



Bishop Ellis Catholic Voluntary Academy



Design and Technology Intent

At Bishop Ellis Catholic Primary School we aim to provide a high-quality design and technology that is inspiring, rigorous and practical. Our children will be given opportunities to use their creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. As part of our design and technology curriculum children will be exposed to a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. We expect that our children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they will develop a critical understanding of its impact on daily life and the wider world.

Our curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical know-how needed to perform everyday tasks confidently and to contribute positively in an increasingly technological world
- build and apply knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

As part of their work with food, children will be taught how to cook and apply the principles of nutrition and healthy eating. We intend children to know that being able to cook is a crucial life skill that enables us to feed ourselves and others affordably and well, now and in the future.

At key stage one and two, core knowledge of designing, making, evaluating alongside the technical knowledge and vocabulary of design and technology is mapped out carefully to ensure that the curriculum provides a framework for what children will retain in their long term memory.

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

CYCLE A

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
Reception		Temple design and build. Design, make and wrap a toy.		Cooking- follow a recipe for an end result	Structures- Explore using different construction/art materials to build a bridge for the GBM to get across the river.	
KS1	Structures-den building			Textiles		Mechanisms-build a bus axels & wheel
LKS2		Mechanisms		Food- Cooking		Digital
UKS2	Digital 3D cad		Cooking	Mechanical Systems		

CYCLE B

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
Reception		Temple design and build. Design, make and wrap a toy.		Cooking- follow a recipe for an end result	Structures- Explore using different construction/art materials to build a bridge for the GBM to get across the river.	
KS1	Structures-Tudor houses	Mechanisms- levers and sliders			Food and Nutrition- fruit salad	
LKS2	Cooking - eating seasonally	Structures- Design a stable building				Materials- shadow puppets.
UKS2		Mechanical systems- pop up books	Textiles- Waistcoat		Electrical systems	

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

EYFS						
TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
MAIN TEXT		Rama and Sita Nativity		Oliver's Vegetables	Gingerbread Man	
UNIT OF WORK and KEY CONCEPTS		<p>Temple design and build.</p> <p>To begin to understand that some places are special to members of their community.</p> <p>To freely explore materials to design and develop their own ideas.</p> <p>Design, make and wrap a toy.</p> <p>Explore different materials freely, to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Join different materials and explore different textures.</p>		<p>To know how to use a knife safely to chop up vegetables.</p> <p>To know how to follow a recipe for an end result</p> <p>Develop confidence competence, precision and accuracy when using small equipment, PD</p> <p>Develop social phrases</p> <p>Use new vocabulary in different contexts.</p>	<p>Explore using different construction/art materials to build a bridge for the GBM to get across the river.</p> <p>a range of materials for children to construct with.</p> <p>Encourage them to think about and discuss what they want to make. Discuss problems and how they might be solved as they arise. Reflect with children on how they have achieved their aims.</p> <p>Teach children different techniques for joining materials, such as how to use adhesive tape and different sorts of glue.</p>	

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

YEAR GROUP. KS1 CYCLE A

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
MAIN TEXT	Beegu Everyday Materials Y1	I am Rosa Parks Famous People	Lost and Found Hot& cold places	Traction Man Uses of Everyday Materials	Bog Baby Animals, including humans	Naughty Bus Immediate locality-
Unit of work and key concepts	Structures. Design and make a den for Beegu. Designing Explain to someone how they want to make their product and make a simple plan before making. Making Use own ideas to make something. Choose appropriate resources and tools. Evaluating Explain what works well and not so well in the model they have made.			Textiles- puppet of Traction Man. To join two fabrics together accurately I can join fabrics together I can align two pieces of fabric I know how to use a template I can fit my hand into my puppet		Mechanisms- ferris wheel. I know how axles help wheels to move a vehicle I can evaluate different designs I can design and label a working wheel
Main enquiry question	What does Beegu think of life on Planet Earth?	How have people like Rosa Parks helped to make the world a better place?	Why can't a penguin live near the equator?	What would Traction Man use to build our school?	Why are humans not like tigers?	Where do and did the wheels on the bus go?

