HOLY TRINITY CATHOLIC ACADEMY
MEDIUM TERM CURRICULUM PLANNER

Subject: DESIGN & TECHNOLOGY

INTENT:

- To offer children the chance to use creative thinking and design within purpose and outcome.
- To provide a variety of creative and practical activities to teach pupils the knowledge, understanding and skills needed to engage in a process of designing and making.
- For pupils to be creative and imaginative in designing and making products
- For pupils to learn how to take risks and to be resourceful and innovative
- Through the evaluation, to develop a critical understanding of its impact on daily life and the wider world.

EYFS – Our DT curriculum learning journey begins in the Early Years' Foundation Stage's 'Expressive Arts and Design' curriculum and all subsequent learning is built upon these foundations. (Please refer to separate EYFS Medium Term Plans for further detail)

During Nursery, children will be able to:

Take part in simple pretend play, using an object to represent something else even though they are not similar.
Begin to develop complex stories using small world equipment like animal sets, dolls and dolls houses etc.
Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.
Explore different materials freely in order to develop their ideas about how to use them and what to make
Develop their own ideas and then decide which materials to use to express them
Join different materials and explore different textures
Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
Draw with increasing complexity and detail, such as representing a face with a circle and including details.

During F2, children will be able to:

- Explore use and refine a variety of artistic effects to express their ideas and feelings
- Return to and build on their previous learning, refining ideas and developing their ability to represent them
- Create collaboratively, sharing ideas, resources and skills

ELG Creating with materials:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- Share their creations explaining the process they have used

The children will have explored this through a variety of means – weekly Forest School sessions, different learning themes, stories and links to the Book of the Week, outdoor learning opportunities, continuous provision, visits etc. Links also will have been made to other aspects of the EYFS curriculum. Refer to the separate EYFS section on the website for further information.

KS1 NATIONAL CURRICULUM:

Know and follow the structure of a Design Brief process as follows:

1) **Explore and Evaluate**

- Explore and evaluate a range of existing products.

2) **Design**

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.

- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups and, where appropriate, ICT.

3) **Make and Technical Knowledge**

- Select from and use a range of tools and equipment to perform practical tests (for example, cutting, shaping, joining and finishing.)

- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

- Build structures, exploring how they can be made stronger, stiffer and more stable.

4) **Evaluate**

Evaluate their ideas and products against design criteria.

KS2 NATIONAL CURRICULUM:

1) **Explore and Evaluate**

- Understand how key events and individuals in design and technology have helped shape the world.

2) **Design**

- Generate, develop, model and communicate ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.

3) **Make**

- Select from and use a wider range of materials and components, functional properties and aesthetic qualities.
- Understand and use electrical systems in their products (for example, series circuits, incorporating switches, bulbs, buzzers and motors.

4) **Evaluate**

- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Cooking and Nutrition:

- Understand and apply principles of a healthy and varied diet
- Prepare and cook a savoury dish using a range of cooking techniques

Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

DT KS1 and 2 Overview

	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Y1/2 Year A		**Design and Make a House** (Linked to History Great Fire of London Topic) **(Construction unit)**		**Design and make a boat** (linked to Science unit) **(Construction unit)**		**Design and Make a Healthy Fruit Snack** (linked to Science unit) **(Food & Nutrition link)**
Y1/2 Year B		**Design and Make a Puppet** (Linked to History Toys Unit) **(Sewing unit)**		**Design and Make a Shelter / Den** (Linked to Science Seasonal Change unit) **(Outdoor Forest School unit)**		**Design and Make a Healthy Sandwich** (linked to Science unit) **(Food & Nutrition link)**
Y3/4 Year A		**Design and Make an Electrical Christmas Decoration** (linked to Electricity Science unit)		**Design and Make an Egyptian Pulley** (Linked to History Topic) **(Construction unit)**		**Design and Make a Bug Hotel** **(Outdoor Forest School unit)**
Y 3/4 Year B		**Design and Make a Magnetic Toy** (linked to Science Forces topic) **(Construction unit)**		**Design and Make an Anglo-Saxon Purse** (Linked to History Topic) **Sewing Unit**		**Design and Make a Healthy Dish** **(Food & Nutrition link)**
Y5/6 Year A				**Design and Make a Healthy Dish** **(Food & Nutrition link)**		**Design and Make an Aeroplane** (linked to History unit) **(Construction unit)**
Y5/6 Year B		**Design and Make a Mars Rover** (Linked to Science Earth & Space topic) **(Construction unit)**				**Design and Make a Healthy Dish** **(Food & Nutrition link)**

