

Design and Technology Roadmap Year 3

Ready to Pop

Suggested author and paper engineer: Matthew Reinhart

Autumn -

Children will research pop up books to inspire creativity and innovation. They will communicate ideas through a series of diagrams and prototypes and evaluate their ideas against their own design criteria. Children will understand and use mechanical systems in their product ensuring that they are fit for purpose.

Why do we follow on with this unit?
To further develop the children's ability research and develop design criteria.

What skills will we continue to build upon?
Understanding of how to recognise when a product has reached the state of completion.

You've Been Framed

Suggested design house(s): Ikea

Spring -

Children will consider the appeal and use of a photo frame. They will explore different types of wood and sustainability, generating ideas for their own design. They will be taught how to join and strengthen corners and how to finish a product to a high standard.

I'm in Love with My Car

Suggested Industrialist: Henry Ford

Children will learn how key individuals helped shape the world. They will research and develop design criteria, communicating their ideas in a variety of ways. Children will select from a wide range of tools and equipment to explore and use mechanical systems.

Why do we follow on with this unit?
To develop the children's understanding of different mechanisms.

What skills will we continue to build upon?
Understanding of how to prepare materials for a project.



Design and Technology Roadmap Year 4

On a Roll

Suggested chef(s): Nadiya Hussain

Autumn -

Following on from the children's understanding of healthy eating, children will discover how different types of bread are made and used by different cultures around the world. They will analyse how different flours and ingredients affect the texture and taste, whilst experimenting with a loaf's appearance. The children will prepare and cook bread and evaluate the outcome.

Why do we follow on with this unit?
To develop the children's understanding of how key individuals can shape the world.

What skills will we continue to build upon?
Understanding of how to analyse a range of products.

Quizzical Quilting

Suggested graphic designer: Michele Walker

Spring -

Children will research the historical origins of quilt making. They will respond to the research, designing and making a quilt based on tried and tested patterns. After completing a class quilt, children will be supported to make constructive reflections on the process of their own work.

Create a Buzz

Suggested scientist(s): Joseph Henry

Summer -

Children will explore how the evolution of a product changes over time and how its original purpose may evolve into another. Using flowcharts and diagrams they will articulate how an electronic device works, before applying the knowledge to their own design and success criterion.

Why do we follow on with this unit?
To develop the children's understanding that products need to be appealing and functional.

What skills will we continue to build upon?
Understanding of how to evaluate against design criteria.

Design and Technology Roadmap Year 5

Marble Run

Suggested sculptor(s): George Rhoads

Autumn -

Children will further develop their knowledge gained from previous structure units by creating their own marble run. They will set their own design criteria keeping within given parameters and master how to reduce the force of friction thereby allowing gravity to take over.

Why do we follow on with this unit?

To develop the children's understanding of how external forces can affect technology.

Pinball Wizard

Suggested businessman(s): David Gottlieb

Spring -

In this unit, children will explore the range of mechanisms used in pinball machines. They will follow the steps of design, prototype, test, release and feedback aiming to create a product fit for the intended audience.

What skills will we continue to build upon?

Understanding of how to alter forces in technology to achieve a product design

Roving Roberts

Suggested engineer(s): Mars Rover Engineering Team

Summer -

Children will apply their understanding of computing to design a programmable device. They will use exploded diagrams to show both structural pieces of their product and exploded sections to focus on the functional mechanisms used. They will evaluate their model throughout the design process, altering the programming sequence in accordance with their findings.

Why do we follow on with this unit?
To develop the children's understanding of building prototypes

What skills will we continue to build upon?
Understanding of how to apply computing knowledge



Design and Technology Roadmap Year 6

Take a Seat

Suggested designer(s): Robin and Lucienne Day

Autumn -

Children will research the historical origins of a seat. They will analyse a range of materials and apply knowledge gained from their research of print design to their own design ideas. Using carefully selected tools, they will use a range of joining techniques to make a padded seat cushion.

Why do we follow on with this unit?
To develop the children's understanding of how to strengthen and manipulate textiles.

What skills will we continue to build upon?
Understanding of how to use a range of joining techniques

Hats Off to You

Suggested designer(s): Philip Treacy and John Batterson

Spring -

Children will research the range of different types of hats worn over the decades. They will investigate the specific and necessary tools required to complete a hats journey before creating their own piece of millinery.

Great British Menu

Suggested chef(s): Angela Hartnett

Summer -

Children will learn the process of menu planning and the different types. They will investigate products to inform the designing and making of their own savoury dish; exploring basic cooking techniques for selected ingredients. They will investigate the process in which food is manufactured and produced learning the difference between processed and unprocessed foods.

Why do we follow on with this unit?
To develop the children's understanding of artistic creativity

What skills will we continue to build upon?
Understanding of how to plan for a project brief.