## Dame Catherine Harpur's Design and Technology Curriculum (version Jan 2024)

## Our vision for design and technology

We believe that design and technology empowers all children to create products that solve real-life problems. Through teaching design and technology, our children will demonstrate an understanding of the design process, as well as the ability to develop, evaluate and modify their designs to produce a successful, finished product. Our vision is that children at Dame Catherine's will be equipped with a foundation of knowledge and skills that enable them to contribute to, and flourish in, a world where design and technological solutions play an important role in solving issues both locally and in wider society.

## Intent : what we teach and why we teach it


#### Abstract

We believe that by giving children the skills and knowledge to create, that we can better foster their creativity, problem solving and independence. Our much loved Art Show is an example of the value that we place upon creativity at DCHS. It is important to us that we are able to develop skills and processes throughout children's time at DCHS that aid them in participating successfully in an increasingly technological world, building and applying a repertoire of knowledge, understanding and skills in order to design and make products for a wide range of users. Children should be looking at a range of disciplines for inspiration (including but not limited to the STEM subjects, computing, and art). Pupils will learn to become resourceful and innovative and to take risks with their plans and designs. Developing confidence through desi We think it is important for children to have the opportunity to critique, evaluate, test and revise their ideas and products, and to use the work of others to support them in doing this. In addition to product design, Design Technology at DCHS includes food technology. Understanding and applying the principles of nutrition and cooking is a vital skill for children to take away from primary school and we hope to provide ample opportunities for children to explore these concepts and more in cross curricular and cross-cultural ways. As a globally minded school we are committed to educating children about life beyond the UK, for example in designing and making Moon Cakes to celebrate the Mid Autumn Festival. Design Technology is so much more than just designing and making and allows children the space to learn and apply core skills such as Mathematics, English and Science in an engaging and practical way.


## Implementation: what this looks like in practice

This will be through a combination of discrete teaching blocks (e.g. Design Days/Weeks) in addition to ongoing project time. Our challenge curriculum allows for flexibility with our project time and we are able to follow the children's interests in order to meet our curriculum goals. Most of our curriculum themes will have some form of design or technological link although in some topics this will be more overt than others. Some challenge questions, for example "Who would like a peek into Santa's workshop?" will have a stronger design focus as children will be designing and evaluating their own toys and games. Our 'Off Piste' work, which responds to current events and interests, will also play a role in supporting this model. Wider opportunities for creation will be linked into our themes and subject learning, ensuring that our design work has a purpose and that quality time is spent on learning in a relevant and focused way. By linking projects to our big (and small) questions and allowing proper time for this, we hope to foster high quality design work.

There are details of the themes to be incorporated in our progression document which will allow us to ensure breadth whilst still being flexible in our incorporation of these skills into our curriculum. This will provide a picture over a rolling 3 to 4 year period. We are fortunate to be able to have a flexible approach, allowing us to cater to the needs of our mixed age and part-time groups. We are able to tailor our approach to the needs of the cohort and hope to imbue children with the knowledge and confidence to become designers and problem solvers as they move through the school, and by celebrating innovation and creativity we hope to ignite a passion for Design and Technology in our students.

## Impact: the effects of the experiences the children have in DCHS

Through our work with pupils, teaching of skills and provision of opportunities to apply, we will ensure that our children are confident to design products, apply cooking skills, and consider novel uses of technology in their day to day lives. Children will be able to apply skills across projects, e.g. joining skills being taught in a toy-making project and then being applied later in school when creating scale models. Children will be supported to learn appropriate vocabulary and where possible we will follow Children's interests in order to foster a genuine interest and curiosity about product design. As children move through the school they will learn about key designers of the past, in addition to considering more recent design innovations and their impact (e.g. fridges that do not require electricity). As with all areas of our curriculum, we encourage children to take ownership of their learning and development by inputting their interests and ideas. Through work with food technology, cooking and nutrition we want to develop a love of cooking. Instilling such a love of cooking will open the doors to one of the great expressions of human creativity as well as giving children key life skills.

