

St. Stephen's R.C. Primary School

STRUCTURES

Design strong foundations.
Build, strengthen and innovate.

FOOD & NUTRITION

Cook with confidence.
Understand nutrition.
Explore seasonality.

MECHANISMS

Explore movement.
Create mechanisms that make things move and work.

TEXTILES

Sew, join and design.
Create purposeful, functional and beautiful products.

DESIGNING & EVALUATING

Think, test and improve.
Evaluate ideas and create solutions to real-life problems.

ELECTRICAL SYSTEMS

Power up ideas.
Design and make products with electrical systems.

DESIGN TECHNOLOGY

PROGRESSION

Designing today,
building tomorrow.

At St. Stephen's,
we are inspired to be
creative, confident
and curious designers
and innovators.

OUR CARES



COMPASSION
We show kindness and care for others.



AMBITION
We aim high and believe in ourselves.



REJOICE
We celebrate our gifts and happiness.



EXCELLENCE
We do our best and take pride.



SERVICE
We use our talents to serve God and our community.

DESIGNER FOCUS



Elizabeth Scott
Architect



Henry Royce
Mechanic



Alice Parker
Mechanical Engineer



Patrick Robinson
Fashion Designer



James Dyson
Engineer



Jamie Oliver
Chef



Garret Morgan
Inventor



Oliver Evans
Inventor



Mary Quant
Fashion Designer



Steve Jobs
Software Designer



Mary Fergusson
Engineer

...and many more!

WE DEVELOP **SKILLS** • BUILD **KNOWLEDGE** • SOLVE **PROBLEMS** • CREATE **SOLUTIONS**



We are creative thinkers and problem solvers.



We use tools safely and take care.



We work collaboratively and respectfully.



We persevere, reflect and never give up.



We design for people, communities and our world.



Rooted in the love of God, we use our talents to serve one another and the world.

John 15:12

Every child,
every chance,
every day

OUR INTENT

At St. Stephen's, we intend to inspire children to be **creative, confident designers and innovators** who can solve problems, think critically and make a positive impact in the world.



We develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.



We build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.



We critique, evaluate and test our ideas and products and the work of others.



We understand and apply the principles of nutrition and learn how to cook.

★ OUR KEY PRINCIPLES



Creativity
We think imaginatively.



Innovation
We try and create and take risks.



Sustainability
We care for our world and make responsible choices.



Perseverance
We keep going and learn from challenges.



Excellence
We take pride in our work and strive for our best.



Service
We use our skills to make a positive impact on others.

SKILLS WE DEVELOP



Designing



Making



Technical Knowledge



Problem Solving



Evaluating



Teamwork



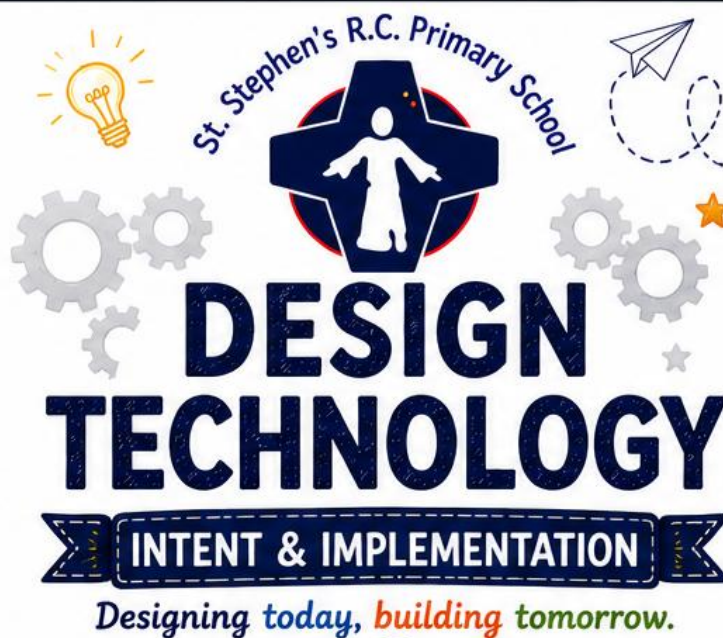
Independence



Communication



Precision



At St. Stephen's, we believe DT empowers children to become **resourceful, resilient and ambitious problem solvers who can shape the future.**

HOW WE TEACH DT



INSPIRE
Explore ideas and real-world problems.



DESIGN
Plan and create purposeful designs.



MAKE
Use skills, tools and materials to build.



EVALUATE
Test, improve and evaluate our work.



REFLECT
Reflect, share and celebrate our learning.

OUR IMPLEMENTATION

Our DT curriculum is carefully planned and sequenced to ensure progression of skills and knowledge across all year groups.



A hands-on, practical curriculum that encourages creativity, curiosity and innovation.



Clear progression of technical knowledge, skills and vocabulary.



Purposeful, real-life contexts that make learning meaningful and relevant.



Opportunities to design, make and evaluate products for a range of users.



Links to Maths, Science, Computing, Art and real-world careers.



A focus on healthy eating, sustainability, seasonality and making responsible choices.



★ DESIGNER FOCUS

We learn from inspirational designers, engineers, chefs and inventors who have changed the world.



Elizabeth Scott
Architect



Henry Royce
Mechanic



Alice Parker
Mechanical Engineer



Patrick Robinson
Fashion Designer



James Dyson
Engineer



Jamie Oliver
Chef



Garret Morgan
Inventor



Oliver Evans
Inventor



Mary Quant
Fashion Designer



Steve Jobs
Software Designer

...and many more!



We are not just learning to make things.
We are learning to change the world.



Every child, every chance, every day



Rooted in the love of God, we use our talents to serve one another and the world.



We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



We design for people, communities and our world.



