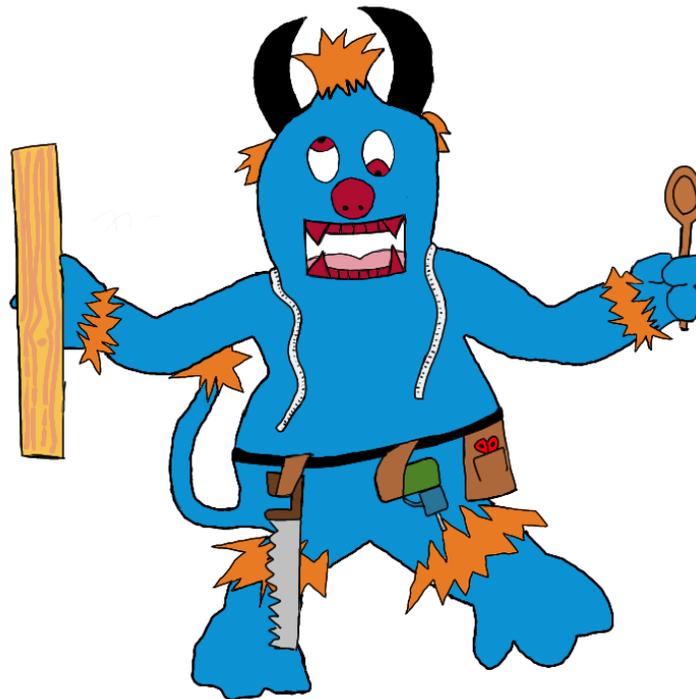


The Priestley Progress Path

Design & Technology



Placing learning at the heart of everything we do.



Working Creatively.

Designing & Making



Technical Knowledge

Cooking & Nutrition



Textiles

Intent

At Priestley School, we aim to provide a coherently planned sequence of lessons to ensure progressive coverage of the knowledge, understanding and skills required in the National Curriculum. We aim to inspire children through a broad range of practical experiences to create innovative designs which solve real and relevant problems within a variety of different contexts. The intention is to encourage children to identify real and relevant problems, critically evaluate existing products and then take risks and innovate when designing and creating solutions to the problems. As part of this process, time is built in to reflect, evaluate and improve on prototypes using design criteria throughout to support this process. Opportunities are provided for children to evaluate key events and individuals who have helped shape the world, showing the real impact of design and technology on the wider environment and helping to inspire children to become the next generation of innovators.

Implementation

Design and Technology skills and understanding are built into lessons, to allow for the revision of ideas to become part of good practice, which ultimately helps to build a depth to children's understanding. Revisiting and consolidating skills will help children to build on prior knowledge alongside introducing new skills, knowledge and challenge. The revision and introduction of key vocabulary is also built into each lesson. This vocabulary is then included in display materials and additional resources to ensure that children are allowed opportunities to repeat and revise this knowledge. At Priestley School, we intend to inspire pupils to develop a love of Design and Technology and show them how it has helped shaped the ever-evolving technological world they live in.

Impact

Using a wide range of resources, including display materials, will increase the profile of Design and Technology. The learning environment will be consistent, with Design and Technology technical vocabulary displayed, spoken and used by all learners. We want to ensure that Design and Technology is loved by teachers and pupils across the school, therefore encouraging them to want to continue building on this wealth of skills and understanding, now and in the future. Impact can also be measured through key questioning skills built into lessons, child-led assessment such as KWL grids, pupil conferencing and summative assessments aimed at targeting next steps in learning.



1. represent my own ideas, thoughts and feelings through design and technology
2. experiment with colour, design, texture, form and function.

Designing & Making

1. use what I have learnt about media and materials in original ways, thinking about uses and purposes.
2. use and explore a variety of materials, tools and techniques.

Technical Knowledge

1. use what I have learnt about different foods in original ways, thinking about how they arrive in my kitchen and what I need to do in order to eat them.
2. use and explore a variety of food, tools and techniques.

Cooking & Nutrition

Textiles

1. represent my own ideas, thoughts and feelings through design and technology
2. experiment with colour, design, texture, form and function.

EYFS Designers

Will be able to:

1. offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.
2. express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.

Communication & Language Speaking

1. safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
2. share their creations, explaining the process they have used.
3. make use of props and materials when role playing characters in narratives and stories.

Expressive Art & Design Creating with materials

1. hold a pencil effectively in preparation for fluent writing
2. use the tripod grip in almost all cases.
3. use a range of small tools, including scissors, paint brushes and cutlery.
4. begin to show accuracy and care when drawing.

