



Nacton C of E Primary School

WE ARE DESIGNERS- DT Knowledge Gems

EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
Take inspiration - Explore objects and designs to identify likes and dislikes. - Suggest improvements to existing designs. - Explore how products have been created.	Acquire the technical knowledge needed to make a high-quality product.	Develop the process of design: - Think - Design - Make

EYFS/Y1 – Cycle A

Fabric Faces

Cycle A - Autumn	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to explore fabrics. I know how to explore and evaluate how hair is created using different materials.	I know how to join fabrics together using runner stitch and attach different materials.	I know how to select a material and shape it.
	I know how to evaluate my product.	I know how to cut on a line and use a template to create my fabric face shape.	I know how to follow my design carefully and use different tools to make my fabric face.

Packed lunch problems

Cycle A - spring	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to evaluate a product's ability to do a job well.	I know how to build a strong structure.	I know how to design a new product that meets the design criteria
	I know how to test a product and then evaluate it.	I know how to look at reclaimed materials and think about which will be strong and waterproof.	I know how to improve my product by making it stronger, stiffer, more stable and more waterproof.

Dips and Dippers

Cycle A - summer	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to explore different dips.	I know how to safely use a range of kitchen equipment to cut, peel, grate and chop ingredients. I know how to use measuring equipment such as table spoons and teaspoons to measure out my ingredients.	I know how to plan my own appealing dip and clearly show my ideas.
	I know how to evaluate different dips.	I know where different foods come from.	I know how to plan my own appealing dipper and clearly show my ideas.

EYFS/Y1 – Cycle B

Vegetable Soup

Autumn Cycle B	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
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	I know how to explore and evaluate an existing product.	I know how to peel and chop.	I know how to follow instructions to make a soup.
	I know how to evaluate my product.		I know how to prepare different vegetables.

Puppets

Cycle B - spring	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to explore and evaluate an existing product.	I know how to join two different materials.	I know how to make decisions about my product design and use an annotated sketch to show them.
	I know how to evaluate my product against design criteria.	know how to use a basic running stitch.	I know how to design a working product, thinking about who it is for and what it needs.

Junk modelling

Cycle B - summer	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to explore temporary and permanent joins.	I know how to join materials in different ways.	I know how to make decisions about my product design and use an annotated sketch to show them.

	I know how to evaluate my product.	I know how to develop scissor skills.	I know how to design a working product, thinking about who it is for and what it needs.
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Year 2

Moving pictures

Autumn	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to explore and evaluate an existing product.	I know how to use a lever mechanism.	I know how to make decisions about my product design and use an annotated sketch to show them.
	I know how to evaluate my product against design criteria.	know how to use a wheel mechanism.	I know how to design a working product, thinking about who it is for and what it needs.

Sensational salads

Spring	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to explore and evaluate existing products.	I know how to correctly use measuring spoons, zesters and juicers when preparing dishes.	I know how to prepare and make a healthy salad made from root vegetables.
	I know how to evaluate my product.	I know how to follow a simple recipe and assemble and combine ingredients.	I know how to prepare a tasty fish salad.

Fabric bunting

Summer	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to say what I like and dislike about the design of existing products.	I know how to use a graphics program to design a bunting flag.	I know how to use a paper template to help cut out a fabric shape.
	I know how to evaluate my product.	I know how to create a seam using a running stitch.	I know how to select fabrics that are suitable for decorating my bunting.

Lower Key Stage Two

Battery operated lights

Cycle A - Spring	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how key events and individuals in design and technology have helped shape the world	I know how to use switches.	I know how to make and represent different types of circuits.
	I know how to complete a detailed evaluation of my finished product.	I know how to select materials and components to make my light work.	I know how to make a product which contains a working circuit to light a bulb

Juggling balls

Cycle A - Autumn	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to investigate and evaluate juggling balls.	I know how to perform tie-dye as a technique for decorating my fabric.	I know how to follow a design criteria.