YEAR	KEY UNIT KNOWLEDGE	KEY VOCABULARY	DESIGN BRIEF KNOWLEDGE
F1 **YEAR A** **BY THE END OF THE ADVENT TERM**	**To build and create presents for the Hungry Caterpillar / Postman Bear**		To know how to explore a variety of construction materials
F2 **YEAR A** **BY THE END OF THE ADVENT 2 TERM**	**DESIGN BRIEF:** Big Build with parents: To design and make a firework/Catherine Wheel	Label Plan Build List	**To begin to know about planning and making stages within a Design Brief process:** • I know how to make a simple labelled plan and write a list • I know how to use various construction materials linked to the Design Brief • I know how to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. • I know how to join construction pieces together to build and balance, such as using glue or masking tape
F2 **YEAR B** **BY THE END OF THE ADVENT 2 UNIT**	**DESIGN BRIEF:** Big Build with parents: To design a house to keep the wolf away **KEY KNOWLEDGE:** I know that houses can be made of brick, thatch, stone, glass, cement, brick I know that roofs need to be waterproof I know that houses need to be strong and durable	Brick Thatch Stone Glass Cement Brick Waterproof Durable Strong Design Build	
F2 **YEAR B** **BY THE END OF THE LENT 1 UNIT**	**DESIGN BRIEFS: see separate MTP for further details** To design a star catcher Big Build with parents: To design and build a rocket To design a pancake topping	Label Plan Build List Variety of other related topic vocabulary – see EYFS MTP	
F2 **YEAR B**	**DESIGN BRIEFS: see separate MTP for further details** **Pentecost 1:** Big Build with parents – Design and Make a dragon	Label Plan Build List	

BY THE END OF THE PENTECOST TERM UNIT	Design and build a shelter for a woodland animal **Pentecost 2:** To make a fish finger sandwich To investigate the best shape and materials to make a boat Big Build – with parents – design and build a vehicle	Variety of other related topic vocabulary – see EYFS MTP	
Y1/2 YEAR A **BY THE END OF THE ADVENT TERM UNIT**	**DESIGN BRIEF:** **Home Context** **To design and make a house** linked to the Great Fire of London (History topic link) **KEY KNOWLEDGE:** To recognise the aesthetic difference between modern and Tudor houses To recognise the Tudor house design (white building with black stripes) To know that each floor was built a little larger than the floor underneath, creating an overhanging effect To know that the building technique used to create the overhang effect is called 'jettying' To know that it was very expensive and difficult to make big pieces of glass so the glass panes were small	Design Tools Cut Join Plan Model Build Structure Materials Make Evaluate Jettying/jetty Tudor Glass panes Strong Waterproof Safe Secure	**To begin to know the basic sequence of a design brief:** - **Explore, design, make, evaluate** **Explore** – to know the key information outlined in the Key Unit Knowledge section To know what a successful house will look like and be like – strong, waterproof, safe, secure etc **Design** – To know how to draw on their own experience to help generate ideas To know how to suggest ideas and explain what they are going to do. To know how to develop their ideas through talk and drawings. To know how to draw and label their designs **Make -** To know how to build structures, exploring how they can be made stronger, stiffer and more stable. To know how cut and shape a range of materials. To know how to use tools e.g. scissors safely. To join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. To use simple finishing techniques to improve the appearance of their product **Evaluate**

