

Beaconsfield Primary School
Year 1 Design & Technology Curriculum

| | Autumn 2 | Spring 2 | Summer |
|---------------|---|---|---|
| Year 1 | <p>Homes with moving parts (Links to History/Geography)</p> <ul style="list-style-type: none"> • Pupils should be taught how to create products based on specific design criteria. • Pupils should be taught to use a range of materials creatively to design and make products. • Pupils should be taught to apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • Pupils should be taught how to evaluate their work and make changes where necessary. <p>(Something more than just 'junk modelling' as they did a lot of this in EYFS)</p> | <p>'Keeping Teddy Dry' (Links with Science/Geography)</p> <ul style="list-style-type: none"> • Pupils can follow design criteria. • Pupils can generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. • Pupils can select from and use a range of tools and equipment to perform practical tasks. • Pupils can select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics • Pupils can explore and evaluate a range of existing products . • Pupils can evaluate their ideas and products against design criteria. | <p>'Moving Pictures' (See QCA Unit) (Links with English)</p> <ul style="list-style-type: none"> • Pupils should know that simple levers and sliding mechanisms can be used to create movement • Pupils know that levers are used in products <i>eg scissors, balances and moving books.</i> • Pupils should be able to use drawings to represent products. • Pupils know that construction kits can be used to try out ideas • Pupils can make simple sliding and lever mechanisms. • Pupils know how to use tools <i>eg scissors and a hole punch</i> safely • Pupils can suggest ideas and explain what they are going to do • Pupils can model their ideas in card and paper • Pupils can make their design using appropriate techniques. • Pupils can evaluate their product by discussing how well it works in relation to the purpose. |
| | <p>English Curriculum Links</p> <p>Speaking and Listening</p> <ul style="list-style-type: none"> • Talking through/Presenting ideas. • Group/whole class discussion. <p>Reading</p> <ul style="list-style-type: none"> • drawing on what they already know or on background information and vocabulary provided by the teacher. • making inferences on the basis of what is being said and done. <p>Writing</p> <ul style="list-style-type: none"> • Composing sentences (writing up research, methods, evaluations etc.) • Developing spelling through writing activities. | | <p>Maths Curriculum Links</p> <ul style="list-style-type: none"> • compare, describe and solve practical problems for: > lengths and heights [for example, long/short, longer/shorter, tall/short, double/half • recognise and use language relating to dates, • recognise and name common 2-D and 3-D shapes. • describe position, direction and movement • describe position, direction and movement, including whole, half, quarter and three-quarter turns |

Beaconsfield Primary School
Year 2 Design & Technology Curriculum

| | Autumn 1 | Spring 2 | Summer 2 |
|---------------|---|---|---|
| Year 2 | <p>Vehicles - Wheels & Axels See QCA Scheme of Work <i>(Links to History)</i></p> <ul style="list-style-type: none"> • Pupils should learn about wheels and axles and how to use these when making vehicles. • Pupils should be taught to experiment with and use a range of materials creatively to design and make products. • Pupils should be taught to evaluate their ideas and products against design criteria. | <p>Felt Puppets (See QCA Scheme of Work) <i>(Links to History/Literacy)</i></p> <ul style="list-style-type: none"> • Pupils should be able to design purposeful, functional, appealing products for themselves and other users based on design criteria • Pupils should generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • Pupils should select from and use a range of tools and equipment to perform practical tasks • Pupils should select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. • Pupils should evaluate, explore and evaluate a range of existing products. • Pupils should evaluate their ideas and products against design criteria. • Pupils should build structures, exploring how they can be made stronger, stiffer and more stable. | <p>Weather recorder (Rain Gauge/Windmill) <i>(Links to Geography/Science)</i></p> <ul style="list-style-type: none"> • Pupils should be able to design purposeful, functional, appealing products for themselves and other users based on design criteria • Pupils should generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • Pupils should select from and use a range of tools and equipment to perform practical tasks • Pupils should select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. • Pupils should evaluate, explore and evaluate a range of existing products. • Pupils should evaluate their ideas and products against design criteria. • Pupils should build structures, exploring how they can be made stronger, stiffer and more stable. |
| | <p>DT - Cooking & Nutrition Healthy Sandwiches/Wraps <i>(Links with Science)</i></p> <ul style="list-style-type: none"> • Pupils should be taught how to create products based on specific design criteria. • Pupils should be taught how to use the principals of a healthy and varied diet to prepare dishes. | | |

Beaconsfield Primary School – Design & Technology Curriculum Map

English Curriculum Links

Speaking and Listening

- Talking through/Presenting ideas.
- Group/whole class discussion.

Reading

- drawing on what they already know or on background information and vocabulary provided by the teacher.
- making inferences on the basis of what is being said and done.

Writing

- Composing sentences (artist biographies, writing up research, evaluations etc.)
- Developing spelling through writing activities.

Maths Curriculum Links

Number

- Applying during measuring materials for DT projects.


Shape, Space and Measure

- Capacity (Summer 2)
- Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
- Compare and sort common 2-D and 3-D shapes and everyday objects
- Use mathematical vocabulary to describe position, direction and movement.

