

Mousehole School: Design and Technology Learning Sequence

Years 1 and 2			
Term	Autumn A	Spring A	Summer A
Enquiry question	Junk Modelling	Fruits and Vegetables - Soup	Bookmarks
Curriculum Links	Structures	Food and Nutrition	Materials
Outcome	Children can use a range of materials and tools to construct a junk model. They can use joining materials and scissors to realise their design.	Children can explore taste, texture and appearance of fruits and vegetables. They can use a knife to safely chop ingredients. They can say what they like about their design.	Children can explore different weaving and sewing techniques. They can plan this into a design and make it.
Sequence of Learning	<p>Design I can explore materials and tools and gather ideas for a model.</p> <p>Skill and Finger Fluency I can explore and investigate tools and materials.</p> <p>Skill and Finger Fluency I can develop cutting skills with scissors</p> <p>Design I can plan a model and choose materials</p> <p>Make I can explore ways to join a model together</p> <p>Evaluate I can share my finished model and talk about how I made it</p>	<p>Design I can taste, smell and feel different fruits and vegetables and think and bout what I like</p> <p>Skill and Finger Fluency I can use a knife to chop safely</p> <p>Design I can develop my own ideas for a tasty soup</p> <p>Make I can use knives safely to prepare vegetables</p> <p>Evaluate I can say what I liked about my soup. I can say what went well with my cutting skills.</p>	<p>Design I can explore threading and weaving in different</p> <p>Skill and Finger Fluency I can practise paper weaving</p> <p>Skill and Finger Fluency I can thread using wool and hessian</p> <p>Design I can gather ideas for my own bookmark design</p> <p>Make I can use threading and weaving to make my own bookmark</p> <p>Evaluate I can reflect on how I have chieved my design goals</p>
Vocabulary	cut shape bend tools materials build	fruit vegetable healthy prepare peel slice	thread weave sew bookmark materials

Mousehole School: Design and Technology Learning Sequence

Years 1 and 2			
Term	Autumn B	Spring B	Summer B
Enquiry question	Sewing	Smoothies	Wheels and Axels
Curriculum Links	Materials	Food and Nutrition	Mechanisms
Outcome	Children can join fabric using basic stitches. Children can design and make a character-based puppet using a preferred joining technique, before decorating	Children can make distinctions between fruit and vegetables. They can design a fruit smoothie.	Children can design and construct a moving vehicle with working wheels and axles. They can recognise that wheels and axles are used in everyday life, not just in cars.
Sequence of Learning	<p>Design I can explore existing products that are appealing and functional based on design criteria.</p> <p>Skill and Finger Fluency I can explore different ways to join fabrics e.g. glue, staples, pins and stitches.</p> <p>Design I can create a template for my design using paper</p> <p>Make I can join two fabrics together accurately</p> <p>Make I can select appropriate tools, and equipment to add embellishments to my design</p> <p>Evaluate I can evaluate my ideas and products against design criteria</p>	<p>Design I can identify if a food is a type of fruit and vegetable</p> <p>Skill and Finger Fluency I can suggest and explore appropriate tools to prepare different food</p> <p>Design I can identify where plants grow and which parts we eat</p> <p>Design I can state and compare fruit and vegetables before designing my own smoothie</p> <p>Make I can make a fruit or vegetable smoothie</p> <p>Evaluate I can evaluate my ideas and products against design criteria</p>	<p>Design I can identify what mechanism makes a toy or vehicle roll forward</p> <p>Skill and Finger Fluency I can explore wheels and axles and what stops wheels from turning</p> <p>Design I can design a moving vehicle</p> <p>Make I can make a wheel and axle mechanism</p> <p>Evaluate I can evaluate my design against my design criteria</p>
Vocabulary	hand puppet fabric safety pin staple stitch template	fruit vegetable healthy peel slice deseed	axle axle holder chassis diagram dowel mechanism