Physical Development Fine Motor Skills

1. listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.
2. make comments about what they have heard and ask questions to clarify their understanding.
3. hold conversation when engaged in back-and-forth exchanges with their teacher and peers.

Communication & Language Listening, Communication & Attention



Designing & Making

1. make and design functional products based on design criteria.
2. make a simple plan for a product.
3. develop my practical skills in cutting, shaping, joining and finishing.
4. explore and talk about familiar existing products.
5. talk about how a product was made and find strengths and weaknesses.

Cooking & Nutrition

1. understand where basic foods come from.
2. identify healthy foods.
3. select ingredients to include in a simple healthy snack.
4. prepare a healthy snack.
5. begin to understand the importance of food safety and hygiene.



Year One Designers

Will be able to:

Technical Knowledge

1. build simple structures.
2. explore and use simple mechanisms in their products such as sliders and levers.

Textiles

1. begin to use the appropriate vocabulary to describe and name fabrics and tools.
2. cut out shapes which have been created by drawing around a template on to fabric.
3. decorate and colour fabrics using simple techniques such as gluing, printing and painting.



Designing & Making



1. design a functional product based on design criteria.
2. make a simple plan showing the development of their ideas.
3. use appropriate resources from a range of materials and components.
4. begin to use tools more effectively to join materials and components in different ways.
5. explore and talk about a variety of existing products.
6. communicate to others the strengths and weaknesses of their products.

Year Two Designers

Will be able to:

Technical Knowledge

1. explore how to make structures stronger.
2. explore and use simple mechanisms such as sliders and levers, wheels and axles in my products.

Textiles

1. refer to fabrics and tools using correct terminology.
2. join fabrics using a running stitch, glue, staples, Velcro and other sewing tape.
3. decorate and colour fabrics using a range of techniques with creativity and some accuracy.



KS1 Vocabulary



design designer material strong safety
change peeling chopping slicing mixing stitch
evaluate wheel balanced diet carbohydrate
protein fruit vegetables fats minerals oils
plastic cardboard product criteria technology feature
purpose test hygiene diagram structure
base strengthen attach hacksaw waterproof
flexibility texture deseeding dicing grating
horizontal vertical mechanism modify





KS1 Design & Technology

Year A



***Bright Lights
Big City***



***Enchanted
Woodland***



***Towers, Tunnels
& Turrets***



Year B



Moonzoom



***Wriggle &
Crawl***



***Street
Detectives***



Designing & Making

1. *design a functional and appealing product aimed at particular users, based on design criteria.*
2. *create a step-by-step plan showing my ideas.*
3. *select and use a wide range of materials and components, according to their characteristics.*
4. *use tools with improved accuracy.*
5. *investigate and begin to evaluate a range of existing products.*
6. *evaluate my ideas and products against my own design criteria.*

Cooking & Nutrition

1. *be aware of the seasonality of some foods.*
2. *use 'The Eatwell Guide' to plan and prepare a healthy balanced dish.*
3. *describe the taste, texture and appearance of different foods.*
4. *know how to be both hygienic and safe when using food.*



Textiles

1. *develop vocabulary for tools, materials and their properties.*
2. *select an appropriate resource to join fabric: glue, staples, Velcro and over sewing tape.*
3. *join fabrics using a running stitch and over sewing.*
4. *sew on buttons.*
5. *use appropriate decoration techniques to successfully make a product more attractive.*



Year Three Designers

Will be able to:

Technical Knowledge

1. *develop my understanding of how to strengthen, stiffen and reinforce structures.*
2. *explore and use mechanical systems in my products such as gears, pulleys, cams, levers and linkages.*



Designing & Making



1. *design a purposeful, functional and appealing product that is fit for purpose, aimed at particular individuals or groups based on design criteria.*
2. *create a step-by-step plan, which I can adapt, and change to improve my design.*
3. *experiment with materials, tools and techniques to improve my product.*
4. *evaluate products for both their purpose and appearance.*
5. *evaluate and suggest improvements to my products and original designs.*

Year Four Designers

Will be able to:

Technical Knowledge

1. *apply my understanding of how to strengthen, stiffen and reinforce structures by making a structure to withstand the weight of a specific object.*
2. *create a simple circuit incorporating switches, bulbs, buzzers and motors.*



