

Oasis Academy Broadoak – Design and Technology Subject Overview

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Spring 1 <b>Our Changing Planet</b>	<b>Product:</b> A moving birds nest	<b>Product:</b> An interactive book about local wildlife and protecting our green space.	<b>Product:</b> Models of public transport.	<b>Product:</b> Model of an eco-house.	<b>Product:</b> Model of a working wind turbine.	<b>Product:</b> A pulley system that would allow materials to be lifted up and down buildings.	<b>Product:</b> Prototypes of electronic cars.
<b>Technical knowledge</b>	Experiment with different pneumatic systems and explore how air can control movement.	Look at a range of pop up, slide and lift the flap books.	Explore & evaluate different construction kit chassis and wheels and toy / model vehicles.	Research features of eco houses and look at a range of model and prototypes already produced.	Look at models of windmill and wind turbines. Investigate the size, shape and angle of the blades and the overall structure.	Explore different pulley systems. Experiment with using pulley systems with different weights and at different heights.	Research features of electronic and look at a range of model and prototypes already produced.
<b>Practical knowledge</b>	-Fold, tear and cut paper and card -Roll paper to create tubes -Cut along lines, straight and curved Insert paper - fasteners for card linkages -Use scissors and hole punch -Assemble, join and combine	-Cut, Shape, Join, Finish -Insert paper fasteners for card linkages -Create hinges -Use simple pop ups <b>Make stronger, stiffer, more stable</b> -Use scissors and hole punch Assemble, join and combine	Use range of tools and equipment (including saw – under 1-1 supervision) -cut, Shape, Join, Finish <b>Make stronger, stiffer, more stable</b> -Measure, cut and score.	<b>Use a wider range of tools to:</b> -Cut, Shape, Join Finish. -Measure, mark out, cut, score and assemble with accuracy. -Use finishing techniques to <b>strengthen and improve</b> the finish of a product.	<b>Use a wider range of tools to:</b> -Cut ,Shape, Join, Finish -Make prototypes -Measure, mark out, cut, score and assemble with accuracy. -Join and combine materials and components.	<b>Use a wider range of tools to:</b> -Make prototypes -Measure, mark out, cut, score and assemble with accuracy. -Join and combine materials and components. -Cut and join with accuracy.	-Make prototypes -Use models, kits and drawings to help formulate design ideas -Measure, mark out, cut, score and assemble with accuracy. -Join and combine materials and components. -Achieve a quality product.
<b>Design concept</b>	Draw and label the desired outcome.	Draw and label the desired outcome.	Include measurements in annotated diagrams of design.	Include measurements and annotation on design.	Draw to scale and annotated technical drawing including measurements and a cross sectional diagram.	Draw plan with annotation, and drawing from different views to help plan and design.	Include detailed exploded diagrams and technical drawings from different views.
<b>Design Process</b>	With adult support, children create the moving animals in groups.	Children make moving picture books.	Children make models.	Children make the eco house model, evaluating throughout the process.	Children make the wind turbine model, evaluating & changing the plan throughout the process.	Children make the wind turbine model, evaluating & changing the plan throughout the process.	Children make the wind turbine model, evaluating & changing the plan throughout the process.

<b>Evaluate</b>	Children evaluate final product.	Children evaluate their final product.	Children evaluate the product against the design brief.	Children evaluate the product against the design brief.	Children consider other people's evaluation of the product.	Children consider other people's evaluation of the product.	Children use what has been learnt to create further designs.
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Autumn 2 <b>The Heritage of our Country</b>  RE DAY	Christmas cards that cover the textiles curriculum.						