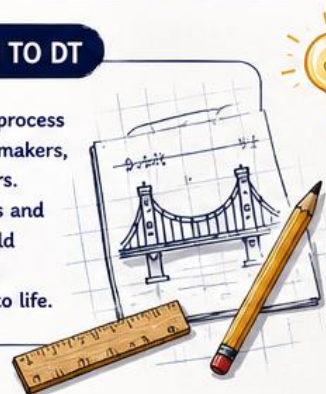
We persevere, reflect and never give up.

John 15:12



OUR APPROACH TO DT

We follow an iterative design process where children are designers, makers, innovators and problem solvers. Through hands-on experiences and real-life contexts, children build confidence, independence and resilience as they bring ideas to life.



St. Stephen's R.C. Primary School



PLANNING OUR DT CURRICULUM

Creative minds. Practical skills. Real-world impact.

WHAT WE DO



INVESTIGATE

We explore existing products and real-life problems to understand user needs and inspire ideas.



DESIGN

We generate ideas, plan, sketch and model our designs using annotation and prototypes.



MAKE

We select materials, tools and techniques to create high-quality prototypes and products.



EVALUATE

We test, reflect and evaluate our products and the work of others to improve further.

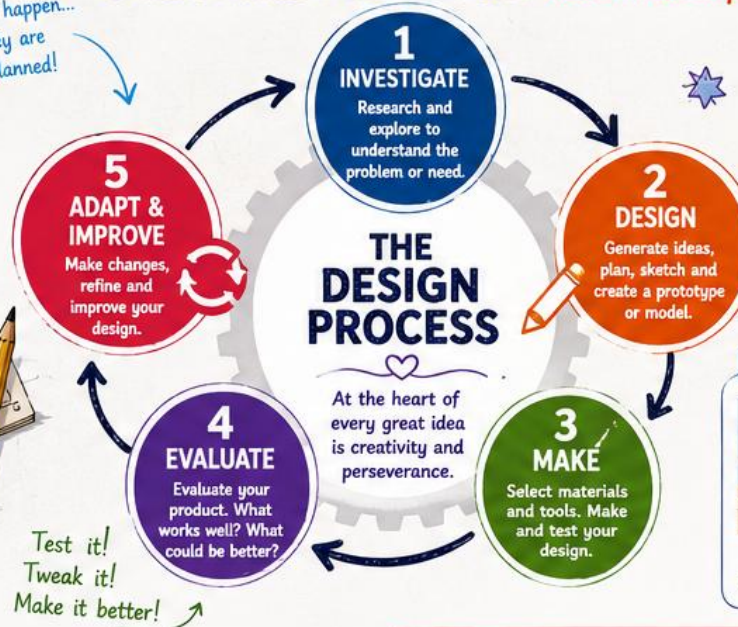


ADAPT & IMPROVE

We refine our ideas, solve problems and make improvements to achieve the best outcome.



Great designs don't just happen... they are planned!



OUR DT CURRICULUM IS...



Ambitious – inspiring creativity and innovation.



Practical – developing hands-on skills and technical knowledge.



Connected – linking to real life, other subjects and future careers.



Inclusive – every child can design, make and succeed.



Future-focused – preparing children for an increasingly technological world.



REAL-WORLD LINKS



ENGINEERING & STRUCTURES



MECHANISMS & MOVEMENT



TEXTILES & FASHION



FOOD & NUTRITION



ELECTRICAL SYSTEMS

We solve real-life problems and design for people, communities and the environment. We consider sustainability, safety and ethics in our designs.

EXAMPLES OF OUR WORK



Year 1
Bridge Structure



Year 2
Wheels & Axles



Year 3
Sew a Stocking



Year 5
Traffic Light System



Year 6
Sew a Phone Case



PRACTICAL SKILLS WE DEVELOP



Cutting



Joining



Shaping



Finishing



Stitching



Mechanisms



Electrical Systems



Cooking



Measuring



Computing

WE ENCOURAGE CHILDREN TO...



ASK QUESTIONS



THINK CREATIVELY



TAKE RISKS



SOLVE PROBLEMS



BE RESILIENT



BE PROUD

Great ideas start with curiosity and grow with determination!



Rooted in the love of God, we use our talents to serve one another and the world.



We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



We design for people, communities and our world.



We persevere, reflect and never give up.

John 15:12



At St. Stephen's, we design today, build tomorrow and make a positive impact in the world.

WHAT WE BELIEVE



DT empowers children to be creative thinkers, problem solvers and innovators.



We believe in learning through hands-on experiences and real-life contexts.



We encourage children to take risks, be resilient and never stop improving their ideas.



We design for people, communities and our world.



★ DESIGNER LINKS

We learn from inspirational designers, engineers, chefs and inventors who have shaped our world.



Solve real problems



Make a positive impact



Be creative and curious



Work with purpose and passion



Take risks and try new ideas



Keep improving and never give up

Design. Make. Evaluate. Innovate. Improve.

The building blocks of creative problem solving



1 MECHANISMS

Understanding how things move.

We explore...

- Wheels, axles and levers
- Gears, pulleys and cams
- Sliders and linkages



Key skills

Movement • Function • Control

EXAMPLE

Moving Monster
Year 4



2 STRUCTURES

Designing strong, stable and functional structures.

We explore...

- Strong shapes and frames
- Materials and their properties
- Stability and reinforcement



Key skills

Strength • Stability • Materials

EXAMPLE

Bridge Challenge
Year 5



3 TEXTILES

Combining creativity with practical textile skills.

We explore...

- Joining techniques
- Stitching and embellishing
- Designing for purpose



Key skills

Join • Decorate • Function

EXAMPLE

Hand Puppet
Year 3



4 FOOD & NUTRITION

Making healthy, balanced choices and developing cooking skills.

We explore...

- Healthy eating and nutrition
- Seasonal and local ingredients
- Preparing and cooking safely



Key skills

Prepare • Cook • Evaluate

EXAMPLE

Smoothies
Year 2



5 ELECTRICAL SYSTEMS

Designing and making products that use electricity and control.

We explore...