Cooking & Nutrition

1. *understand the seasonality of a variety of ingredients.*
2. *make a seasonal dish using readily available or home-grown ingredients.*
3. *make healthy eating choices from my understanding of a balanced diet.*
4. *express my food preferences using a broadening vocabulary.*
5. *show that I am hygienic and safe in the kitchen.*

Textiles

1. *discuss use of tools, materials and their properties using technical vocabulary.*
2. *fabrics using a running stitch, over sewing and a blanket stitch.*
3. *sew on buttons and make loops.*
4. *select the most appropriate decoration techniques and materials for a specific project*

Lower KS2 Vocabulary



durable *properties* *invention* *method* *evaluate*

alterations *shell* *frame structure* *rigid*

diagonal struts *shaft* *pulley* *cams* *slides*

levers *linkages* *gears* *axle* *cog*

spindle *research* *packaging* *measure*

appliance *manipulated* *appealing* *develop* *materials*

style *model* *function* *cross sections* *prototypes*

research *hygiene* *ingredients* *organic*





Lower KS2 Design & Technology

Year A



***Mighty
Metals***



***Tribal
Tales***



Tremors

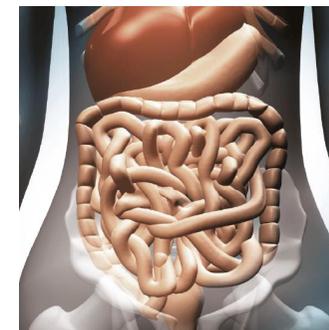
Year B



I Am Warrior



Potions



***Bottoms,
Burps & Bile***



Designing & Making



1. use research to help inform my own designs to ensure they are fit for purpose.
2. communicate my ideas through discussion, annotated sketches, pattern pieces and computer-aided design.
3. select from and use a wider range of tools and equipment to perform practical tasks safely and effectively.
4. successfully evaluate a range of products using some technical terms and vocabulary.

Cooking & Nutrition

1. begin to understand where and how a variety of ingredients are grown, reared, caught and processed.
2. use a range of cooking techniques to prepare and cook predominantly savoury dishes.
3. understand the principles of a healthy and varied diet.
4. analyse the taste, texture, smell and appearance of a range of foods.



Year Five Designers

Will be able to:

Technical Knowledge

1. test the strength and suitability of materials to help them select appropriate resources for design projects.
2. solve design and structural problems using appropriate tried and tested techniques.
3. create movement in two places using mechanical systems.
4. develop my understanding of computer programming and control of products.



Textiles

1. develop technical vocabulary in relation to a project and the skills involved.
2. join fabrics using a running stitch, over sewing and a blanket stitch with increased confidence and autonomy.
3. prototype a product using j cloths.
4. use a prototype to make a pattern.
5. understand seam allowance.
6. begin to create my own ideas to decorate and finish products.



Designing & Making



1. research independently and use my findings to inform my own designs.
2. communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
3. use a range of tools and equipment competently with accuracy and precision.
4. understand how key events and individuals in design and technology have helped shape the world.
5. justify my designs and use of materials in a convincing way.
6. explain the design process for my product, including changes and refinements.
7. begin to think of marketing ideas for my product.

Year Six Designers

Will be able to:

Technical Knowledge

1. work collaboratively on creating a functional structure taking into account stability, durability, assembly, and disassembly.
2. understand and use electrical systems in my products.
3. use a computer program to control a product.

Cooking & Nutrition

1. understand where and how a variety of ingredients are grown, reared, caught and processed.
2. understand and apply the principles of a healthy and varied diet.
3. use my knowledge and experience of a variety of foods to help me to create healthy savoury dishes.



Textiles

1. use the correct vocabulary appropriate to the project.
2. join fabrics using a variety of stitches with a good level of competence and skill.
3. create products using pattern pieces and seam allowance.
4. combine fabrics to create an aesthetically pleasing product.
5. reuse and refashion items to create a new product.
6. use different techniques to create colour and pattern on fabrics, batik, printing and tie dyeing.



Upper KS2 Vocabulary



target audience

culture

precision

pattern piece

reinforcement

specification

wire strippers

cylinder

circuit

hacksaw

combine

slips

finishing

varnishing

shaping

nutrition

savoury

cross-section

exploded

diagram

prototype

computer-aided design

iterative process

orthographic drawings

chemical reaction

ferment

knead

yeast

malleable

cross-hatching



Year A

Upper KS2 Design & Technology



Stargazer



A Childs War



ID

Year B



Blood Heart



Hola Mexico



Alchemy Island