			To know how to evaluate their products as they are developed,identifying strengthsand possible changes they mightmake To know how to evaluate their product by discussing how well it works in relation tothe purpose (design criteria), saying what they liked and disliked
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y1/2 YEAR B BY THE END OF THE ADVENT TERM UNIT	**DESIGN BRIEF:** **Home Context** **To design and make a puppet** History link – how Toys have changed within living memory Science link – which materials are suitable for a puppet **KEY KNOWLEDGE** To know that a hand puppet (or glove puppet) is a type of puppet controlled by a hand or hands. To know that the person who works the puppet and makes it move is called a puppeteer. To know that puppets have been around for a very long time. To know that sewing is stitching cloth, leather, furs, or other materials, using a needle and thread. Sewing can be done on a sewing machine, or by hand.	Design Tools Cut Join Plan Model Build Structure Materials Make Evaluate Sew Thread Design Needle Puppet Fabric Flexible Decorative	**To know the basic sequence of a design brief:** - **Explore, design, make, evaluate** **Explore** – to know the key information pertinent to the design brief in the Key Unit Knowledge section To know what a successful puppet will look like and be like using key vocabulary – flexible, soft, decorative etc **Design** – To know how to draw on their own experience to help generate ideas To know how to suggest ideas and explain what they are going to do. To know how to develop their ideas through talk and drawings. To know how to draw and label their designs **Make -** To know how to join fabric using a basic running stitch To know how to thread a needle by passing the thread through the eye To know how cut and shape a range of materials. To know how to use tools e.g. scissors safely. To use simple finishing techniquesto improve the appearance of their product, such as gluing decorations to make the puppet more appealing **Evaluate**

			To know how to evaluate their products as they are developed,identifying strengthsand possible changes they mightmake To know how to evaluate their product by discussing how well it works in relation tothe purpose (design criteria), saying what they liked and disliked
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y1/2 **YEAR A** **BY THE END OF THE LENT TERM UNIT**	**DESIGN BRIEF:** **Industry and Playground/Garden/Wider Environment Context** **Year A: Design & Make a boat** (Linked to Science Materials topic)	Design Float Tools Sink Waterproof, water tight Cut Join Glue Plan Model Build Structure Materials Make Evaluate	**To know the basic sequence of a design brief:** - **Explore, design, make, evaluate** **Explore** – to know the key information pertinent to the design brief in the Key Unit Knowledge section To know what a successful boat will look like and be like – floating, waterproof, water tight **Design** – To know how to draw on their own experience to help generate ideas To know how to suggest ideas and explain what they are going to do. To know how to develop their ideas through talk and drawings.

	KEY KNOWLEDGE: To know that boats float on water To understand that wood is the best material for making boats To know that: • the back part of a boat is called the stern • the front of the boat is a bow • the tall pole on a sailboat is called the mast • the body of a boat is the hull	Vocabulary linked to History Unit in Year A and Science / Geography in Year B	To know how to draw and label their designs **Make -** To know how to create suitable boat structures, exploring the best material to be waterproof and so that it does not sink To know how to shape a range of materials for the boat so that it does not sink To know how to use tools e.g. scissors safely. To join and combine materials and components together using a variety of temporary methods To use simple finishing techniquesto improve the appearance of their product **Evaluate** To know how to evaluate their products as they are developed,identifying strengthsand possible changes they mightmake To know how to evaluate their product by discussing how well it works in relation tothe purpose (design criteria), saying what they liked and disliked
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y1/2 **YEAR B** **BY THE END OF THE LENT TERM UNIT**	**DESIGN BRIEF:** **Year B: Design & make a weather shelter / den** (linked to Seasons Science and Hot and Cold areas of the world Geography topics) In each year, the children will develop and apply their historical / Science and Geography knowledge to the Design Brief process	Design Make Build Evaluate Shelter Protection Weather Safety Den Features	**To begin to know the basic sequence of a design brief:** - **Explore, design, make, evaluate** **Explore** – to know the key information pertinent to the design brief in the Key Unit Knowledge section To know what a successful shelter / den will look like and be like – strong, secure, giving protection **Design** –

