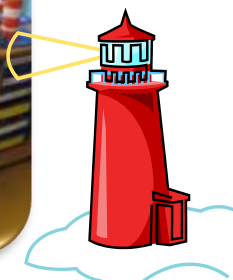


Project: Electrical Lighthouses (Construction)

Term: Summer Term
D&T Focus: Construction
Topic Link: Coasts



- I can research lighthouses
- I can research models of lighthouses and I can consider the use of these products
- I can investigate circuits
- I can consider how computers and circuits can be used to make a bulb flash
- I can Incorporate a circuit with a bulb or buzzer into a model
- I can create a shell or frame structure from any relevant material of choice.
- I can strengthen frames or structures with diagonal struts
- I can make structures more stable by giving them a wide base
- I can prototype frame and shell structures out of a cheaper material and evaluate its success.
- I can measure, mark and prepare a range of materials accurately and carefully
- I can select most appropriate tools / techniques when working on my model
- I can use a cool melt glue gun with close supervision (one to one)
- I can identify the strengths and weaknesses of my design ideas
- I can explain alterations to product after checking it
- I can decide which design idea to develop
- I can consider and explain how the finished product could be improved
- I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user.
- I can begin to explain how I could improve upon my design if I were to do it again







Newbald Primary School Year 5 & 6



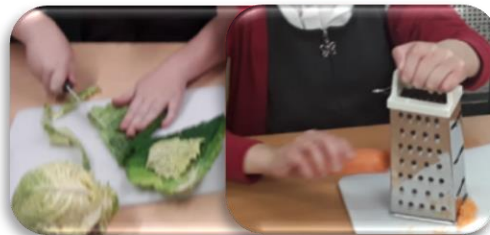
Project: Creating Savoury Meals Using Rations

Cycle: 2

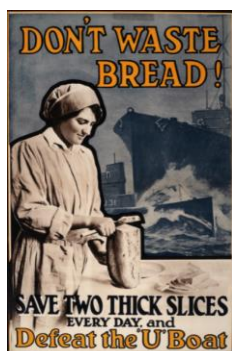
Term: Autumn Term

D&T Focus: Food

Topic Link: World War 1



- I can research and design recipe for a meal using food that would have been available during World War 1
- I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
- I can develop sensory vocabulary and knowledge using, smell, taste, texture and feel
- I can analyse the taste, texture, smell and appearance of a range of foods
- I can draw on market research to inform my designs and ingredient choices
- I can create own design criteria and specification
- I know a basic recipe
- I can follow instructions
- I can make healthy eating choices from and understanding of a balanced & varied diet
- I know that a variety of different, and sometimes unusual, foods that were available in Britain during WW1
- I can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
- I can join and combine a range of ingredients and comment on their success.
- I can work safely and hygienically
- I can measure and weigh ingredients appropriately
- I can identify the strengths and weaknesses of my recipe design ideas
- I can decide which design idea to develop
- I can consider and explain how the finished product could be improved
- I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user







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Project: Creating a Greek / Trojan Horse Cam Toy