Mousehole School: Design and Technology Learning Sequence

Years 3 and 4			
Term	Autumn A	Spring A	Summer A
Enquiry question	Constructing a Castle	Pneumatic Monsters	Eating Seasonally
Curriculum Links	Structure - Architecture	Mechanisms	Food and Nutrition
Outcome	Children can identify and learn about key features of a castle before designing and constructing their own castle range of 3D geometric shapes using nets.	Children can explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams	Children can explain that fruits and vegetables grow in different countries based on their climates. They can understand that 'seasonal' fruits and vegetables are those that grow in a given season and taste best then.
Sequence of Learning	<p>Design I can explore what architecture is and zoom in on castle structures</p> <p>Design I can explore what 2D and 3D shapes are used to form strong and stable structures</p> <p>Skill and Finger Fluency I can fold and bend materials to form architectural shapes</p> <p>Make I can construct a castle to fit the design criteria</p> <p>Evaluate I can evaluate my ideas and products against design criteria</p>	<p>Design I can explore examples of and draw an exploded diagram</p> <p>Skill and Finger Fluency I can explore how pneumatic systems work</p> <p>Design I can design a toy that uses a pneumatic system by making thumbnail sketches and exploded diagrams</p> <p>Design I can create a pneumatic system to create a desired motion</p> <p>Make I can select appropriate tools and equipment to accurately create my product</p> <p>Evaluate I can evaluate my ideas and products against design criteria and consider the view of others to improve my work</p>	<p>Design I understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</p> <p>Skill and Finger Fluency I can follow a recipe to make a seasonal dish and evaluate the flavour combinations</p> <p>Design I can design a puff pastry tart using seasonal vegetables and fruit</p> <p>Make I can safely follow my recipe to make a puff pastry tart</p> <p>Evaluate I can evaluate my design against my design criteria</p>
Vocabulary	stable stiff strong scoring tab	exploded diagram input/output mechanism pneumatic system thumbnail sketch net	climate diet imported natural processed reared

Mousehole School: Design and Technology Learning Sequence

Years 3 and 4			
Term	Autumn B	Spring B	Summer B
Enquiry question	Constructing a Windmill	A Balanced Diet	Making a Moving Book
Curriculum Links	Structures	Food and Nutrition	Mechanisms
Outcome	Children can design and construct a windmill for a client (mouse) to live in. They can explore various types of windmills, how they work and their key features.	Children can name the main food groups and identify foods that belong to each group. They can select and use tools for food preparation safely. Children can design different wrap ideas, considering flavour combinations and a healthy balance	Children can make slider mechanisms and the movement they output, to design, make and evaluate a moving storybook from range of templates.
Sequence of Learning	<p>Design I can explore existing products. I can evaluate their effectiveness</p> <p>Skill and Finger Fluency I can explore making my own structure to make it stronger, stiffer and more stable</p> <p>Design I can discuss and draw a windmill design that is purposeful, functional and appealing using design criteria</p> <p>Make I can select appropriate tools and equipment to make my structure</p> <p>Evaluate I can evaluate my ideas and products against design criteria</p>	<p>Design I can understand what makes a balanced diet using food groups</p> <p>Skill and Finger Fluency I can suggest and explore appropriate tools to prepare different foods</p> <p>Design I can design three meals based on design criteria</p> <p>Make I can make healthy wrap</p> <p>Evaluate I can evaluate my ideas and products against design criteria</p>	<p>Skill and Finger Fluency I can explore and make slider mechanisms</p> <p>Design I can draw exploded designs</p> <p>Make I can select appropriate materials and components according to their functional properties and aesthetic qualities</p> <p>Evaluate I can evaluate my ideas and products against design criteria</p>
Vocabulary	model net stiff template stable/unstable strong/weak	balanced diet carbohydrate dairy protein grate peel	sliders adapt input aesthetic assemble mechanism

Mousehole School: Design and Technology Learning Sequence

Years 5 and 6			
Term	Autumn B	Spring B	Summer B
Enquiry question	Adapting a Recipe	Electric Posters	Navigating the World
Curriculum Links	Food and Nutrition	Electrical Systems	Digital World
Outcome	Children can carry out market research to inform their design. They can use a range of baking skills to make a biscuit batter or dough.	Children can create various forms of 'information design' before being briefed to develop an electric museum display	Children design and program a navigation tool to produce a multifunctional device for trekkers using CAD 3D modelling software.
Sequence of Learning	<p>Design I can carry out market research by testing and evaluating an existing biscuit</p> <p>Skill and Finger Fluency I can rub in, knead and use tools such as cutters</p> <p>Design I can select ingredients and follow a budget</p> <p>Design I can take inspiration from my existing packaging and innovate my own</p> <p>Make I can make and test my biscuit on a target audience</p> <p>Evaluate I can evaluate my product against a specification</p>	<p>Design I can research electrical posters to develop a range of initial ideas.</p> <p>Skill and Finger Fluency I can create a simple circuit that includes a bulb or LED</p> <p>Design I can develop an initial idea into a final design</p> <p>Make I assemble my final product and incorporate a simple circuit</p> <p>Make I can input my mechanisms into my own book design</p> <p>Evaluate I can evaluate my electrical poster products against design criteria</p>	<p>Design I can write a design brief and criteria based on a client request.</p> <p>Skill and Finger Fluency I can explore current tools for navigation</p> <p>Design I can write a program to include multiple functions as part of a navigation device</p> <p>Design I can develop a product idea through annotated sketches</p> <p>Make I can develop 3D CAD skills to produce a virtual model</p> <p>Evaluate I can evaluate my ideas and products against design criteria. I can present a pitch to 'sell' the product</p>
Vocabulary	knead rub in roll cream cutters target audience	circuit battery bulb system component crocodile wires product	navigation client function sustainable design product lifecycle product lifespan