

Flying Machines

Autumn 2 2019
National Curriculum
lead subject: **Design
Technology**

New knowledge we will acquire:

Using research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.

Investigating and analysing a range of existing products.

Generating, developing, modelling and communicating our ideas through discussion and annotated sketches.

Understanding and using electrical systems in our products [for example, series circuits incorporating switches, bulbs, buzzers and motors.]

Applying our understanding of how to strengthen, stiffen and reinforce more complex structures.

Evaluating our ideas and products against our own design criteria and consider the views of others to improve our work.

Learning activities we will complete:

Drawing a timeline to show where the Vikings and Anglo-Saxons fit in history.

Reviewing lifestyles of Vikings and Anglo-Saxon and comparing the differences.

Visiting the Hull and East Riding museum to scrutinise Viking artefacts.

Creating our own written retelling of a Viking invasion.

Investigating Alfred the Great and the role he played in the struggle for the Kingdom of England.

Considering what we have learned and deciding whether the Vikings were civilised or barbaric.

Creating a presentation to summarise what we have discovered.

Key vocabulary we will use:

criteria	design	structure
research	adapt	strength
circuit	alter	evaluate
force	motor	improve
flight	gravity	propeller

Visits/visitors: Design Museum Resources

We will be exploring a range of interesting and quirky resources with peculiar designs, trying to understand why they are made in a specific way.

Helpful websites:

<https://www.bbc.co.uk/bitesize/subjects/zyr9wmn>

www.atschool.co.uk/keystage2-ks2/d-and-t.asp

www.stem.org.uk/resources/collection/2897/designing-key-stage-two

www.educationquizzes.com/ks2/d-and-t

Literacy

Key texts we will read:

Goodnight Mr Tom, The Machine Gunners, Friend or Foe

As readers we will:

- Enjoy reading for pleasure.
- Analyse how a character feels, including part of the text to support our answers.
- Summarise key parts from a couple of paragraphs.

As writers we will:

- Focus on descriptive phrases that develop a character when writing a narrative piece of text.
- Choose and use persuasive language to create an effect.
- Plan and write our own “defeating the monster” story.
- Plan and create our own advertisement for one of our products.

Art and Design

As artists we will:

- Use sketch books to review and revisit ideas.
- Improve mastery of painting techniques using watercolours, acrylics and poster paints.
- Work in the style of a futurist.

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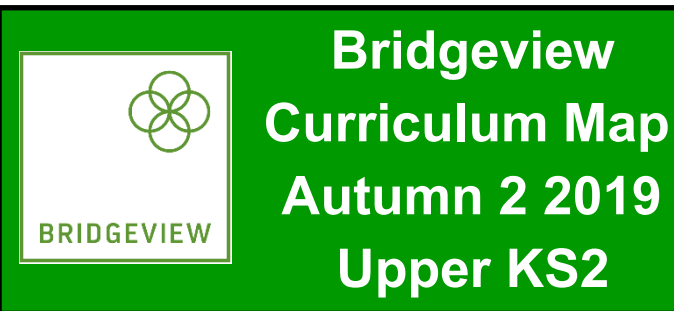
As thoughtful individuals we will:

- Investigate the significance of religious festivals and rituals.
- Explore the religious teachings of forgiveness and reconciliation.

Science

As scientists we will:

- Focus on flying machines. Our science will play a main role in our designs.
- Identify the effects of air resistance and friction between moving surfaces.
- Understand and use electrical systems in our designs such as series circuits, switches, bulbs and motors.
- Compare results using scientific diagrams and labels.



PSHE and Personal Development:

As caring citizens we will:

- Explore our perceptions of normality and look at ways that people are different to us.
- Look at different types of bullying and the causes and effects of these and consider how we can ensure we are neither victims or perpetrators of bullying.
- Try to empathise with people who are different to us and look at how differences are a cause of both celebration and for conflict.



Maths

As mathematicians we will:

- Continue to work on our addition and subtraction of whole numbers of increasing complexity, and learn to use inverse operations to check our working and solve missing number problems.
- Learn how to multiply up to 4 digit numbers by 2 digit numbers.
- Developing our understanding of how to measure and calculate area and perimeter.

Music

As musicians we will:

- Explore different steel pan instruments, playing together as an ensemble using a range of 5-note melodies and 3-chord patterns.
- Put our new skills into a performance across a range of pieces.

PE

As active pupils we will:

- Play group games to develop our striking and fielding skills. We will play netball and handball to throw a ball and intercept.
- Develop positioning when fielding, evaluating our success and making changes.

Computing

As digital pupils we will:

- Learn how to stay safe on the internet including how to respond to things that make me feel unsafe.