## Our curriculum overview

| Three and Four Year olds | Four and Five Year Olds | ELGs (milestones leading into stage D) |
| :---: | :---: | :---: |
|  | Contexts |  |

- Explore different materials, using all their senses to investigate them.
- Manipulate and play with different materials.
- Use ther imagination as they consider what they can do with materials.
- Make simple models which express their ideas.


## 5-7 years stages $D$ and $A$

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 will be taught:

## Designing

- 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 imaginative ad complex 'small worlds' with blocks and construction kits, e.g. a city with different buildings, a park
- Explore different materials freely, developing their ideas about how to use them and what to make
- Develop own ideas and decide which materials to use to express them
- Join different materials and explore different textures.

Expressive Art 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.
- Make use of props and materials when role playing characters in narratives and stories.
- Children know the importance for good health of a healthy diet.

| 5-7 years stages D and $A$ | 7-11 years stages M, E, C and H |
| :---: | :---: |
| 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. <br> 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]. <br> When designing and making, pupils will be taught: <br> Designing <br> - Design purposeful, functional, appealing products for themselves and other users based on design criteria <br> - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <br> Making | 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. <br> They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. <br> When designing and making, pupils will be taught: <br> Designing <br> - 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 <br> - 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 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


## Evaluation

- Explore and evaluate a range of existing products le 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.


## Cooking and Nutrition

## Pupils will be taught ...

3-4/4-5 year olds: To begin to develop a food vocabulary using taste, smell, texture and feel. They start to think about the need for a variety of foods in a diet.

## 5-7 years

- Use the basic principles of a healthy and varied diet to prepare dishes
- 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


## Evaluation

- 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 contro their products.


## 7-11 years

- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of savoury dishes and sweet dishes using a range of cooking techniques, using recipes but also adapting recipes to create their own dishes
- Have a good knowledge of cuisines linked to different cultures and the opportunity to create these dishes
- Have the opportunity to make food / meals for others to try and evaluate
- Understand where food comes from.
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Vocabulary / Knowledge Map

|  | Design and Develop | Making |  | Product | Evaluation |
| :---: | :---: | :---: | :---: | :---: | :---: |
| E | - Plan <br> - Draw <br> - Ideas <br> - Design | - Make <br> - Build <br> - Combine <br> - Join <br> - Shape <br> - Tools |  | - Complete <br> - Product <br> - Final | - Change <br> - Like <br> - Dislike <br> - Next Time <br> - Better <br> - Worse <br> - Different <br> - Instead |
|  | Design | Technical Knowledge/Making |  | Cooking and Nutrition | Evaluate |
| K S 1 | - Plan <br> - Prepare <br> - Design <br> - Materials <br> - Ideas <br> - Use <br> - Model <br> - Development <br> - Market Research <br> - Survey <br> - Template | - Fast - Fix <br> - Slow - Glue <br> - Faster - Attach <br> - Slower - Features <br> - Up - Brick <br> - Down - Wood <br> - Turn - Stone <br> - Wind up - Cloth <br> - Design - Metal <br> - Draw - Foam <br> - Sketch - Felt <br> - Tools - Paper | - Tissue <br> - Newspaper <br> - Cardboard <br> - String <br> - Wool <br> - Clay <br> - Scissors <br> - Glue <br> - Tape <br> - Cut <br> - Stick <br> - Decorate | - Healthy - Ingredients <br> - Unhealthy - Recipe <br> - Source - Weight <br> - Fruit - Nutrients <br> - Vegetables - Vegetarian <br> - Clean - Dietary <br> - Safe  <br> requirements  <br> - Dirty  <br> - Unsafe  <br> - Amount  | - Change <br> - Improve <br> - Prefer <br> - Useful <br> - Unsuccessful <br> - Future <br> - Progress <br> - Modify <br> - Alter <br> - Adapt <br> - Original <br> - Finished Article <br> - Evaluate |