	KEY KNOWLEDGE: To know that shelter is a place giving protection from bad weather, such as rain or snow To know that we can make shelters with things outside such as sticks and leaves To understand that shelters can stand up in different ways	Strong Secure	To know how to draw on their own experience to help generate ideas To know how to suggest ideas and explain what they are going to do. To know how to develop their ideas through talk and drawings. To know how to draw and label their designs **Make -** To know how to create suitable shelter / den structures, exploring the best materials and structures To know how to shape a range of materials for the shelter To know how to use tools safely. To join and combine materials and components together using a variety of temporary methods **Evaluate** To know how to evaluate their products as they are developed,identifying strengthsand possible changes they mightmake To know how to evaluate their product by discussing how well it works in relation tothe purpose (design criteria), saying what they liked and disliked
Y1/2 **Year A** **BY THE END OF THE PENTECOST TERM UNIT**	**DESIGN BRIEF:** **Home/School/Garden/Wider Environment Context** **Year A: Design and make a healthy fruit snack** (linked to Science Plants topic, PSHE Healthy Week and Eco Curriculum)	Design Tools Plan Make Evaluate Improve Taste Texture Healthy Fruit Vegetable	**To begin to know the basic sequence of a design brief:** - **Explore, design, make, evaluate** **Explore** – to know the key information pertinent to the design brief in the Key Unit Knowledge section **Design** – To know how to draw on their own experience to help generate ideas To know how to suggest ideas and explain what they are going to do.

	KEY KNOWLEDGE: To begin to know that all food comes from plants or animals. To know thatfood has to be farmed, grown elsewhere (e.g. home) or caught. To begin to know, name and sort foods into the five groups in 'The Eat well plate' To being to know that everyone should eat at least five portions offruit and vegetablesevery day To begin to know how to prepare simple dishes safely and hygienically, withoutusing a heat source. To begin to know how to use techniques such as cutting, peeling and grating.	Vocabulary specific to linked topic on Science Knowledge Organiser	To know how to develop their ideas through talk and drawings. To know how to draw and label their designs **Make -** To know how to create a suitable healthy snack To know how to use tools safely to create the healthy snack **Evaluate** To know how to evaluate their products as they are developed,identifying strengthsand possible changes they might make To know how to evaluate their product by discussing how well it works in relation tothe purpose (design criteria), saying what they liked and disliked
Y1/2 **YEAR B** **BY THE END OF THE PENTECOST TERM UNIT**	**DESIGN BRIEF:** **Year B: Design and make a healthy sandwich** (linked to PSHE Healthy Week) **KEY KNOWLEDGE:** To know that all food comes from plants or animals. To know that food has to be farmed, grown elsewhere (e.g. home) or caught. To know how to name and sort foods into the five groups in 'The Eat well plate' To know that everyone should eat at least five portions of fruit and vegetables every day. To know how toprepare simple dishes safely and hygienically, withoutusing a heat source. To know how touse techniques suchas cutting, peeling and grating	Design Tools Plan Make Evaluate Improve Taste Texture Healthy Fruit Vegetable Vocabulary specific to linked topic on Science Knowledge Organiser	

YEAR	KEY UNIT KNOWLEDGE	KEY VOCABULARY	DESIGN BRIEF KNOWLEDGE
Y3/4 **YEAR A** **BY THE END OF THE ADVENT TERN UNIT**	**DESIGN BRIEF:** **Home context** **To design and make an electrical Christmas Decoration** (Linked to Science Electricity Topic) **KEY KNOWLEDGE:** Start to know that electrical systems have an input, process and output. To know that electrical circuits and components can be used to create functionalproducts.	Design criteria Tools Cutting Joining Shaping Finishing Planning Evaluating Scientific vocabulary linked to the topics as per the Knowledge Organiser	**To develop their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of different electrical Christmas decorations, expressing their views and preferences To know how electrical Christmas decorations have been designed, made, what materials have been used and the construction technique To know what a successful Christmas decoration needs to be like, generating design criteria – bright, colourful, exciting etc **2) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making a product. To know how to explain their choice of materials and components **3) Make** To know how to select appropriate tools and techniques for making their product and explain the technique they will use and why To know how to measure, mark out,cut, score and assemble components with more accuracy. To know how to work safely and accurately witha range of simple electrical items To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this