Cycle: 2

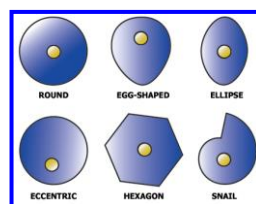
Term: Spring Term

D&T Focus: Construction

Topic Link: Ancient Greeks



- I can use research and know how cams work
- I can use research and evaluate toys and models that use cams
- I can identify a 'user' and research the user's individual needs, wants, requirements for my design
- I can to create my own design criteria and specification (design brief)
- I can come up with innovative design ideas and show how my design meets the design criteria.
- I can identify features of design that will appeal to the intended user
- I can follow and refine a logical plan
- I can create and use annotated sketches, cross-sectional planning and exploded diagrams
- I can create, follow, and adapt detailed step-by-step plans and design decisions, considering, resources and cost
- I can clearly explain how parts of design will work, and how they are fit for purpose
- I can independently model and refine design ideas by making prototypes and using pattern pieces e.g. create a model to experiment with how my cam system will work
- I can use computers to aid my designs
- I can use a Bradawl to mark hole positions (Close supervision)
- I can use hand drill to drill tight and loose fit holes
- I can cut strip wood, dowel, square section wood accurately to 1mm
- I can join materials using appropriate methods
- I can use a cam to make an up and down mechanism.
- I can build frameworks using a range of materials e.g. wood, card, corrugated plastic to support mechanisms
- I can use a cool melt glue gun with close supervision
- I can use the design criteria to inform my decisions about ways to proceed
- I can select materials carefully, considering intended use of the product, the aesthetics and functionality. reinforce and strengthen a 3D structure or product
- I can accurately assemble, join, combine, measure, mark out, cut and shape materials/components
- I can accurately apply a range of finishing techniques
- I can have at least one idea about how to create product and suggest improvements for design during the making process and make changes to improve quality.
- I can reflect on my work using design criteria stating how well the design fits the needs of the user and explain how product will appeal to audience
- I can identify what does and does not work in the product.
- I can make suggestions as how my design could be improved







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Project: Textile Maps

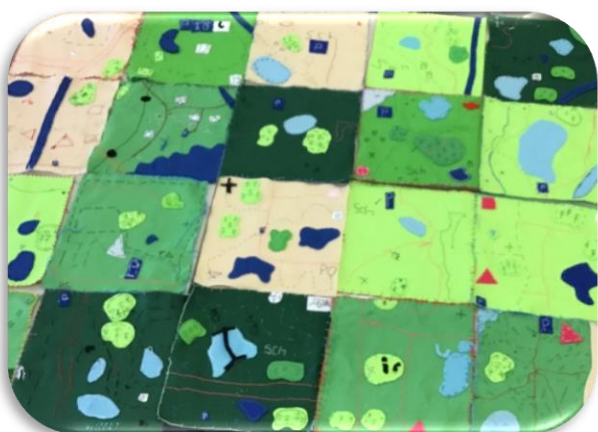


Term: Summer Term
D&T Focus: Textiles
Topic Link: Maps & Rivers



- I can research maps and think of creative ways I could use textiles to create them.
- I can think about how product might be sold and I can draw on market research to inform design
- I can use research of user's individual needs, wants, requirements to create a design criteria and specification
- I can think about user's wants/needs and aesthetics when choosing textiles and I can identify features of my design that will appeal to the intended user
- I can come up with innovative design ideas use annotated sketches and diagrams
- I can make design decisions, considering, resources and cost
- I can make a prototype
- I can understand that a single textiles project (including 3D projects) can be made from a combination of fabric shapes.
- I can decorate textiles appropriately often before joining components
- I can pin and tack fabric pieces together
- I can use a range of techniques to join fabrics using over sewing, back stitch, blanket stitch or machine stitching (one to one supervision when using sewing machines)
- I can make product attractive and strong
- I can combine different types of fabrics
- I can make quality products
- I can use the design criteria to inform my decisions about ways to proceed
- I can justify my decisions about materials and methods of construction
- I can reflect on my work using design criteria stating how well the design fits the needs of the user
- I can identify what does and does not work in the product.
- I can think carefully and make suggestions about what would improve my product.







Newbald Primary School Year 5 & 6

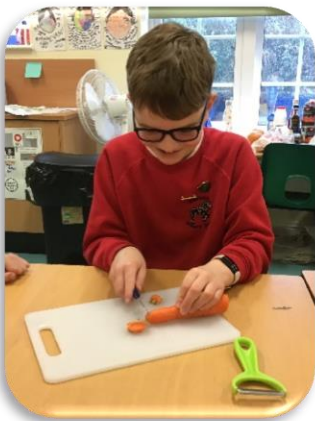
Project: Savoury Meal inspired by Europe e.g. Spaghetti / pasta bolognaise