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

YEAR GROUP. KS1 CYCLE B

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
MAIN TEXT	Toby and the Great Fire of London	Dogger Changes within living memory	Little Evie and the Wild Wood Plants focus (y1)	The Last Tree Plants focus (y2)	Lila and the Secret of the Rain.	Wild. Living things and their habitats (y2)
Main enquiry question	Why did the Great Fire of London start?	Are iPads more fun than the toys my grandparents played with?	How old are the trees around us?	How can a plant be healthy?	Where would you prefer to live: England or Kenya?	Why would a dinosaur not make a good pet?
Curriculum enhancer- horizontal links	Structures Make a chair for baby bear. To make a structure according to design criteria I can remember that chairs are structures and need to be strong, stiff and stable I know how to create joints and structures from paper/card and tape	Mechanisms- moving toy Use own ideas to design something and describe how their own idea works Design a product which moves Explain to someone else how they want to make their product and make a simple plan before making Making Use own ideas to make something Make a product which moves Choose appropriate resources and tools Evaluating Describe how something works Explain what works well and not so well in the model they have made				Food & Nutrition I know how to prepare fruit and vegetables I can use a knife to cut safely I know how to use a blender I can make a smoothie

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

YEAR GROUP. LKS2 CYCLE A

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
NOVEL	History - "Stone age boy" Satoshi Kitamura 5 weeks Science - "The Street beneath my feet." 3 weeks	Geography- Escape from Pompeii. 4 Weeks History - Julius Caesar by Andrew Matthews (adapted Shakespeare play). 4 weeks	Who Let The Gods Out- Max Evans Greek Myths- Marcia Williams. (Shared Reading Text)	Who Let The Gods Out- Max Evans Falling out of the sky (Poetry Anthology).	Life on the Farm (Charlotte's Web by E.B. White) The Incredible book eating boy- Oliver Jeffers.	Band of Angels – Deborah Hopkinson The sound collector by Roger McGough (Poem)
Main enquiry question	Who first lived in Britain? What do rocks tell us about the way the Earth was formed?	Who were the Romans and what did we learn from them?	How would we survive without water?	Why were the Ancient Greeks ruled by their Gods? Why do so many people choose to go to the Mediterranean for their holiday?	What happens to the food we eat?	Why is the sound made by ***** enjoyed by so many?
Unit of Work and Key Concepts.		Mechanisms I can assemble the panels of the body to the chassis correctly I can remember that smaller shapes create less air resistance and can move faster through the air I can evaluate the speed of my design based on the understanding that some cars are faster than others as a result of: <ul style="list-style-type: none"> • Body shape • Stored energy in the elastic band • Accuracy of the angle in the chassis and axle 		Food- seasonal I know how to prepare a kitchen to cook in I know how to prepare myself in order to start cooking I know the basic rules of food contamination I can use, store and clean a knife safely I can follow a recipe to make a tart		Digital I can identify the key features of a pouch I can develop design ideas for a technology pouch I can use a template when cutting and assembling the pouch

