

SUBJECT: DT

OUR COMMON PURPOSE

All children will reach their full educational potential and look back at their time at Riverview Junior School with absolute admiration irrespective of gender, race, disability or background.

Rationale:

At Riverview Junior School, we value Design Technology. WE ARE DESIGNERS! A high-quality Design Technology education should inspire in pupils a curiosity and fascination about the world and its people and Technology that will remain with them for the rest of their lives. Our Design Technology curriculum aims to equip pupils with knowledge about diverse of technology together with a deep understanding of technology. As our pupils progress, their growing knowledge about the world and the technology will help them to deepen their understanding of the interaction between technology and people within the world and how technology has changed over time.

Aims and objectives:**Key Stage 2**

Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of technology, craft and design.

When designing and making, pupils should be taught to:

- 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 wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- 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
- 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
- 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 control their products.

CURRICULUM PROGRESSION STRAND MAP DT

Skills and Knowledge Progression

Area of Study: Exploring and developing ideas

Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Record ideas from first hand observation, experience and imagination.	Look at other ideas from an existing product and consider the purpose of its use.	Look at other ideas from existing products and decide what would be useful to use in your design.	Look at other ideas from existing products and brainstorm ideas that they could use in their designs.	Explore existing products and brainstorm ideas, from these.	Explore existing products and brainstorm ideas, from these.
Ask and answer questions about the starting points for their work.	Identify the purpose of the product and the criteria to make it a successful product. (Brain Storm)	Identify specific features from the existing products showing different views and use labelling to support.	Create detailed labelled drawings from the existing products that they may use in their own designs.	Create detailed labelled drawings from the existing products that they may use in their own designs.	Create detailed labelled drawings from the existing products that they may use in their own designs.
Explore the differences and similarities within the work of artists, craftspeople and designers in different times and cultures.	Plan how the product is going to be made and what order they are going to take when making the product.	Create examples models (prototypes) to support their design ideas and constructions of their designs.	Develop a clear idea of what they are making and the process they need to take.	Create a design specification stating materials, skills and equipment with labelled drawings.	Create a design specification stating materials, skills and equipment with labelled drawings.
To refine motor skills to exercise care and control over the range of materials they use.	Create example models (Prototype) to support their design ideas and construction of their design.	Plan how the product is going to be made and what order they are going to take when making the products. Suggest materials, equipment and process when making it.	Create models (Prototype) to support their design ideas and constructions of their designs. Begin to evaluate the effectiveness of their prototype	Create models (Prototype) to support their design ideas and constructions of their designs. Evaluate the effectiveness of their prototype against their design specification and make relevant changes if necessary	Create models (Prototype) to support their design ideas and constructions of their designs.
Work on their own, and collaboratively with others, on projects in 2 and 3 dimensions and on different scales.	Make a final design ideas and add labels to support their design.	Evaluate all the process by identifying the criteria that they could use in their own designs.	Use results from what they have found out and develop their design ideas further.	Evaluate all the process by identifying the criteria that they could use in their own design.	Evaluate all the process by identifying the criteria that they could use in their own design.

Outcomes for this area are embedded across all the following areas of study including the enrichment activities.

CURRICULUM PROGRESSION STRAND MAP DT

Skills and Knowledge Progression

Area of Study: working with tools, equipment, materials and components to make quality products

Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Review what they and others have done and say what they think and feel about it.	On their specification sheets make sure the children have labelled all tools required for the task.	Select tools and techniques for making their products.	Select appropriate materials, tools and techniques.	Select appropriate materials, tools and techniques.	Select appropriate materials, tools and techniques.
Identify what they and others might change in their current work or develop in their future work.	Children are to show skills of measuring, marking out, cutting, scoring and assembling the components with more accuracy.	Measure, mark out, cut and shape a range of materials using the correct tools, equipment and techniques.	Measure, mark out, cut and shape a range of materials using the correct tools, equipment and techniques.	Measure, mark out, cut and shape a range of materials using the correct tools, equipment and techniques. When making working models of their designs.	Measure, mark out, cut and shape a range of materials using the correct tools, equipment and techniques. When making working models of their designs.
To evaluate and identify features for development and express a preference.	Children to use the equipment and hand tools in the correct and safe manor.	Join and combine materials and components accurately firstly in the temporary position (Prototype) then into the permanent position (Final Design).	Show the correct skills when using different tools and equipment safely and accurately.	Using the correct skills with the right tool safely and accurately.	Using the correct skills with the right tool safely and accurately.
Select graphic-based computer programmes and use search engines to investigate different kinds of art, craft and design.	Children are to assemble and join their product in the correct way. Cut, shape and join fabric to make a simple garment. Use basic sewing techniques. Choose and use all appropriate finishing techniques depending on what product you are making.	Apply the rules for basic food hygiene and other safe practices. Measure tape and pin, cut and join fabric with some accuracy. Sew using a range of different stitches, weave and knit Use simple drawings to show their skills in their designs sheets (Process)	Weigh and measure accurately (time, dry, ingredients, liquids). Apply the rules for basic food hygiene and other safe practices. Ensure that all products have a quality finish to the product.	Weigh and measure accurately (time, dry, ingredients, liquids). Apply the rules for basic food hygiene and other safe practices. Cut and join accurately to ensure a good quality finish to the product.	Weigh and measure accurately (time, dry, ingredients, liquids). Apply the rules for basic food hygiene and other safe practices. Cut and join accurately to ensure a good quality finish to the product.
Curriculum goals:	Structures Shell structures (including computer aided design)	Mechanical Systems (shaduf) Levers and linkages	Structures Frame structures Food	Textiles Combining different fabric shapes (including	Textiles Combining different fabric shapes (including

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<p>Computer art - Self-portraits; Fairy Tale front cover; Rousseau pictures; pointillism using graphics programme.</p>	<p>Food Healthy and varied diet (including cooking and nutrition requirements for KS2) Textiles 2D shape to 3D product</p>	<p>Electrical Systems Simple circuits and switches (including programming and control) Food Healthy and varied diet (including cooking and nutrition requirements for KS2)</p>	<p>Celebrating culture and seasonality (including cooking and nutrition requirements for KS2) Electrical Systems More complex switches and circuits (including programming, monitoring and control)</p>	<p>computer-aided design Mechanical Systems Pulleys or gears Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)</p>	<p>computer-aided design Mechanical Systems Pulleys or gears Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)</p>
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