Term: Autumn Term
D&T Focus: Food
Topic Link: Europe



- I can research and design recipe for a meal using food that is traditionally grown /reared and cooked in Europe e.g. pasta bolognaise
- I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
- I can develop sensory vocabulary and knowledge using, smell, taste, texture and feel
- I can analyse the taste, texture, smell and appearance of a range of foods
- I can draw on market research to inform my designs and ingredient choices
- I can create own design criteria and specification
- I know a basic recipe
- I can follow instructions
- I can make healthy eating choices from and understanding of a balanced & varied diet
- I know that a variety of different, and sometimes unusual, foods that are available and eaten in Europe
- I can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, frying, boiling, etc
- I can join and combine a range of ingredients and comment on their success.
- I can work safely and hygienically
- I can measure and weigh ingredients appropriately
- I can identify the strengths and weaknesses of my recipe design ideas
- I can decide which design idea to develop
- I can consider and explain how the finished product could be improved
- I can discuss how well the finished product meets the design criteria and how well it meets the needs of the user







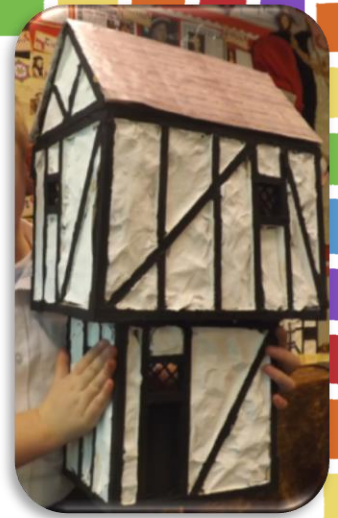
Newbald Primary School Year 5 & 6

Project: Tudor Houses

Term: Spring Term

D&T Focus: Construction

Topic Link: The Tudors



- I can research Tudor houses
- I can research models of Tudor houses and I can consider their use as a product
- I can identify a 'user' (the school) and research the user's individual needs, wants, requirements for my design
 - I can to create my own design criteria and specification (design brief)
 - I can come up with innovative design ideas and show how my design meets the design criteria.
 - I can identify features of design that will appeal to the intended user
 - I can follow and refine a logical plan
 - I can create and use annotated sketches, cross-sectional planning and exploded diagrams
 - I can create, follow, and adapt detailed step-by-step plans and design decisions, considering, resources and cost
- I can consider health and safety aspects when using tools
- I can cut thin wood/dowel using hacksaw and bench hook
- I can select materials carefully, considering intended use of the product, the aesthetics and functionality.
- I can create a wooden shell or frame structure
- I know and can use different methods for joining wood including a butt joint and mitre joint
- I know how I can strengthen my wood joints and I can reinforce and strengthen a 3D structure or product
- I can prototype frame and shell structures
- I can measure and mark square selection, strip and dowel accordingly to 1cm
- I can use a cool melt glue gun with close supervision (one to one)
- I can identify the strengths and weaknesses of my design ideas
- I can refine my product after testing, considering aesthetics, functionality and purpose
- I can decide which design idea to develop
- I can consider and explain how the finished product could be improved• I can reflect on my work using design criteria stating how well the design fits the needs of the user and explain how product will appeal to audience
 - I can make suggestions as how my design could be improved if I made the product again.







Newbald Primary School
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Project: Sewn 60s Tie-dye products (peg bag, draw string bag, waistcoat / t-shirt etc) (Textiles)

Term: Summer Term

D&T Focus: Textiles

Topic Link: Britain Since 1945



- I can research textile products and I can identify how they were created.
- I know that fabrics can be dyed and coloured.
- I can use a tie dye effect to create fabric that can be used in my design.
- I can think about how market research can inform my design
- I can use research of user's individual needs, wants, requirements to create a design criteria and specification
- I can think about user's wants/needs and aesthetics when choosing textiles and I can identify features of my design that will appeal to the intended user
- I can come up with innovative design ideas use annotated sketches and diagrams
- I can make design decisions, considering, resources and cost
- I can create 3D items, products or clothing using pattern pieces and seam allowance
- I can understand pattern layout
- I can decorate textiles appropriately often before joining components
- I can pin and tack fabric pieces together
- I can join fabrics using over sewing, back stitch, blanket stitch or machine stitching (one to one supervision when using sewing machines)
- I can combine different types of fabrics
- I can make quality products
- I can use the design criteria to inform my decisions about ways to proceed
- I can justify my decisions about materials and methods of construction
- I can reflect on my work using design criteria stating how well the design fits the needs of the user
- I can identify what does and does not work in the product.
- I can think carefully and make suggestions about what would improve my product.