			4) Evaluate To know how to evaluate their product against original design criteria *e.g. how well it meets its purpose,* To know how to explain how well their product met the brief and evaluate what they might do differently another time
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y3/4 **YEAR B** **BY THE END OF THE ADVENT TERM UNIT**	**DESIGN BRIEF:** **Design & make a magnetic toy** (linked to Science Forces topic) **KEY KNOWLEDGE:** To know that forces do not always require contact between two objects – for example, magnetic forces can act without direct contact. To know that magnets attract or repel each other and attract some materials and not others. To know that Magnets have two ends (poles) and understand how the poles of two magnets behave towards each other	Design criteria Shaping Finishing Planning Evaluating Scientific vocabulary linked to the topics as per the Knowledge Organiser	**To develop their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of different magnetic toys, expressing their views and preferences To know how magnetic toys have been designed, made, what materials have been used and the construction technique To know what a successful magnet toy needs to be like, generating design criteria **2) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making a product. To know how to explain their choice of materials and components **3) Make** To know how to select appropriate tools and techniques for making their product and explain the technique they will use and why

			To know how to measure, mark out,cut, score and assemble components with more accuracy. To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this **4) Evaluate** To know how to evaluate their product against original design criteria *e.g. how well it meets its purpose,* To know how to explain how well their product met the brief and evaluate what they might do differently another time
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y3/4 **YEAR A** **BY THE END OF THE LENT TERM UNIT**	**DESIGN BRIEF:** **Wider Environment and Culture Context** **Design and make an Egyptian Pulley System** (linked to History topic)	Design criteria Tools Cutting Joining Shaping Finishing Planning Evaluating Pulley Function Movement	**To develop their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of different pulleys, expressing their views and preferences To know how pulley systems have been designed, made, what materials have been used and the construction technique To know what a successful pulley system needs to be like, generating design criteria – bright, colourful, exciting etc

	KEY KNOWLEDGE To know that the Egyptians used a pulley system to move objects such as stones for pyramids from one place to another. To know that a pulley is a type of wheel that can lift heavy objects. To know that the wheels are joined by a belt or rope that loops between them. To know that a downwards pull creates an upwards pull at the other end which lifts the weight.	Range of History vocabulary as per the Knowledge Organiser	**2) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making a product. To know how to explain their choice of materials and components **3) Make** To know how to select appropriate tools and techniques for making their product and explain the technique they will use and why To know how to measure, mark out,cut, score and assemble components with more accuracy. To know how to work safely and accurately witha range of simple electrical items To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this **4) Evaluate** To know how to evaluate their product against original design criteria *e.g. how well it meets its purpose,* To know how to explain how well their product met the brief and evaluate what they might do differently another time
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**

Y3/4 **YEAR B** **BY THE END OF THE LENT TERM UNIT**	**DESIGN BRIEF:** **Design and make a purse** **KEY KNOWLEDGE:** To know that there are different types of stitches including running stitch, back stitch and oversewing stitch. To know that purses can come with a range of different fastenings. To know that Anglo-Saxons had their own form writing that is different to ours today.	Design criteria Tools Cutting Joining Shaping Finishing Planning Evaluating Pulley Function Movement Sew Thread Needle Stiches – running stitch Fabric Range of material vocabulary	**To develop their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of different purses, expressing their views and preferences To know how a range of purses have been designed, made, what materials have been used and the construction technique To know what a successful purse needs to be like, generating design criteria **2) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making a product. To know how to explain their choice of materials and components **3) Make** To know how to select appropriate tools and techniques for making their product and explain the technique they will use and why To know how to measure, mark out,cut, score and assemble components with more accuracy. To know how to work safely and accurately witha range of simple electrical items To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this