- Simple circuits and components
- Switches, buzzers and motors
- Control and automation



Key skills

Circuitry • Control • Safety

EXAMPLE

Traffic Light System
Year 6



6 DESIGNING & EVALUATING

Thinking critically to design, test, evaluate and improve our ideas.

We explore...

- Designing for a purpose
- Prototyping and testing
- Evaluating and improving



Key skills

Design • Test • Improve

EXAMPLE

Product Redesign
Year 5



PROGRESSION OF SKILLS



Explore and investigate
Ask questions and explore ideas.



Develop skills
Learn techniques, use tools safely and confidently.



Apply knowledge
Design and make products with purpose.



Evaluate critically
Test, evaluate and reflect on our work.



Improve and innovate
Make changes and create even better solutions.

KEY VOCABULARY



Design
A plan or drawing for a product.



Prototype
A model made to test an idea.



Function
What a product is designed to do.



Evaluate
To judge how well something works.



User
The person who will use the product.



Improve
To make something better.



Innovate
To create something new and helpful.



Sustainable
To design with care for our world.



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OUR CURRICULUM PROVIDES...

- ✓ A balance of practical and theoretical learning
- ✓ Progressive knowledge, skills and vocabulary
- ✓ Real-world contexts and meaningful outcomes
- ✓ Opportunities to be creative, innovative and ambitious
- ★ Experiences that inspire future designers and makers



St. Stephen's R.C. Primary School



CONTENT & COVERAGE

A PROGRESSIVE DT CURRICULUM – BUILDING KNOWLEDGE, SKILLS AND CREATIVITY

DESIGNER THREAD

Throughout our DT curriculum, we learn from inspirational designers, engineers, chefs and inventors who have shaped our world.



We explore their work, values and impact in every unit.

YEAR GROUPS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
UNIT 1 AUTUMN	Structures Build a Bridge How can we build a strong bridge? Designer Focus: Elizabeth Scott (Architect)	Mechanisms Wheels & Axles How can we make things move? Designer Focus: Alice Parker (Mechanical Engineer)	Textiles Christmas Stocking How can we join fabric using sewing techniques? Designer Focus: Mary Quant (Fashion Designer)	Cooking & Nutrition Greek Gyro / Greek Cuisine How can we cook a Greek meal? Designer Focus: James Dyson (Engineer)	Product Design Workspace Organiser How can we design and make a useful product? Designer Focus: Product Designer	Curriculum Enrichment / SATs Preparation No DT unit this term to support core curriculum priorities.
UNIT 2 SPRING	Mechanisms Sliders & Levers Moving Mother's Day Card How can we make something move? Designer Focus: Henry Royce (Engineer)	Textiles Felt Gift Bag How can we join and decorate fabric? Designer Focus: Patrick Robinson (Fashion Designer)	Mechanisms Lever & Linkages Moving Card How can we use levers to create movement? Designer Focus: James Hargreaves (Inventor)	Electrical Systems Pentecost Light-Up Card How can we create a working light circuit? Designer Focus: James Dyson (Engineer)	Computer-Controlled Electrical Systems Smart Traffic Crossing (Purple Mash 2Code) How can we design a system that helps keep people safe? Designer Focus: Ada Lovelace (Computer Programmer)	Textiles Personalised Mobile Phone Case How can we design and make a high quality product? Designer Focus: Cath Kidston (Textile Designer)
UNIT 3 SUMMER	Food & Nutrition Fruit Smoothie How can we make a healthy smoothie? Designer Focus: Jamie Oliver (Chef)	Food & Nutrition Preparing Fruit & Vegetables Healthy Picnic How can we prepare healthy food? Designer Focus: Jamie Oliver (Chef)	Structures Shell Structures Memory Box How can we make a strong box structure? Designer Focus: Jamie Oliver (Chef)	Seasonality Edible Growing: Making Soup How can we use ingredients we have grown? Designer Focus: Jamie Oliver (Chef)	Cooking & Nutrition Design Your Own Curry How can we design and cook a healthy curry? Designer Focus: Madhur Jaffrey (Chef & Food Writer)	Mechanisms Engineering Challenge: Saving Nepal's Tomatoes (Pulleys) How can we use pulleys to solve a real-life problem? Designer Focus: Isambard Kingdom Brunel (Engineer)

OUR DESIGN PROCESS



CROSS-CURRICULAR LINKS



EXAMPLES OF OUTCOMES



PROGRESSION IN DT

Children build on prior learning each year, developing knowledge, skills and confidence to tackle more complex problems.

EXPLORE

I can explore ideas and materials.

DEVELOP

I can develop skills and create simple products.

APPLY

I can apply my knowledge to design and make.

REFINE

I can evaluate and refine my work.

MASTER

I can innovate and create excellent outcomes.

REAL-WORLD IMPACT

DT prepares children for life in the modern world, giving them the creativity, skills and confidence to solve problems, think independently and make a positive impact.



VALUED OUTCOMES

- ✓ Practical skills for life
- ✓ Confidence and independence
- ✓ Creativity and innovation
- ✓ Resilience and perseverance
- ✓ Pride in high-quality outcomes



Designing today, building tomorrow, inspiring forever.



Rooted in the love of God, we use our talents to serve one another and our world.



We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



We design for people, communities and our world.



We persevere, reflect and never give up.

John 15:12



OUR KEY CONCEPT

STRUCTURES

Designing and building strong, stable and purposeful structures using a range of materials and techniques.



KEY PRINCIPLES



Stability

Structures need a strong base to stay upright.



Strength

The shape and materials affect how strong a structure is.



Materials

Different materials have different properties and uses.



Reinforcement

Adding features can make a structure stronger.



Function

Structures are designed for a purpose.



St. Stephen's R.C. Primary School

DT PROGRE OF SKILLS STRUCTURES

Designing and building strong, stable and purposeful structures.



YEAR 1

Freestanding Structures

LEARNING FOCUS

Explore and construct freestanding structures using a variety of materials. Explore how shapes can be made stable and tall.

KEY QUESTIONS

- What makes a structure stable?
- How can we make a tall structure?
- Which shapes are strongest?