	I know how to evaluate my product.	I know how to research and trial different fillings for my juggling ball and decide upon the most functional one.	I know how to join my juggling ball using an appropriate stitch to create my finished shape
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Edible garden

Cycle A - summer	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know the Eatwell Guide and know which foods I should be eating more and less of.	I know the names of different herbs.	I know how to use kitchen tools and utensils correctly to prepare and make a tasty and nutritious drink.
	I know how to evaluate my product.	I know what is meant by seasonality.	I know how to prepare and cook a savoury meal.

Mechanical posters

Cycle B - autumn	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how input and output works in a mechanical system.	I know the function of a loose pivot and fixed pivot.	I know how to develop a design criteria to help me design an innovative product.
	I know how to use a prototype.	I know the difference between a lever and a linkage.	I know how to draw a design which uses annotations to add some detail.

Let's go fly a kite

Cycle B - spring	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
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	1. I know how Homan Walsh used a kite to help build the Niagara Falls Bridge.	2. I know the name of different parts of a kite and can explain their function.	4. I know how to develop design criteria and communicate a design for my kite.
	6. I know how to use my design criteria to say whether my kite was successful.	3. I know how to investigate different kite shapes and can select from and use different materials and components.	5. I know how to use tools and equipment to make the structure for my kite and use methods of joining to add strength to the structure.

Bread bake off

Cycle B - summer	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know the history of the Warburtons brand and different types of Warburtons bread.	I know how market research is used and can evaluate existing products	I know how to knead and bake.
	I know how to evaluate my product against a design criteria.	I know how to shape dough into rolls and knots.	I know how to use an annotated design.

Upper Key Stage Two

Automata Animals

Cycle A - Autumn	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to research ideas about different animals to inform my design.	I know how simple cam mechanisms work. I know how the shape of the cam changes the movement of the follower.	I know how to use the acronym CAFEQUES to help me develop design criteria.

	I know how to evaluate my product.	I know how rotary motion is converted into linear motion in a mechanical system.	I know how to accurately measure and cut the dowel wood for use as the axle/shaft.
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Programmable adventures

Cycle A - Spring	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know why floor robots move differently on different materials using knowledge of the properties of materials.	I know how to program floor robots.	I know how to generate ideas for an adventure map and appropriate obstacles matching an overall theme.
	I know how suggest an improvement to a finished product.	I know how to control floor robots.	I know how to join surfaces together effectively.

Seasonal cooking

Cycle A - summer	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
	I know how to evaluate seasonal foods and recognise that sometimes we need to try a new food a few times to find out if we like it.	I know when cherries, Brussels sprouts, pumpkin, blackberries, peas and parsnips are in season.	I know the principles of a healthy and varied diet in the context of the importance of protein in the diet
	I know how to evaluate against a design criteria.	I know that foods are reared, caught and processed and can say where some of these foods come from.	I know how to communicate my choice of ingredients, methods, cooking times and temperatures.

Global food

Cycle B - autumn	EXPLORE and EVALUATE	TECHNICAL ACQUISITION	DESIGN AND MAKE
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	I know how an ingredient might be prepared and used.	I know how to use a hob as a heat source to cook rice.	I know how to use some more advanced food skills and techniques, such as frying, peeling, shredding and cracking an egg.
	I know how to evaluate my product against a design criteria.	I know that diets around the world are based on similar food groups.	I know how to make a pretzel.

Marbulous structures

Cycle B - spring	EXPLORE and EVALUATE	TECHNICAL ACQUISTION	DESIGN AND MAKE
	I know how to explore existing free standing structures and explain what gives them strength, reinforcement and stability.	I know how to cut materials with accuracy and precision and refine the finish with appropriate tools such as a craft knife.	I know how to design and build a marble run which incorporates some varied bends.
	I know how to evaluate my product against a design criteria.	I know how to select and use tools and equipment to help me create bends.	I know how to consider the aesthetics when building a marble run.

Felt phone case

Cycle B - summer	EXPLORE and EVALUATE	TECHNICAL ACQUISTION	DESIGN AND MAKE
	I know how to evaluate the functionality of a product.	I know how to sketch my designs from different angles.	I know how to create a design criteria that refers to the functionality of a phone case.

	I know how to evaluate my product against a design criteria.	I know how to sew a running stitch, backstitch and overcast stitch.	I know how to select decorative techniques and fastenings according to their functional properties and aesthetic qualities.
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