			4) Evaluate To know how to evaluate their product against original design criteria *e.g. how well it meets its purpose,* To know how to explain how well their product met the brief and evaluate what they might do differently another time
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y3/4 YEAR A **BY THE END OF THE PENTECOST TERM**	**DESIGN BRIEF:** **Home/School/Wider Environment Context** **Design and make a bug hotel** (Linked to Eco Curriculum) **KEY KNOWLEDGE:** To know that bugs and insects have a range of habitats. To know there are different ways to join materials. To select appropriate materials for their bug hotels. To know that non-biodegradable materials will have a negative impact on our planet and to choose materials that are better for the planet.	Design criteria Tools Cutting Joining Shaping Finishing Planning Evaluating *Vocabulary related to Eco Curriculum and Science unit as per Knowledge Organiser	**To develop their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of different bug hotels, expressing their views and preferences To know how bug hotels have been designed, made, what materials have been used and the construction technique To know what a successful bug hotel needs to be like, generating design criteria – bright, colourful, exciting etc **2) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making a product. To know how to explain their choice of materials and components **3) Make** To know how to select appropriate tools and techniques for making their product and explain the technique they will use and why To know how to measure, mark out,cut, score and assemble components with more accuracy.

			To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this **4) Evaluate** To know how to evaluate their product against original design criteria *e.g. how well it meets its purpose,* To know how to explain how well their product met the brief and evaluate what they might do differently another time
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y3/4 YEAR B **BY THE END OF THE PENTECOST TERM**	**DESIGN BRIEF:** **Design and make a healthy savoury dish:** Plain and Spinach Pasta Ravioli with butternut squash puree filling and a traditional Napolitana Sauce (Linked to Science and PSHE Healthy Week curriculum) **KEY KNOWLEDGE:** To know that basil, thyme, rosemary, oregano and parsley are different types of herbs and that oregano is used in Napolitana Sauce	Design criteria Tools Cutting Joining Shaping Finishing Planning Evaluating *Vocabulary related to Eco Curriculum and Science unit as per Knowledge Organiser	**To *develop* their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of different pasta and ingredients used in the dish, expressing their views and preferences To know how the dish has been made, what ingredients have been used and the recipe To know what a successful pasta dish needs to be like, generating design criteria **2) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making the dish To know how to explain their choice of ingredients

	To know the names of different hard cheeses – eg. Cheddar, Edam, Parmesan, Red Leicester and that sometimes Parmesan cheese is sprinkled on top of pasta dishes To know that Butternut Squash is actually a fruit but is eaten as a vegetable and it is full of vitamin A. To know that pasta is famous for being used widely in Italy but is a popular food around the world To know that there are many different varieties of pasta and these are group according to their size and shape To know ravioli and tortellini are types of pasta that can be stuffed To know how to make ravioli pasta, butternut squash puree filling and a Napolitana Sauce To know that pasta can be made by mixing flour and water or eggs To know how to follow a recipe and follow safety instructions.		**3) Make** To know how to select appropriate tools and techniques for making their dish and explain the technique they will use and why To know how to measure out, combine ingredients etc with more accuracy. To know how to work safely and accurately witha range of simple kitchen tools **4) Evaluate** To know how to evaluate their dish against original design criteria *e.g. how well it meets its purpose,* To know how to explain how well their dish met the brief and evaluate what they might do differently another time
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y5/6 **YEAR B** **BY THE END OF THE ADVENT TERM UNIT**	**DESIGN BRIEF:** **Industry Context** **Year B: To design and make a Mars Rover vehicle** (linked to Earth and Space Science unit of work)	Earth and Space vocabulary: Sun Star Solar System Orbit Rotation Moon Heliocentric Geocentric	**To *embed* their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate** To know the key facts about Curiosity and how the developments in this technology shapes the world