TECHNICAL VOCABULARY

stable, strong, tall, base, shape, build, material, balance

PRACTICAL OUTCOME



BY THE END OF YEAR 1...

I can build a freestanding structure using a range of materials and explain what makes it stable. ★



YEAR 2

Bridges

LEARNING FOCUS

Design and build bridges that span a distance. Explore strength, stability and ways to reinforce structures.

KEY QUESTIONS

- How can a bridge be strong?
- What shapes help a bridge stay stable?
- How can we make it hold weight?

TECHNICAL VOCABULARY

span, support, structure, strong, truss, beam, load, stable

PRACTICAL OUTCOME



BY THE END OF YEAR 2...

I can design and build a bridge that is strong and stable and can explain how it works. ★



YEAR 3

Shell Structures

LEARNING FOCUS

Explore and create shell structures. Investigate how curved shapes increase strength and stability.

KEY QUESTIONS

- What are shell structures?
- Why are curved shapes strong?
- How can we join materials to form a shell?

TECHNICAL VOCABULARY

curved, shell, surface, arch, dome, strong, join, form

PRACTICAL OUTCOME



BY THE END OF YEAR 3...

I can create a shell structure and explain how its shape makes it strong. ★



YEAR 5

Frame Structures

LEARNING FOCUS

Design and build frame structures. Explore how frames can be joined and reinforced to add strength.

KEY QUESTIONS

- What is a frame structure?
- How can we reinforce a frame?
- How does the shape affect strength?

TECHNICAL VOCABULARY

frame, support, joint, reinforce, load, tension, compression, rigid

PRACTICAL OUTCOME



BY THE END OF YEAR 5...

I can design and build a frame structure and justify my choices of materials and joints. ★



YEAR 6

Architectural Models

LEARNING FOCUS

Design and make detailed architectural models. Explore scale, accuracy, function and aesthetics.

KEY QUESTIONS

- How do architects plan buildings?
- How can we use scale accurately?
- How can we make our model realistic and functional?

TECHNICAL VOCABULARY

scale, proportion, model, design, purpose, detail, aesthetics

PRACTICAL OUTCOME



BY THE END OF YEAR 6...

I can design and make an architectural model that is accurate, detailed and fit for purpose. ★



ENGINEER FOCUS

We learn from inspiring engineers and architects have shaped our world. ✨



Isambard Kingdom Brunel (1806–1859)

Civil engineer who designed bridges, railways, ships and tunnels. He was a pioneer of strong, innovative structures.



Elizabeth Scott (1958–Present)

Structural engineer known for the design of bridges and bridges of bridges and footbridges around the world.



Sir Norman Foster (1935–Present)

World-famous architect who designs innovative buildings that combine beauty, function and sustainability.



Zaha Hadid (1950–2016)

Architect known for her bold, futuristic designs and creative structures.



Rooted in the love of God, we use our talents to serve one another and the world.



We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



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John 15:12

OUR KEY CONCEPT

Structures are designed and built to be strong, stable and purposeful. We use a range of materials and techniques to create safe and functional builds.



KEY PRINCIPLES



Stability

Structures need a strong base to stay upright.



Strength

The shape and materials affect how strong a structure is.



Materials

Different materials have different properties and uses.



Reinforcement

Adding features can make a structure stronger.



Function

Structures are designed for a purpose.



St. Stephen's R.C. Primary School



STRUCTURES

Designing and building strong, stable and purposeful structures.



YEAR 1

Freestanding Structures

LEARNING FOCUS

Explore and construct freestanding structures using a variety of materials. Explore how shapes can be made stable and tall.

KEY QUESTIONS

- What makes a structure stable?
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- Which shapes are strongest?

TECHNICAL VOCABULARY

stable, strong, tall, base, shape, build, material, balance

PRACTICAL OUTCOME



BY THE END OF YEAR 1...

I can build a freestanding structure using a range of materials and explain what makes it stable. ★



YEAR 2

Bridges

LEARNING FOCUS

Design and build bridges that span a distance. Explore strength, stability and ways to reinforce structures.

KEY QUESTIONS

- How can a bridge be strong?
- What shapes help a bridge stay stable?
- How can we make it hold weight?

TECHNICAL VOCABULARY

span, support, structure, strong, truss, beam, load, stable

PRACTICAL OUTCOME



BY THE END OF YEAR 2...

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YEAR 3

Shell Structures

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curved, shell, surface, arch, dome, strong, join, form

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YEAR 5

Frame Structures

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Design and build frame structures. Explore how frames can be joined and reinforced to add strength.

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John 15:12

OUR KEY CONCEPT

Mechanisms are systems of moving parts that work together to transfer movement and make things work. We use creativity, accuracy and engineering skills to design and make functional products.



KEY PRINCIPLES



Movement

Mechanisms create and control movement.



Function

Each part has a purpose and works together.



Control

Movement can be changed in speed, direction or force.



Accuracy

Precise making helps mechanisms work smoothly.



Innovation

Designing and improving makes mechanisms better.

St. Stephen's R.C. Primary School



MECHANISMS

Designing and making working mechanisms that create movement.



YEAR 1

Sliders and Levers



LEARNING FOCUS

Explore and use levers and sliders in simple mechanisms.

KEY QUESTIONS

- How does a lever move?
- How does a slider move?
- How can we make movement smooth and controlled?

TECHNICAL VOCABULARY

lever, pivot, slider, slot, guide, up, down, push, pull

PRACTICAL OUTCOME

A moving story character with a slider or lever.

BY THE END OF YEAR 1...

I can use sliders and levers to create simple movement.



YEAR 2

Wheels and Axles



LEARNING FOCUS

Explore and use wheels and axles to make movement easier.

KEY QUESTIONS

- How do wheels help things move?
- How does an axle work?
- How can we reduce friction?

TECHNICAL VOCABULARY

wheel, axle, rotate, roll, friction, smooth, fixed, moving

PRACTICAL OUTCOME

A moving vehicle with wheels and axles.

