



DESIGN AND TECHNOLOGY PROGRESSION GRID

Intent: At Dorothy Barley Infant School we believe that a high-quality design and technology curriculum sparks the creativity and imagination of the children. The hands-on lessons encourage pupils to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Through the evaluation of past and present design and technology, the pupils should develop a critical understanding of its impact on daily life and the wider world. By securing the basic principles of designing, making and evaluating, our children are well prepared for the Design and Technology curriculum at Key Stage Two and beyond.

SHINE:

- S – Sparking curiosity
- H – Hands on and active learning
- I – Independence
- N – New knowledge and skills
- E – Empowering experiences

SMSC:

- S – Spiritual
- M – Moral
- S – Social
- C – Cultural

NURSERY

RECEPTION

YEAR 1

YEAR 2

KEY VOCABULARY

paper
cut
fold
join
juicy
crunchy
fruit
vegetables
bridge
build
bake
bread
cook
car
boat
bus

card
metal
wood
plastic
weak
strong
sweet
sticky
cutting
vehicle
taste
cook
ingredients
mix
dough
design
structure
strong
plan
design

wheel
axel
body
cab
assemble
join
design
make
evaluate
slicing
peeling
fabric
sewing
needle
thread
healthy diet
nutrition
carbohydrate
dairy
sugar
protein

chassis
axle holder
dowel
function
design criteria
purpose
structure
framework
strengthen
running stitch
seam
finishing technique
user
assemble
mechanism
slider
lever
pivot

NURSERY	RECEPTION	YEAR 1	YEAR 2
Designing - Understanding contexts, users and purposes, generating, developing, modelling and communicating ideas			
<p>Explore different materials freely, to develop their ideas about how to use them and what to make</p> <p>Develop their own ideas and then decide which materials to use to express them</p>	<p>Generate ideas through discussion with an adult and with others</p> <p>Make decisions about what a product should look like, choosing between alternatives</p> <p>Represent ideas in drawing</p>	<p>Generate initial ideas through talking and using own experiences.</p> <p>Explore a variety of products and use this to come up with some simple ideas</p> <p>Design a product after discussing it's purpose and the design criteria</p> <p>Use talk and drawing to represent ideas</p>	<p>Generate initial ideas and simple design criteria through talking and using own experiences.</p> <p>Generate initial ideas and design criteria through investigating a variety of products</p> <p>Design appealing products for a particular user based on simple design criteria</p> <p>Develop and communicate ideas through talk, drawings and mock ups</p>
Making - Planning/ Practical skills and techniques			
<p>Make imaginative and complex 'small worlds' with blocks and construction kits</p> <p>Join different materials and explore different textures</p>	<p>Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.</p> <p>Working with paper and card to make simple flaps and hinges.</p> <p>Experience of using construction kits to build walls, towers and frameworks.</p> <p>Experience of using basic tools</p> <p>Experience of different methods of joining card and paper</p>	<p>Use a range of tools to cut, join and finish, for example scissors, glue and tape</p> <p>Understand that different materials are suitable for different projects and begin to select the most appropriate material</p> <p>Follow a series of steps to make a product</p> <p>Cut and join paper and card</p> <p>Use simple finishing techniques suitable for the product they are creating</p> <p>Join fabric by gluing and begin to experiment with stitching</p> <p>Use templates for marking out</p> <p>Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product</p> <p>Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely</p>	<p>Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing</p> <p>Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.</p> <p>Plan by selecting what to do next.</p> <p>Select and use tools, explaining their choices, to cut, shape and join paper and card.</p> <p>Use simple finishing techniques suitable for the product they are creating.</p> <p>Use new and reclaimed materials and construction kits to build structures</p> <p>Join fabric in simple ways by gluing and stitching</p> <p>Use simple patterns and templates for marking out.</p>

Evaluating - Own ideas and products/ Existing products

<p>Identify something that has been successful in what they have made</p>	<p>Explore moving vehicles through play</p> <p>Talk about what has been successful in what they have made</p> <p>Begin to think about whether their product works e.g. would this house be a good shelter?</p>	<p>Explore and evaluate a range of products with wheels and axels</p> <p>Evaluate a range of textile products.</p> <p>Taste and evaluate a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product</p> <p>Evaluate their completed products against their design, recognising where they have met the intended purpose of the product</p>	<p>Explore and evaluate a range of products with wheels and axels</p> <p>Explore a range of everyday products that use simple sliders and levers.</p> <p>Explore a range of freestanding structures in the school and local environment.</p> <p>Evaluate a range of textile products.</p> <p>Evaluate their ideas throughout and their products against original criteria, including intended user and purpose</p>
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Technical Knowledge - Making products work

<p>Join different materials and explore different textures</p> <p>Use simple equipment and utensils to help cook or bake a product</p> <p>Explore toys that produce movement</p>	<p>Know and use technical vocabulary relevant to the project</p> <p>Mechanisms Identify wheels on a range of wheeled vehicles Explore toys that produce different types of movements</p> <p>Structures Use construction kits to make structures</p> <p>Textiles Use gluing to join fabric</p> <p>Cooking and Nutrition Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance, taste and smell Experience of cutting soft fruit and vegetables using appropriate utensils</p>	<p>Know and use technical vocabulary relevant to the project</p> <p>Mechanisms Explore and use wheels, axels and axle holders.</p> <p>Textiles Know and understand different methods for joining fabric, including gluing and sewing</p> <p>Cooking and Nutrition Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely</p>	<p>Know and use technical vocabulary relevant to the project</p> <p>Mechanisms Explore and use wheels, axels and axle holders. Distinguish between fixed and freely moving axles Explore and use levers and sliders. Understand that different mechanisms produce different types of movement.</p> <p>Structures Know how to make freestanding structures stronger, stiffer and more stable.</p> <p>Textiles Know and understand different methods for joining fabric, including gluing and sewing</p>
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Assessment

Key Enquiry: Big Questions

<p>Nursery</p> <p>Expressive Arts & Design How can we make a toy work? How do vehicles go?</p>	<p>Reception</p> <p>Expressive Arts & Design How can we design and bake a gingerbread man?</p>	<p>Year 1</p> <p>Mechanisms How do we design and make a wheeled vehicle?</p>	<p>Year 2</p> <p>Mechanisms How do we create a moving scene using levers and sliders?</p>
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	<p>How can we bake bread?</p> <p>How can we build a bridge?</p>	<p>How can we create a character?</p> <p>How can we design and build a castle?</p> <p>How can we draw a plan?</p> <p>How can we build a house?</p>	<p>Cooking and Nutrition</p> <p>Where does our food come from?</p> <p>How do we make a healthy fruit smoothie?</p> <p>Joining</p> <p>How do we make a puppet using fabric?</p>	<p>How do we design and make a wheeled vehicle?</p> <p>Joining</p> <p>How do we make a cuddly toy?</p> <p>Structures</p> <p>How do we design and make a playground structure?</p>
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