	KEY KNOWLEDGE INCLUDING DESIGNER KNOWLEDGE: To know that Curiosity was launched from Florida on 26th November 2011 To know that Curiosity was launched to see if there were any signs of life on Mars To know that Curiosity has tracked wheels to allow it to move on the surface of Mars	Axis Day <u>Above vocabulary plus:</u> Design Brief Disassembly Prototype Sketch Components Diagram Function Research Mock-up Motor Drive Belt System	To know how to explore and investigate prototypes of vehicles and know how to explain what worked effectively and what did not; to know the key features of a successful mechanism and how it can work effectively To know how to generate and articulate design criteria for a successful Mars Rover **2) Design** To know how to use their research in Stage 1to inform the design of a functional and appealing Mars Rovers which is fit for purpose. To know how to make labelled diagrams of the Mars Rover taking their research into account To know how to plan the order of their work, choosingappropriate materials, tools and techniques **3) Make** To know how to use tools safely and accurately To know how to suggest alternativemethods of makingif the first attempts fail. To know how to demonstrate whenmake modificationsas they go along. To know how to construct productsusing permanent joining techniques. To know how to reinforce and strengthen a 3Dframework. To know how to accurately apply a range of finishing techniques to make the product look appealing, selecting appropriate materials. To know how to make a quality product Identify the strengths and areasfor development in their ideas and products. **4) Evaluate**

			To know how to evaluate their products, identifyingstrengths and areasfor development, and carrying out appropriate tests. To know how to evaluate their workboth during and at the end of the assignment. To evaluate against their original criteriaand suggest ways that their product could be improved.
YEAR	**KEY UNIT KNOWLEDGE**	**KEY VOCABULARY**	**DESIGN BRIEF KNOWLEDGE**
Y5/6 YEAR A **BY THE END OF THE LENT TERM UNIT**	**DESIGN BRIEF:** **Home, School, Industry, Leisure Context** **Design and make a healthy meal**	Spice Herbs Fat Sugar Carbohydrate Protein Vitamins Nutrients/Nutrition Healthy Varied Gluten Dairy Allergy	**To *embed* their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate:** To know how to evaluate a range of healthy dishes, expressing their views and preferences To know the key knowledge in the Design Brief section about seasonality and how we can impact on the environment by using locally sourced produce. **2) Design**

	KEY KNOWLEDGE: Understand that food is grown (suchas tomatoes, wheatand potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in theUK, Europe and thewider world. Begin to understandthat seasons may affect the food available.	Intolerance Savoury Source Seasonality Utensils Combine Stir Pour Mix Whisk	To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making the dish To know how to explain their choice of ingredients **3) Make** To know how to select appropriate tools and techniques for making their dish and explain the technique they will use and why To know how to measure out, combine ingredients etc with accuracy. To know how to work safely and accurately witha range of simple kitchen tools To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this **4) Evaluate** To know how to evaluate their dish identifyingstrengths and areasfor development, and carrying out appropriate tests. To know how to evaluate their workboth during and at the end of the assignment. To evaluate against their original criteriaand suggest ways that their product could be improved.
Y5/6 **YEAR A**	**DESIGN BRIEF:** **Industry and Leisure Link**	Battle of Britain vocabulary: Air raid Air raid siren Air raid shelter	**To *embed* their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **1) Explore and evaluate**