BY THE END OF YEAR 2...

I can use wheels and axles to create a working vehicle.



YEAR 3

Linkages



LEARNING FOCUS

Explore and use linkages to create more complex movement.

KEY QUESTIONS

- How do linkages change movement?
- How can linkages go up and down or back and forth?
- How can we make our mechanism more effective?

TECHNICAL VOCABULARY

linkage, connector, pivot, motion, linear, reciprocating, joint

PRACTICAL OUTCOME

A moving creature or arm using a linkage mechanism.

BY THE END OF YEAR 3...

I can use linkages to create complex movement.



YEAR 5

Pulleys



LEARNING FOCUS

Explore and use pulleys to lift and move loads with less effort.

KEY QUESTIONS

- How do pulleys help us lift things?
- How does the number of pulleys change the effort?
- Where are pulleys used in real life?

TECHNICAL VOCABULARY

pulley, wheel, rope, load, effort, fixed, moveable, mechanical advantage

PRACTICAL OUTCOME

A working pulley system to lift a load.

BY THE END OF YEAR 5...

I can use pulleys to make lifting easier.



YEAR 6

Gears and Cams



LEARNING FOCUS

Explore and use gears and cams to control movement and direction.

KEY QUESTIONS

- How do gears change speed and direction?
- How does a cam turn rotary motion into linear motion?
- How can we design an efficient mechanism?

TECHNICAL VOCABULARY

gear, gear train, driver, driven, cam, follower, rotation, ratio

PRACTICAL OUTCOME

A gear or cam mechanism with a specific function.

BY THE END OF YEAR 6...

I can use gears and cams to control movement and achieve a purpose.



ENGINEER FOCUS

We learn from inspiring engineers who design and develop mechanisms that change the world.



Isambard Kingdom Brunel (1806–1859)

Civil engineer who designed bridges, railways and ships. His mechanisms and machines made the impossible possible.



Joseph Whitworth (1803–1887)

Mechanical engineer and inventor who designed precision measuring instruments and machinery.



James Dyson (b. 1947)

Engineer and innovator who designs products that solve real problems in clever ways.



Emily Roebling (1843–1903)

Engineer who played a key role in completing the Brooklyn Bridge when her father became ill.



Laila Pervaiz (b. 1982)

Engineering designer and inventor of sustainable technology and inclusive engineering solutions.



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We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



We design for people, communities and our world.



We persevere, reflect and never give up.



John 15:12



OUR KEY CONCEPT

Textiles are materials made from fibres and fabrics. We use a range of skills and techniques to join, shape, decorate and combine textiles to create useful and attractive products.



KEY PRINCIPLES



Function

Textiles have purposes and are chosen for specific reasons.



Quality

Careful making and finishing improve the quality of products.



Creativity

Design ideas can be inspired by fabrics, patterns and people.



Skills

A range of techniques help us join, shape and decorate textiles.



Sustainability

Choosing materials carefully can help people and the planet.



St. Stephen's R.C. Primary School



TEXTILES

Designing and making products using a range of textiles skills and techniques.



YEAR 1

Joining Materials

LEARNING FOCUS

Explore simple ways to join fabrics and other materials using running stitch and glue.

KEY QUESTIONS

- How can we join fabrics together?
- Which joining method is best?
- How can we strengthen our joins?

TECHNICAL VOCABULARY

fabric, join, stitch, glue, material, applique, edge, strong, neat

PRACTICAL OUTCOME



BY THE END OF YEAR 1...

I can join materials using running stitch and glue to make a simple product.



YEAR 2

Sewing Stockings

LEARNING FOCUS

Learn to thread a needle and use a running stitch to sew simple shapes and items.

KEY QUESTIONS

- How do we thread a needle safely?
- How can we sew in a straight line?
- How can we make our stitches even and strong?

TECHNICAL VOCABULARY

needle, thread, running stitch, sew, hem, seam, straight, neat

PRACTICAL OUTCOME



BY THE END OF YEAR 2...

I can sew running stitch to make a simple stocking.



YEAR 3

Cushion Covers

LEARNING FOCUS

Use templates and joins to make a cushion cover and add simple embellishments.

KEY QUESTIONS

- How can we join fabric pieces accurately?
- How can we add decoration to improve our design?
- How can we make our cushion cover neat and strong?

TECHNICAL VOCABULARY

template, seam, hem, embellish, decorate, applique, neat, strong

PRACTICAL OUTCOME



BY THE END OF YEAR 3...

I can make and decorate a cushion cover using a range of stitches.



YEAR 4

Combining Fabrics

LEARNING FOCUS

Combine fabrics using different stitches and techniques to create a useful product.

KEY QUESTIONS

- How can we combine fabrics for strength and appearance?
- Which stitches are suitable for our product?
- How can we improve the quality of our finishing?

TECHNICAL VOCABULARY

combine, stitch, backstitch, overlap, reinforce, pattern, contrast, finish

PRACTICAL OUTCOME



BY THE END OF YEAR 4...

I can combine fabrics and use different stitches to make a useful product.



YEAR 5

Decorating Textiles

LEARNING FOCUS

Use a range of decorative techniques to enhance the appearance of textiles.

KEY QUESTIONS

- Which decorating techniques can we use?
- How do our choices improve the look of our product?
- How can we add detail and personal style?

TECHNICAL VOCABULARY

embroidery, applique, running stitch, cross stitch, bead, decorate, detail, design

PRACTICAL OUTCOME



BY THE END OF YEAR 5...

I can decorate textiles using embroidery or applique to enhance my product.



YEAR 6

Functional Phone Cases

LEARNING FOCUS

Design and make a functional phone case with a fastening and strong, neat finishing.

KEY QUESTIONS

- How can we design a product that is both functional and attractive?
- How can we add a fastening and reinforce seams?
- How can we evaluate and improve our final product?