Beaconsfield Primary School
Year 3 Design & Technology Curriculum

| | Autumn 2 | Spring 2 | Summer 1 |
|---|--|---|---|
| Year 3 | <p>Cooking & Nutrition Healthy Takeaway <i>(Links with Geography/Science)</i></p> <ul style="list-style-type: none"> • Pupils must understand and apply the principles of a healthy and varied diet. • Pupils must explore and critique a variety of food-stuffs. • Pupils must design, prepare and cook a savoury dish that allows them to demonstrate cooking techniques. • Pupils should begin to understand the seasonality of ingredients and where they come from. • Pupils must be able to evaluate their finished products. | <p>Woven placemat <i>(Links to Geography/Bolivia' topic)</i></p> <ul style="list-style-type: none"> • 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. • Pupils should present their designs in a range of way. • Pupils should investigate and analyse a range of existing products. • Pupil should evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Pupils should understand how key events and individuals in design and technology have helped shape the world. | <p>Tudor Purse - See QCA Unit 4a <i>(Links to History)</i></p> <ul style="list-style-type: none"> • 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. • Pupils should present their designs in a range of way. • Pupils should investigate and analyse a range of existing products. • Pupil should evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Pupils should understand how key events and individuals in design and technology have helped shape the world. |
| <p>English Curriculum Links</p> <p>Reading</p> <ul style="list-style-type: none"> • Comprehension activities based on their research findings. • Understanding text. <p>Writing</p> <ul style="list-style-type: none"> • Pupils could write instructions for how to make their DT projects/a recount of how they made their final pieces. | | <p>Maths Curriculum Links</p> <ul style="list-style-type: none"> • Measure - Measuring materials accurately and doubling, halving, scaling measurements where appropriate. • measure, compare, add and subtract: lengths (m/cm/mm). • Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. • Recognise that angles are a property of shape or a description of a turn. • Draw 2-D shapes and make 3-D shapes using modelling materials; • Measure the perimeter of simple 2-D shapes. | |

Beaconsfield Primary School
Year 4 Design & Technology Curriculum

| | Autumn 2 | Spring 2 | Summer 1 |
|---------------|--|--|---|
| Year 4 | <p>Building Bridges <i>(Links to Geography)</i></p> <ul style="list-style-type: none"> • Pupils must understand how key events and individuals in design and technology have helped shape the world. • Pupils must be able to follow a set of design criteria. • Pupils must select from and use a wider range of tools and equipment to perform practical tasks accurately. • Pupils must select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities. • Pupils must investigate and analyse a range of existing products. • Pupils must evaluate their ideas and products against their own design criteria and consider the views of others to improve their work . • Pupils must understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. | <p>Lighting it Up See QCA <i>(Links to Science)</i></p> <p>Pupils should learn:</p> <ul style="list-style-type: none"> • that lights are designed with the particular needs of the user in mind and that these needs can vary widely • that lights can be switched on and off using remote control or a control device • that lights are made out of a variety of materials suited to a particular purpose • safety when using electricity • to make a simple circuit, incorporating a battery, light bulb, different switches and connecting wires in a safe manner • how to find a fault in a simple circuit and to correct it • that a variety of metals will conduct electricity • to use ICT <i>eg the Internet, CD-ROM</i> to acquire information for their research into different types of lights • how to program a simple control device or use a control box/program • that identification of a particular combination of needs can result in a design for a light which has not existed before • to use their research to support their design • that plans for a new product can be made using drawings with labels • to check their product is safe • to evaluate their work both during and at the end of the assignment. | <p>Anglo Saxon Jewellery <i>(Links to History)</i></p> <ul style="list-style-type: none"> • Pupils should 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. • Pupils should present their designs in a range of way. • Pupils should investigate and analyse a range of existing products. • Pupil should evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Pupils should understand how key events and individuals in design and technology have helped shape the world. <div style="text-align: center;">  </div> |

Beaconsfield Primary School – Design & Technology Curriculum Map

English Curriculum Links

Reading

- Comprehension activities based on their research findings.
- Understanding text.

Writing

Pupils could write instructions for how to make their DT projects/a recount of how they made their final pieces.

Maths Curriculum Links

- Measure - Measuring materials accurately and doubling, halving, scaling measurements where appropriate, estimate measures.
- identify lines of symmetry in 2-D shapes presented in different orientations
- measure, compare, add and subtract: lengths (m/cm/mm).
- Identify shapes in different orientations and describe them.
- Recognise that angles are a property of shape or a description of a turn.
- Measure the perimeter of simple 2-D shapes using squares.