|  |  |  |  | - Graphics |
| :---: | :---: | :---: | :---: | :---: |
| K |  | - Materials <br> - Mould <br> - Liquid <br> - Solid <br> - Form <br> - Shape <br> - Adhesive <br> - Mass Produce <br> - Handmade <br> - Packaging <br> - Presentation <br> - Machine Made <br> - Dimensions <br> - Durable <br> - Lattice | - Healthy - Cross <br> - Unhealthy $\quad$ contamination <br> - Balanced - Grams <br> - Vitamins - Storage <br> - Disease - Presentation <br> - Nutrition - Taste <br> - Healthy Eating - Texture <br> - Hygiene - Flavour <br> - Diet - Disinfect <br>  - Bacteria | - Assess <br> - Edit <br> - Improve <br> - Alter <br> - Outcome <br> - Develop <br> - Test <br> - Analyse <br> - Effective <br> - Fit for Purpose <br> - Design Criteria <br> - Alternatives <br> - Models <br> - Quality <br> - Function <br> - Functionality |

## Detailed Progression Guidance for Skills in Design Technology

| Area | 5-7 years | 7-11 years |
| :---: | :---: | :---: |
| Designing <br> Understanding contexts, users and purposes <br> Generating, developing, modelling and communicating ideas | (EYFS: Select appropriate resources and express ideas using gestures, talking and arrangements of materials and components to show design. Use contexts set by the teacher and myself. Begin to use the language of designing and making (join, build, shape, longer, shorter, heavier etc.) <br> To have own ideas and to explain what I want to do, explaining what my product is for, how it will work. To use pictures and words to plan, begin to use models. To design a product for myself following design criteria and to research similar existing products <br> To have own ideas and plan what to do next. To explain what I want to do and describe how I may do it. To explain purpose of product, how it will work and how it will be suitable for the user. To describe design using pictures, words, models, diagrams, begin to use ICT. Begin to design products for myself and others following design criteria and to choose best tools and materials, and explain choices, using knowledge of existing products to produce ideas | Begin to research others' needs and to show design meets a range of requirements. To describe purpose of product and follow a given design criteria. To 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 <br> * 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. <br> *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 <br> * 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, crosssectional 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 |

## Making Planning

 Practical skills and techniquesSelect 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

## Evaluating

Own ideas and products Existing products
Key events and individuals
(EYFS* Construct with a purpose, using a variety of resources *Use simple tools and techniques *Build / construct with a wide range of objects *Select tools \& techniques to shape, assemble and join *Replicate structures with materials / components *Discuss how to make an activity safe and hygienic *Record experiences by drawing, writing, voice recording *Understand different media can be combined for a purpose)

To explain what I'm making and why I am making it, and to think about what needs to be done next. To select tools/equipment to cut, shape, join, finish and explain choices and to measure, mark out, cut and shape (with support). To choose suitable materials and explain choices. To consider use of finishing techniques to make the product look good and to work in a safe and hygienic manner

To 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 *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
(EYFS: Adapt work if necessary *Dismantle, examine, talk about existing objects/structures *Consider and manage some risks *Practise some appropriate safety measures independently *Talk about how things work *Look at similarities and differences between existing objects / materials / tools *Show an interest in technological toys *Describe textures)
*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
* 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

| *Explore and <br> evaluate a range of <br> existing products <br> *Evaluate their ideas <br> and products against <br> design criteria | *talk about my work, linking it to what I was asked to do <br> * talk about existing products considering: use, <br> materials, how they work, audience, where they might <br> be used *talk about existing products, and say what is <br> and isn't good * talk about things that other people <br> have made *begin to talk about what could make <br> product better | *refer to design criteria while designing and making *use criteria to evaluate <br> product * begin to explain how I could improve original design *evaluate existing <br> products, considering: how well they've been made, materials, whether they work, <br> how they have been made, fit for purpose * discuss by whom, when and where <br> products were designed * research whether products can be recycled or reused * <br> know about some inventors/designers/ engineers/chefs/manufacturers of ground- <br> breaking products |
| :---: | :--- | :--- |
| 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 |  |  |$\quad$| *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 groundbreaking |
| products |

example, levers, sliders, wheels and axles], in their products.
Textiles:
Choose appropriate materials for the project and join appropriately.