TECHNICAL VOCABULARY

fastening, reinforce, seam allowance, interfacing, durable, precision, evaluate, improve

PRACTICAL OUTCOME



BY THE END OF YEAR 6...

I can design and make a phone case with a fastening and a high quality finish.



DESIGNER FOCUS

We learn from inspiring designers and makers who use textiles to solve problems and express creativity.



Katharine Hamnett
(b. 1947)

Fashion designer known for her bold designs and sustainable clothing.



Zandra Rhodes
(b. 1940)

Textile designer famous for her colourful prints and innovative fabric designs.



Anni Albers
(1899–1994)

Weaver and textile artist who explored pattern, weaving and texture in amazing ways.



Orla Kiely
(b. 1963)

Designer known for her retro-inspired prints used in fashion and homewares.



Aki Choklat
(b. 1976)

Textile artist who creates playful soft sculptures and installations.



Rooted in the love of God, we use our talents to serve one another and the world.



We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



We design for people, communities and our world.



We persevere, reflect and never give up.



John 15:12

OUR KEY CONCEPT

Food is essential for life and affects our health, mood and wellbeing. We use a range of skills and techniques to prepare and cook food, understand where it comes from, and make informed choices.



KEY PRINCIPLES



Health & Wellbeing

Eating a balanced diet and understanding the impact of food on our bodies.



Food Knowledge

Knowing where food comes from and how it is produced.



Cooking Skills

Learning practical skills and techniques to prepare and cook food.



Safety & Hygiene

Following safety and hygiene rules to keep ourselves and others safe.



Sustainability

Reducing waste and making choices that help people and the planet.



CHEF FOCUS

We are inspired by chefs who create delicious food and promote healthy, sustainable eating.



Jamie Oliver
(b. 1975)

Chef and campaigner who encourages families to cook together and make healthy choices.



Yotam Ottolenghi
(b. 1968)

Chef and author known for his creative recipes using fresh, flavourful ingredients from around the world.



Mary Berry
(b. 1935)

Baking expert and author who inspires confidence in the kitchen and values traditional recipes.



Nadiya Hussain
(b. 1984)

Chef and TV presenter who creates approachable recipes and celebrates cooking for family and community.



Dan Barber
(b. 1969)

Chef and advocate for sustainable food and supporting local farms and the environment.



St. Stephen's R.C. Primary School



COOK
LEARN
EAT WELL



FOOD & NUTRITION

Learning how to cook and eat well for a healthy and balanced lifestyle.



YEAR 1

Smoothies

LEARNING FOCUS

Explore and make simple smoothies. Learn about ingredients and how healthy choices help our bodies.

KEY QUESTIONS

- What makes a smoothie healthy?
- How can we combine fruits safely?
- How can we taste and evaluate our smoothie?

TECHNICAL VOCABULARY

fruit, blend, peel, chop, soft, smooth, healthy, taste, evaluate

PRACTICAL OUTCOME



BY THE END OF YEAR 1...

I can prepare a simple smoothie using a range of fruits and evaluate how it tastes.



YEAR 2

Greek Cuisine

LEARNING FOCUS

Discover Greek cuisine and prepare a simple recipe. Learn about the Mediterranean diet.

KEY QUESTIONS

- What foods are popular in Greek cuisine?
- How can we prepare ingredients safely?
- How does Greek food support a healthy diet?

TECHNICAL VOCABULARY

chop, mix, combine, dice, olive oil, herbs, seasoning, flavour

PRACTICAL OUTCOME



BY THE END OF YEAR 2...

I can prepare a simple Greek recipe and explain the importance of healthy eating.



YEAR 3

Seasonality

LEARNING FOCUS

Explore seasonal ingredients and understand why eating seasonal food is better for us and the planet.

KEY QUESTIONS

- What fruits and vegetables are in season?
- Why is it important to eat seasonal food?
- How does seasonality affect our recipes?

TECHNICAL VOCABULARY

seasonal, harvest, grow, fresh, local, sustainable, variety

PRACTICAL OUTCOME



BY THE END OF YEAR 3...

I can use seasonal ingredients to make a dish and explain why seasonal food is important.



YEAR 4

Soup Making

LEARNING FOCUS

Learn how to make a healthy soup. Explore different vegetables and flavour combinations.

KEY QUESTIONS

- How can we prepare vegetables safely?
- What ingredients make a soup tasty and healthy?
- How can we improve our soup?

TECHNICAL VOCABULARY

boil, simmer, dice, ingredients, nutritious, flavour, texture

PRACTICAL OUTCOME



BY THE END OF YEAR 4...

I can prepare a healthy soup using a range of vegetables and evaluate its taste.



YEAR 5

Bread Making

LEARNING FOCUS

Learn how bread is made and bake a simple bread product. Understand the role of different ingredients.

KEY QUESTIONS

- What ingredients are needed to make bread?
- How do ingredients work together?
- How can we evaluate our bread?

TECHNICAL VOCABULARY

knead, dough, yeast, prove, bake, crust, texture, evaluate

PRACTICAL OUTCOME



BY THE END OF YEAR 5...

I can bake a bread product and explain how different ingredients work together.



YEAR 6

Soda Bread

LEARNING FOCUS

Explore traditional Irish soda bread and bake our own. Learn about cultural heritage and traditions.

KEY QUESTIONS

- What makes soda bread unique?
- How can we follow a recipe accurately?
- How does food reflect culture and tradition?

TECHNICAL VOCABULARY

measure, mix, knead, shape, bake, tradition, heritage, rise

PRACTICAL OUTCOME



BY THE END OF YEAR 6...

I can bake soda bread and understand its cultural significance.



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We design for people, communities and our world.



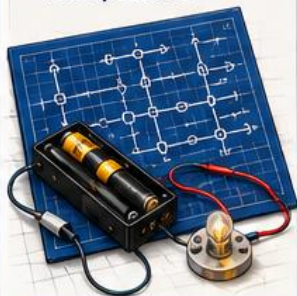
We persevere, reflect and never give up.