Beaconsfield Primary School
Year 5 Design & Technology Curriculum

| | Autumn 2 | Spring 1 | Summer 2 |
|---------------|--|---|---|
| Year 5 | <p>Bread Making (See QCA 'Bread' unit) <i>(Links to Science (changes in materials))</i></p> <ul style="list-style-type: none"> • Pupils must be able to follow a set of design criteria. • Pupils must select from and use a wider range of tools and equipment to perform practical tasks accurately. • Pupils must investigate and analyse a range of existing products. • Pupils must evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <p>Cooking & Nutrition</p> <ul style="list-style-type: none"> • Pupils should understand and apply the principles of a healthy and varied diet. • Pupils should prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. • Pupils should understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. | <p>Viking Longship using leavers, pulleys or gears. <i>(Links to History & Science)</i></p> <ul style="list-style-type: none"> • Pupils should use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. • Pupils should generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design • Pupils should make, select from and use a wider range of tools and equipment to perform practical tasks. • Pupils should select from and use a wider range of construction materials according to their functional properties. • Pupils should evaluate, investigate and analyse a range of existing products. • Pupils should evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • Pupils should understand how key events and individuals in design and technology have helped shape the world • Pupils should understand and use mechanical systems in their products [for example, gears, pulleys, cams and levers. | <p>Working Biodome/Greenhouse <i>(Links to Science)</i></p> <ul style="list-style-type: none"> • Pupils should use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. • Pupils should generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design • Pupils should make, select from and use a wider range of tools and equipment to perform practical tasks. • Pupils should select from and use a wider range of construction materials according to their functional properties. • Pupils should evaluate, investigate and analyse a range of existing products. • Pupils should evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • Pupils should understand how key events and individuals in design and technology have helped shape the world |

Beaconsfield Primary School – Design & Technology Curriculum Map

English Curriculum Links

- Selecting and using appropriate information gathered from research of artists and designers.
- Writing for different audiences.
- Using organisational devices in their writing eg. Headings and bullet points.
- Articulating and presenting their ideas in a group.

Maths Curriculum Links

- Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation including scaling.
- Identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- Draw given angles, and measure them in degrees (°)

Beaconsfield Primary School
Year 6 Design & Technology Curriculum

| | Autumn | Spring | Summer |
|---------------|--|--|--|
| Year 6 | <p>Shelters (See QCA 'Shelters' unit) <i>(links with History/Geography)</i></p> <p>Some large-scale work would be beneficial</p> <ul style="list-style-type: none"> • Pupils must understand how key events and individuals in design and technology have helped shape the world. • Pupils must use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. • Pupils must communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • Pupils must select from and use a wider range of materials, tools and components, according to their functional properties. • Pupils must analyse and investigate a range of existing products. • Pupils must evaluate their products against their own design criteria and consider the views of others to improve their work. • Pupils must understand and use mechanical systems in their products. | <p><i>(Links to Art Project on Shang Dynasty due to SATS Revision)</i></p> | <p>Greek Sandals (See QCA 'Slippers' unit) <i>(links with History)</i></p> <p><i>Activities could contribute to an end-of-unit 'Greek Day'.</i></p> <p>Greek Sandals</p> <ul style="list-style-type: none"> • Pupils should investigate and analyse a range of existing products. • Pupils should use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. • Pupils should generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • Pupils should select from and use a wider range of tools and equipment to perform practical tasks. • Pupils should evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • Pupils should understand how key events and individuals in design and technology have helped shape the world. • Pupils should apply their understanding of computing to program, monitor and control their products. |

Beaconsfield Primary School – Design & Technology Curriculum Map

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| | | | <p>Cooking Traditional Greek Dishes</p> <ul style="list-style-type: none"> • Pupils should use the basic principles of a healthy diet to design and prepare dishes. • Pupils should use a range of cooking techniques. • Pupils should understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. |
| <p>English Curriculum Links</p> <ul style="list-style-type: none"> • Writing biographies for artists/designers. • Researching reference texts to support the design process. • Presenting points of view/ideas to a group/whole class. • Selecting appropriate information from longer research texts. | | <p>Maths Curriculum Links</p> <ul style="list-style-type: none"> • Use, read, write and convert between standard units, converting measurements of length, mass and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • Draw 2-D shapes using given dimensions and angles • Recognise, describe and build simple 3-D shapes, including making nets • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. | |

Links to the UN Convention on the Rights of the Child

Article 2 - Without discrimination

The Convention applies to every child without discrimination, whatever their ethnicity, gender, religion, language, abilities or any other status, whatever they think or say, whatever their family background.

Article 12 - Respect for the views of the child.

Every child has the right to express their views, feelings and wishes in all matters affecting them, and to have their views considered and taken seriously. This right applies at all times, for example during immigration proceedings, housing decisions or the child's day-to-day home life.

Article 24 - Health and Health Services

Every child has the right to the best possible health.

Governments must work to provide good quality health care, clean water, nutritious food and a clean environment so that children can stay healthy. Richer countries must help poorer countries achieve this.

Article 28 - A right to education

Every child has the right to an education. Primary education must be free and different forms of secondary education must be available to every child. Discipline in schools must respect children's dignity and their rights. Richer countries must help poorer countries achieve this.

Article 29 - Goals of education

Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and the environment.

Article 31 - Leisure, play and culture

Every child has the right to relax, play and take part in a wide range of cultural and artistic activities.