Materials
exploring how construction can be made stronger, stiffer and more stable
*begin to use levers or slides
*use levers or slides *begin to understand how to use wheels and axles

## Materials and Structures:

*begin to measure and join materials, with some support *describe differences in materials *suggest ways to make material/product stronger *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
*select materials carefully, considering intended use of the product, the aesthetics and functionality. *explain how product meets design criteria * reinforce and strengthen a 3D frame

## Mechanisms

*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
*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
*refine product after testing *grow in confidence about trying new / different ideas *begin to use cams, pulleys or gears to create movement
*refine product after testing, considering aesthetics, functionality and purpose *incorporate hydraulics and pneumatics *be confident to try new / different ideas *use cams, pulleys or gears to create movement

## Textiles

*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 <br> carefully about what would improve product *understand that a single 3D textiles <br> project can be made from a combination of fabric shapes. |
| :--- | :--- | :--- |


|  |  |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

*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 *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 savoury 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

Dame Catherine Harpur's Design Technology Coverage and Progression year by year
5-7 year olds

| Year and term | Coverage | Curriculum question (where relevant) | Focus skill areas | Progression notes (according to year groups or existing art and design knowledge and ability) |
| :---: | :---: | :---: | :---: | :---: |
| Autumn 2021 | Making toys Looking at historical toys and considering what is the same / different and what they like about them |  | Evaluating own work Mechanisms eg. wheels |  |
| Spring 2022 | CNY foods and making Pho Design a Langar Meal (Vegetarian meal) |  | Cooking and Nutrition Evaluating own work Constructing and designing with a purpose. |  |
| Summer 2022 | Design and make a Jubilee trifle <br> Animal habitat diorama | What colour is your world? | Designing <br> Cooking and nutrition Design an animal habitat |  |


|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Autumn 2022 | Making bear masks <br> Making fairy headdresses <br> for Samhain <br> Make soul cakes <br> Space themed | Bear mini theme (off-piste) <br> How to attach things to headdresses <br> Cooking and nutrition |  |  |
| Spring 2023 | Making Easter decorations <br> Making an Egg Drop <br> protection device (linked to <br> Mini Grey) <br> Paper cities <br> Design a keychain for STEM <br> challenge |  | Designing <br> Cooking and nutrition <br> Evaluating own work <br> Constructing and designing with a <br> purpose. <br> Mechanisms |  |
| Summer 2023 | Looking at different methods <br> of making e.g. baking <br> techniques, types of join, <br> choice of material and how to <br> sew (bunting for jubilee) <br> Making diorama for stick <br> insect habitat- what joining <br> techniques to use <br> Model stick insect. | What colour is our <br> world? | Technical knowledge <br> Cutting <br> Making <br> Technical skills and wirework/beading. |  |
| Spring 2024 | Dam-making Is it really all <br> Summer 2024  | Combining materials <br> Material properties <br> Prototypes <br> Evaluating |  |  |