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

YEAR GROUP. LKS2 CYCLE B

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
NOVEL	Giant – Kate Scott	The Buildings that made London- David Long, Josie Shenay	Ancient Egypt- Secrets of the Sun King	The Promise – Nicola Davies I am the seed that grew the tree – Poetry anthology	The Wind in the Willows by Kenneth Grahame (Penguin Classic and original)	Orion and the dark- Emma Yarlett. My Shadow – Robert Louis Stevenson (Poetry)
Main enquiry question	How can Usain Bolt run so fast?	Why would you choose to live in London/Leicester?	How can we recreate the wonder of Ancient Egypt	Which wild animals and plants thrive in our local environment?	Why are most of the world’s cities located by rivers?	How far can you throw your shadow?
Unit of work and Key Concepts		Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight. Creating a range of different shaped frame structures. Making a variety of free-standing frame structures of different shapes and sizes. Selecting appropriate materials to build a strong structure and for the cladding. Reinforcing corners to strengthen a structure.		Food- Eating seasonally To know that not all fruits and vegetables can be grown in the UK. To know that climate affects food growth. To know that vegetables and fruit grow in certain seasons. To know that cooking instructions are known as a ‘recipe’. To know that imported food is food that has been brought into the country. Design their own tart recipe using seasonal ingredients. Understand the basic rules of food hygiene and safety. Follow the instructions within a recipe.		Structure- Shadow puppet theatre prove that a design meets a set criteria. choose a material for both its suitability and its appearance use ideas from other people when designing produce a plan and explain it communicate ideas in a range of ways, including by sketches and drawings which are annotated select the most appropriate tools and techniques for a given task know which tools to use for a particular task and show knowledge of handling the tool know which material is likely to give the best outcome measure accurately

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

YEAR GROUP. UKS2 CYCLE A						
TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
NOVEL	Kensuke's Kingdom (5 weeks)	Pig Heart Boy (5 weeks) Polar Express (5 weeks)	Tale from Arabian Nights	Holes	The Man Who walked between 2 Towers- Mordecai Gerstein (+ poetry The Lost Words)	Macbeth
Main enquiry question	Why should the rainforests matter to all of us?	Why is your heart the most important pump you own? Are all changes irreversible?	Why was the Islamic civilization (AD900) known as the Golden Age?	Do we need to know where we've come from to know where we are going?	How do forces act upon us?	How can you light up your life?
Unit of work and key concepts.	Digital. identify key industries that utilise 3D CAD modelling and explain why. place and maneuver 3D objects, using computer-aided design. change the properties of, or combine one or more 3D objects, using computer-aided design to produce a 3D CAD model.		Food – creating Arabian dishes I know that the nutritional value of a recipe can change if you remove, substitute or add additional ingredients I can calculate and compare two adapted Arabian recipes using a nutritional calculator Based on this information I can decide which recipe is healthier I can write an amended method for my recipe to incorporate the relevant changes to ingredients	Mechanical systems. Lever soil from the ground 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 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 understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]		

BISHOP ELLIS DESIGN TECHNOLOGY CURRICULUM PLAN

YEAR GROUP. UKS2 CYCLE B

TERM	ADVENT 1	ADVENT 2	LENT 1	LENT 2	PENTECOST 1	PENTECOST 2
NOVEL	Jamie Drake Equation	War Horse Beowulf	The Silver Sword + WW2 poetry	The Nowhere Emporium – Ross McKenzie	The Tempest (including The Lighthouse)	Wonder – R. J. Palacio
Main enquiry question	Is there anybody out there?	Where do we live and how has it changed? How have the Anglo-Saxons impacted life in Britain today?	War – what is it good for?	How do we change over time?	Is it okay to be angry?	Why should we celebrate our differences?
Unit of work and key concepts	Mechanical systems. Pop up books. I know an input is the motion used to start a mechanism I know an output is the motion that happens as a result of starting the input I know that structures use the movement of the pages to work I know that mechanisms control movement I can design a book made up of a front cover and four pages and include a mixture of structures and mechanisms within it		Textiles waist coat I can design a waistcoat in accordance with a specification and design criteria to fit a specific theme. I can mark and cut fabric accurately, in accordance with a design. I can sew a strong running stitch, making small, neat stitches and following the edge. I can tie strong knots. I understand that it is important to design clothing with the client/target customer in mind. I know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. I understand the importance of consistently sized stitches.		Electrical systems. I can design a steady hand game, identifying and naming the components required. I can draw a design from different perspectives. I can model ideas through prototypes. I can construct a stable base for a game. I can accurately cut, fold and assemble a net. I can make and test a circuit. I know that ‘form’ means the shape and appearance of an object. To know the difference between ‘form’ and ‘function’. I understand that ‘fit for purpose’ means that a product works how it should and is easy to use. work very well.	