John 15:12

OUR KEY CONCEPT

Electrical systems power and control our world. We use a range of skills and techniques to design, build and test circuits and components to solve problems and create useful products.



KEY PRINCIPLES

- Electricity**
Understanding how electricity flows and how components work together.
- Function**
Systems have inputs, processes and outputs to achieve a purpose.
- Control**
Electrical systems can be controlled manually or automatically.
- Safety**
Safe design and correct use of components protects people.
- Sustainability**
Using energy wisely and considering the impact on our planet.

ENGINEER FOCUS
We learn from inspiring engineers and inventors who have shaped the technology we use every day.



Michael Faraday (1791–1867)
Pioneer of electricity and magnetism whose discoveries laid the foundation for modern electrical engineering.



Nikola Tesla (1856–1943)
Inventor and engineer who developed AC electricity and many inventions that power our world.



Hedy Lamarr (1914–2000)
Inventor and actress who helped create frequency hopping technology, the basis of Wi-Fi and Bluetooth.



James Watt (1736–1819)
Improved the steam engine and helped power the Industrial Revolution.



Dr. Gladys West (b. 1930)
Mathematician whose calculations helped make GPS possible and accurate.



Mark Dean (b. 1957)
Engineer and tech pioneer who helped develop the modern personal computer.

St. Stephen's R.C. Primary School



ELECTRICAL SYSTEMS

Designing and making functional products that use electrical components and control systems.



YEAR 1

Simple Circuits

LEARNING FOCUS

Explore and build simple circuits with a battery, bulb and wires. Learn how electricity can make components work.

KEY QUESTIONS

- What is electricity?
- How does a bulb light up?
- How can we make a circuit complete?

TECHNICAL VOCABULARY

battery, bulb, wire, circuit, complete, incomplete, cell, positive, negative

PRACTICAL OUTCOME



BY THE END OF YEAR 1...

I can build and test a simple circuit and explain how it works.

YEAR 2

Switches

LEARNING FOCUS

Learn how switches control electrical circuits. Explore different types of switches and their uses.

KEY QUESTIONS

- How does a switch work?
- What happens when we open or close a circuit?
- Where are switches used in everyday life?

TECHNICAL VOCABULARY

switch, open, closed, conductor, insulator, connection, on, off

PRACTICAL OUTCOME



BY THE END OF YEAR 2...

I can include a switch in a circuit to control a component.

YEAR 3

Buzzers

LEARNING FOCUS

Use circuits to make buzzers sound. Explore how components can be used to create different effects.

KEY QUESTIONS

- How can we make a buzzer work?
- What other components can we add to a circuit?
- How can we change the sound?

TECHNICAL VOCABULARY

buzzer, sound, vibration, circuit, component, series, parallel, frequency

PRACTICAL OUTCOME



BY THE END OF YEAR 3...

I can build a circuit that includes a buzzer and explain how it works.

YEAR 4

Traffic Light Systems

LEARNING FOCUS

Design and build a traffic light system using LEDs. Learn how to sequence circuits.

KEY QUESTIONS

- How do traffic lights work?
- How can we control the order of lights?
- How can we improve our design?

TECHNICAL VOCABULARY

LED, sequence, timing, red, amber, green, resistor, current, control

PRACTICAL OUTCOME



BY THE END OF YEAR 4...

I can design and make a traffic light system that works in order.

YEAR 5

Control Systems

LEARNING FOCUS

Use programmable components to control outputs. Learn how inputs, processes and outputs work together.

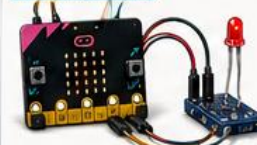
KEY QUESTIONS

- What is a control system?
- How can we program a device to respond?
- How can we test and improve our system?

TECHNICAL VOCABULARY

input, process, output, program, sensor, micro:bit, algorithm, code

PRACTICAL OUTCOME



BY THE END OF YEAR 5...

I can program a control system to make an output respond to an input.

YEAR 6

Advanced Electrical Systems

LEARNING FOCUS

Design and make advanced systems that solve real problems. Consider energy use, safety and reliability.

KEY QUESTIONS

- How can we design a system that solves a problem?
- How can we make our system reliable and safe?
- How can we evaluate and improve our design?

TECHNICAL VOCABULARY

efficiency, reliability, load, voltage, current, automation, feedback, sustainability

PRACTICAL OUTCOME



BY THE END OF YEAR 6...

I can design and make an advanced electrical system that solves a real problem.



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John 15:12

OUR KEY CONCEPT

Design and technology is a creative process. We investigate, design, make, test and evaluate to solve problems and create products that are fit for purpose.

We learn from our ideas, our mistakes and the ideas of others to make things better.



KEY PRINCIPLES



Investigate
Research and explore to understand needs, wants and problems.



Design
Use creativity and knowledge to generate ideas and plan solutions.



Make
Select materials and use skills and techniques to make products.



Test
Test and try out products to see how well they work.



Evaluate
Evaluate products and processes to identify strengths and areas to improve.



Improve
Use evaluation to improve ideas, skills and products.



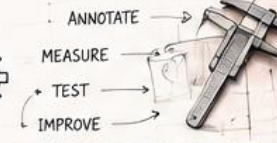
DESIGNER MINDSET

Good designers are:

- Curious
- Creative
- Resilient
- Reflective
- Problem solvers
- Collaborative



St. Stephen's R.C. Primary School



DESIGNING & EVALUATING

Using creativity, knowledge and evaluation to design, make and improve products.

YEAR 1

Exploring & Designing

LEARNING FOCUS

Explore existing products. Generate simple ideas and design with a purpose.

KEY QUESTIONS

- What is the product for?
- Who will use it?
- What are my ideas?
- How will I make it?

TECHNICAL VOCABULARY

idea, design, plan, draw, materials, make, test, change, improve

PRACTICAL OUTCOME



BY THE END OF YEAR 1...

I can explore ideas and design a simple product.