BY THE END OF THE PENTECOST TERM UNIT	**Year A: Design & Make an aeroplane** (linked to History Battle of Britain unit) **KEY KNOWLEDGE INCLUDING DESIGNER KNOWLEDGE:** To know the Battle of Britain took place on 10th July – 31st October 1940 To know that the main types of planes used were Spitfire and Hurricane (UK) and the Messerschmitt (German) To know that the Spitfire was used for short range quick attacks on other planes or bases	Allies Blitz Blackout Luffwaffe Spitfire Warden Royal Air Force Bombing Evacuation **Above vocabulary plus:** Design Brief Disassembly Prototype Sketch Components Diagram Function Research Mock-up Frame Structure, Stiffen, Strengthen, Reinforce, Triangulation, Stability Shape, Join Temporary Permanent	To know the key facts about the Spitfire and how the developments in this technology shapes the world and the outcome of the War. To know how to explore and investigate prototypes of aeroplanes and know how to explain what worked effectively and what did not; to know the key features of a successful aeroplane To know how to generate and articulate design criteria for a successful aeroplane **2) Design** To know how to use their research in Stage 1to inform the design of a functional and appealing aeroplane which is fit for purpose. To know how to make labelled diagrams of the aeroplane taking their research into account To know how to plan the order of their work, choosingappropriate materials, tools and techniques **3) Make** To know how to use tools safely and accurately To know how to suggest alternativemethods of makingif the first attempts fail. To know how to demonstrate whenmake modificationsas they go along. To know how to construct productsusing permanent joining techniques. To know how to reinforce and strengthen the framework To know how to accurately apply a range of finishing techniques to make the product look appealing, selecting appropriate materials. To know how to make a quality product

			Identify the strengths and areasfor development in their ideas and products. **4) Evaluate** To know how to evaluate their products, identifyingstrengths and areasfor development, and carrying out appropriate tests. To know how to evaluate their workboth during and at the end of the assignment. To evaluate against their original criteriaand suggest ways that their product could be improved.
YEAR 5/6 **YEAR B** **BY THE END OF THE PENTECOST TERM**	**Year B: Design and make a healthy meal** Plain and Spinach Pasta Ravioli with butternut squash puree filling and a traditional Napolitana Sauce (linked to Healthy Week PSHE Curriculum and Science Curriculum) **KEY KNOWLEDGE** Understand that food is grown (suchas tomatoes, wheatand potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in theUK, Europe and thewider world. Begin to understandthat seasons may affect the food available. To know that basil, thyme, rosemary, oregano and parsley are different types of herbs and that oregano is used in Napolitana Sauce	Fat Sugar Carbohydrate Protein Vitamins Nutrients/Nutrition Healthy Varied Gluten Dairy Allergy Intolerance Savoury Source Seasonality Utensils Combine Stir Pour Mix Whisk	**To *embed* their knowledge of the design brief sequence:** - **Explore, design, make, evaluate** **5) Explore and evaluate:** To know how to evaluate a range of different pasta and ingredients used in the dish, expressing their views and preferences To know how the dish has been made, what ingredients have been used and the recipe To know what a successful pasta dish needs to be like, generating design criteria **6) Design** To know how to apply knowledge in linked topics and within the Explore and Evaluate phase to generate their designs. To know how to develop ideas through discussion and labelled sketches, with increasing detail considering its purpose and the user/s. To know how to order the main stages of making the dish To know how to explain their choice of ingredients **7) Make**

	To know the names of different hard cheeses – eg. Cheddar, Edam, Parmesan, Red Leicester and that sometimes Parmesan cheese is sprinkled on top of pasta dishes To know that Butternut Squash is actually a fruit but is eaten as a vegetable and it is full of vitamin A. To know that pasta origins can be traced back as early the 4th Century BC, to China To know that pasta is famous for being used widely in Italy but is a popular food around the world To know that there are many different varieties of pasta and these are group according to their size and shape To know ravioli and tortellini are types of pasta that can be stuffed To know how to make ravioli pasta, butternut squash puree filling and a Napolitana Sauce To know that pasta can be made by mixing flour and water or eggs To know how to follow a recipe and follow safety instructions. Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneadingand baking. Begin to understandthat different food and drink contain different substances – nutrients, waterand fibre		To know how to select appropriate tools and techniques for making their dish and explain the technique they will use and why To know how to measure out, combine ingredients etc with accuracy. To know how to work safely and accurately witha range of simple kitchen tools To know how to adapt and change their design based on their evaluation of how well the making process is going To know how to articulate the changes that they made in the making phase and give reasons for this **8) Evaluate** To know how to evaluate their dish identifyingstrengths and areasfor development, and carrying out appropriate tests. To know how to evaluate their workboth during and at the end of the assignment. To evaluate against their original criteriaand suggest ways that their product could be improved.