## 7-11 year olds

| Year and term | Coverage | Curriculum question <br> (where relevant) | Focus skill areas | Progression notes (according to year <br> groups or existing art and design <br> knowledge and ability) |
| :---: | :---: | :---: | :---: | :---: |


| Autumn 2021 | Construction of water wheels (link to school visit) <br> Design and evaluate anemometer <br> Design and build a 2D parklet and 3D model parklet | What's our Power? | Making - using lego - in groups Evaluate and refine <br> Evaluate as staff try to create initial design. Design own in groups <br> Produce plans <br> Use internet and questionnaires to research design ideas. Take users view into account and needs of groups | Age groups considered in grouping <br> Breadth of materials available eg. playdough for younger children |
| :---: | :---: | :---: | :---: | :---: |
| Autumn 2021 <br> Cooking and nutrition | Apple Day: Reibekuchen Create a cookbook to sell |  | Adapting recipes, making substitutions to design own recipes eg. egg tarts, lentil pie, Thai curry. Adapting recipes to make them vegan. Adapting recipes to make them lower carbon emissions. | Older children making recipes independently |
| Spring 2022 | Make a wayfinding boat <br> Kite making <br> Design and make a Kalimba | Are myths merely misconceptions? <br> Off Piste (Windy Day day) | Making using historical info. and pictures. Use various materials for boat, oars and sails including linen and wood. Consider how to join materials. <br> Similar materials to above <br> Designing, considering advantages and disadvantages of different materials according to strength, sound quality, ease of use, appearance. <br> Making - consider functionality and appearance | Older children constructing independently |


| Spring 2022 Cooking and nutrition | Make and decorate Masurek (Polish Easter Cake | Off Piste | Parent volunteered to do a workshop |  |
| :---: | :---: | :---: | :---: | :---: |
| Summer 2022 Cooking and nutrition | Study of school dinners over the past century and compare how balanced and healthy the meals were. Made chocolate crunch and rice pudding |  | Adapting recipes for groups such as vegans |  |
| Autumn 2022 | Making gummibears using gelatin and vegegel Making oil lamps (link with science) <br> Making glue (link with science) <br> Creating stage scenery / props | Shall we go up above or down under? | Focus on evaluation and redesigning Properties (waterproof, flammable etc.) <br> Designing and making using a range of materials |  |
| Autumn 2022 | Soul cakes <br> Colcannon <br> Mulled juice drink | Off Piste Paganism | Following recipes used in the past | Mixed age groups 3-11 years. Older ones supported younger ones |
| Spring 2023 | Design a submersible (on paper) <br> Make an island and volcano using Modroc <br> Design and make a giant squid and Nautilus <br> Use modelling clay to create sea creatures | Shall we go up above or down under? | Properties of a range materials which might be used to make a submersible <br> Designing and making using a range of materials | Children worked in groups with a member of staff to create the items linked to Jules Verne stories |
| Spring 2023 Cooking and nutrition | German foods and drinks | What are Europe's <br> Awes and <br> Abominations? | Kaffee und Kuchen German breakfast |  |
| Summer 2023 | Design and wire a house using knowledge of electrical systems | What are Europe's Awes and Abominations? | Electrical systems. use different types of circuit in product | Children applied knowledge from science at various levels (including KS3 curriculum) |


|  |  |  | think of ways in which adding a circuit would improve product (parallel and series) |  |
| :---: | :---: | :---: | :---: | :---: |
| Autumn 2023 | Cooking and nutrition <br> Link with outdoor learning and science - dam building <br> Raft building <br> Biofilters | Is it All Elementary? | Designing (after researching tastes) and creating their own flavours to design a wafer (inspired by different flavours of Kit Kat <br> Focus on comparing noodles of East Asia. Creating dishes incl. Ramen. Making a Japanese and Korean banquet for the whole school <br> Link with outdoor learning and science - designing, making and evaluating different models of a dam (prototype then a dam in the pond) <br> Making and evaluating rafts made of different woods <br> Evaluating and redesigning biofilters | Older children all prepared a meal for 3-7 year olds and staff <br> Older children built the final dam and led the designing process |
| Spring 2024 | Designing a gashapon machine <br> Making wands | Is it All Elementary? | Working in groups with staff to design a gashapon machine. Design and make small items to include in the machine <br> Explore different materials to create wands eg. paper, Modroc, paper mache, wood |  |