YEAR 2

Planning & Making

LEARNING FOCUS

Plan by drawing and marking out. Select tools and materials and make products safely.

KEY QUESTIONS

- What materials will I use?
- What tools will I need?
- How will I make it safely?
- How will I test it?

TECHNICAL VOCABULARY

plan, design criteria, materials, tools, join, cut, shape, assemble, test

PRACTICAL OUTCOME



BY THE END OF YEAR 2...

I can plan and make a product and test how well it works.



YEAR 3

Designing with Purpose

LEARNING FOCUS

Use research and criteria to design products. Make and evaluate against the design.

KEY QUESTIONS

- What do I need to find out?
- How will my design work?
- Does my product work as planned?
- What could I improve?

TECHNICAL VOCABULARY

research, criteria, function, prototype, evaluate, effective, improve

PRACTICAL OUTCOME



BY THE END OF YEAR 3...

I can design for a specific user and improve my product based on evaluation.



YEAR 4

Developing & Evaluating

LEARNING FOCUS

Develop ideas through prototypes. Test, measure and evaluate to improve function and quality.

KEY QUESTIONS

- How can I develop my ideas?
- How will I test and measure it?
- Is my product sustainable?
- What can I improve and why?

TECHNICAL VOCABULARY

prototype, measure, accuracy, durability, user, feedback, refine, modify

PRACTICAL OUTCOME



BY THE END OF YEAR 4...

I can develop prototypes and use testing to improve the quality of my product.



YEAR 5

Iterating & Improving

LEARNING FOCUS

Iterate designs and make refinements. Consider sustainability and user needs.

KEY QUESTIONS

- How can I improve my design?
- What feedback will I use?
- Is my product sustainable?
- How can I make it better?

TECHNICAL VOCABULARY

iteration, feedback, sustainable, efficient, user needs, purpose, redesign, enhance

PRACTICAL OUTCOME



BY THE END OF YEAR 5...

I can iteratively improve my designs to make products that are fit for purpose.



YEAR 6

Designing for Impact

LEARNING FOCUS

Design innovative products that solve real problems. Evaluate impact and consider the future.

KEY QUESTIONS

- What problem am I solving?
- How innovative is my design?
- What impact will my product have?
- How can I make it the best it can be?

TECHNICAL VOCABULARY

innovation, impact, feasibility, evaluation, user, reliability, efficient, advanced

PRACTICAL OUTCOME



BY THE END OF YEAR 6...

I can design and make innovative products that solve real problems and have impact.



INVESTIGATE

Find out about needs, wants and problems.



DESIGN

Generate ideas and plan the best solution.



MAKE

Use skills and techniques to make it.



TEST

Test it out and see how well it works.



EVALUATE

Evaluate the product and the process.



IMPROVE

Use what you have learned to improve.

Mistakes help us learn. Improvement is progress!



Charles Eames
(1907-1978)
American designer who created innovative furniture and believed in design that solves real problems.



Dieter Rams
(b. 1932)
German industrial designer known for simple, functional and thoughtful design.



Jane Ni Dhulchaointigh
(b. 1940)
Irish designer who created award-winning woven textiles inspired by nature.



Sir James Dyson
(b. 1947)
British inventor and engineer who designs products through problem solving and testing.



Zaha Hadid
(1950-2016)
Architect known for creating bold, innovative and sustainable buildings.



Thomas Edison
(1847-1931)
Inventor who tested thousands of ideas and never gave up improving the future.

Thomas Edison
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Inventor who tested thousands of ideas and never gave up improving the future.



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We persevere, reflect and never give up.



John 15:12



Big ideas
Bright futures



Imagine it.
Design it.
Make it better.

THROUGH DT, OUR CHILDREN LEARN TO...



SOLVE PROBLEMS

We tackle real and relevant problems and find creative solutions.



DESIGN CREATIVELY

We imagine, plan and design products that are purposeful and innovative.



WORK COLLABORATIVELY

We share ideas, listen to others and work together to achieve our goals.



IMPROVE IDEAS

We test, evaluate and improve our products to make them better.



USE TOOLS SAFELY

We select and use tools, equipment and materials safely and responsibly.



THINK CRITICALLY

We ask questions, explore possibilities and make informed decisions.



INNOVATE CONFIDENTLY

We have the courage to take risks, try new ideas and create the future.



DT HAS A REAL-WORLD IMPACT



UNDERSTAND THE DESIGNED WORLD

We explore how products are designed, made and used to improve lives.



BECOME INNOVATORS

We develop the skills and confidence to create ideas that make a difference.



DEVELOP LIFE SKILLS

We build independence, teamwork, communication and practical skills for life.



THINK SUSTAINABLY

We consider the impact of our choices and design for a better, greener future.



PREPARE FOR FUTURE CAREERS

We open doors to exciting careers in engineering, design, technology and more.

Design is not just what it looks like and feels like. Design is how it works. — Steve Jobs

DEVELOPING DESIGNERS & INNOVATORS = at St. Stephen's =



= Rooted in the love of God, we design for people, communities and our world. =

WE WANT OUR CHILDREN TO LEAVE ST. STEPHEN'S AS...



RESILIENT THINKERS

They keep going, learn from mistakes and overcome challenges.



CREATIVE DESIGNERS

They imagine new possibilities and design with originality and purpose.



REFLECTIVE LEARNERS

They evaluate their work and use feedback to grow and improve.



RESPONSIBLE INNOVATORS

They design for a better world and make sustainable choices.



CONFIDENT MAKERS

They use skills and techniques safely to bring their ideas to life.



AMBITIOUS PROBLEM SOLVERS

They see problems as opportunities and solve them with confidence.



LIFELONG DESIGNERS & INNOVATORS

They are ready to shape a brighter future for themselves and others.



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We are creative thinkers and problem solvers.



We work collaboratively and respectfully.



We design for people, communities and our world.



We persevere, reflect and never give up.

Designing today,
building tomorrow,
INSPIRING FOREVER.

