

## Big Question: How do you invent an idea?

<b>Year: 6</b>	<b>Term: Spring 1</b>	
<p><b>Introduction:</b>          This half term's topic across the school is 'Imagination and Make Believe'. During this topic, we want the children to understand how important the imagination is when trying to solve the world's problems and when thinking about the future. We will look at different inventions that have changed the way that Britain works. The children should have an idea of what the industrial revolution was and also of how inventions such as the electric light, telephones (see resources room) and the internet have completely changed people's lives. The children need to imagine what life was like before these inventions; to ask themselves what was going through the mind of the inventors when they came up with these ideas and to start to imagine what the future holds for them.          Look at videos of information regarding inventions on Espresso (for example a clip from <a href="http://10.192.52.10/espresso/modules/news/first_news/school/100317s_inventions.html?source=search-all-all-all&amp;source-keywords=inventions">http://10.192.52.10/espresso/modules/news/first_news/school/100317s_inventions.html?source=search-all-all-all&amp;source-keywords=inventions</a>). Before completing the pre-learning challenge, explain to the children that the mobile phone was invented because someone asked the question: 'When I want to call a person, why do I have to phone a place?' What questions should we be asking that could lead to the next big invention?</p>		
<b>English</b>	<b>Maths</b>	<b>History</b>
Fairy Tales and Traditional Tales  Writing and retelling well-known tales, writing prequels, merging tales to write alternative versions using the texts:  <i>Blackberry Blue</i> <i>The Sleeper and the Spindle</i> (Neil Gaiman)	Measurements, area and perimeter, algebra	<b>How do you invent an idea?</b>  Pupils should be taught about a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066: how different inventions have changed how we live.
<b>Art and Design</b>	<b>Design and Technology</b>	<b>PSHE and Citizenship</b>
Painting and Mixed Media Artist Study	<b>Mechanical systems</b> Automata toys	<b>Dreams and Goals</b> <b>Jigsaw scheme of work</b> Dreams and Goals
<b>Science</b>	<b>RE</b>	<b>Computing</b>
<b>Electricity</b>	<b>2022 Newham Agreed Syllabus</b>  <b><i>How important are the similarities and differences between and within religions?</i></b> <i>Investigating the relationship between secular and religious world views.</i>  What qualities are important to religious leaders?	<b>NCCE Scheme of Work</b> Programming A Variables in games
<b>PE</b>	<b>Music</b>	<b>Spanish</b>
<b>Specialist teacher</b> Parkour <b>Class teacher</b> Dance	Fantastic Creatures (Bates)	Travelling around Europe Children will learn the names of some European countries, their capitals and flags in Spanish. They will also learn about nationalities and the weather.

**Links to the National Curriculum (what must be covered) and assessment descriptors:**

**English**

**Word reading**

- Apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet:
- Words with the /i:/ sound spelt ei after c
- Words containing the letter-string ough
- Endings which sound like /ʃəs/ spelt –cious or –tious

**Comprehension**

- Summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
- Explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary
- Identifying and discussing themes and conventions in and across a wide range of writing
- Maintain positive attitudes to reading and understanding of what they read by: making comparisons within and across books
- Distinguish between statements of fact and opinion

**Writing Transcription**

- Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary

**Writing Composition**

- Plan their writing by: in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed
- Draft and write by: in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action
- Plan their writing by: noting and developing initial ideas, drawing on reading and research where necessary
- Draft and write by: using a wide range of devices to build cohesion within and across paragraphs

**Vocab, Grammar, Punctuation**

- Devices to build
- cohesion, including adverbials of time, place and number
- Using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun (App2)
- Verb prefixes: e.g. dis-, de-, mis-, over-, re-

**Maths**

Measurements, area and perimeter, algebra

**History**

Pupils should be taught about a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066: how different inventions have changed how we live.

<b>Working towards</b>	<b>Expected</b>	<b>Greater depth</b>
I can <b>name</b> a few important inventions and <b>explain</b> in basic detail how they have impacted the way we live today.	I can <b>examine</b> and <b>analyse</b> sources of information and <b>explain</b> how they demonstrate that certain inventions have changed the way we live.	I can <b>examine</b> and <b>analyse</b> a variety of evidence and <b>explain</b> how it proves/disproves who invented key inventions.

**Art and Design**

Pupils who are secure will be able to:

- Understand a narrative and use descriptive language to tell a story.
- Suggest ideas for the meaning behind a picture.
- Identify different features within a painting and use the formal elements to describe it.
- Be creative and imaginative in finding their own meaning in a painting.
- Use their own art or personal experiences to justify their ideas.

- Read a picture well and see beyond the first glance, analysing and evaluating it successfully.
- Reflect on personal experiences to convey through their own piece of abstract art.
- Contribute to discussions to either the class, group or talk partner.
- Understand and choose a meaningful message to convey through imagery, creating some different composition ideas.
- Select an appropriate artist.
- Collect a range of information that is presented in an interesting and pleasing way in sketchbooks.
- Generate an idea for a final piece, demonstrating some inspiration from their chosen artist.
- Produce a final piece of work, selecting appropriate tools and materials to create an intended effect.
- Experiment and revisit ideas, drawing on creative experiences.
- Work in a sustained way to complete a piece, making evaluations at each stage.

### **Design and Technology**

Pupils who are secure will be able to:

- Mark, saw and cut out the components and supports of their toy with a varying degree of accuracy to the intended measurements.
- Follow health and safety rules, taking care with the equipment.
- Attempt a partial assembly of their toys using an exploded-diagram, following a teacher's demonstration.
- Develop a design idea with some descriptive notes.
- Explore different cam profiles and choose three for their follower toppers with an explanation of their choices.
- Create neat, decorated follower toppers with some accuracy.
- Measure and cut panels that fit with some inaccuracies to conceal the inner workings of the automata.
- Decorate and finish the automata to meet the design criteria and brief.
- Evaluate their finished product, making descriptive and reflective points on function and form.

### **PSHE and Citizenship and Emotional Literacy/Social Skills**

- I know my learning strengths and can set challenging but realistic goals for myself (E.g. one in-school goal and one out of school goal). *I understand why it is important to stretch the boundaries of my current learning.*
- I can work out the learning steps I need to take to reach my goal and understand how to motivate myself to work on these. *I can set success criteria so that I will know whether I have reached my goal.*
- I can identify problems in the world that concern me and talk to other people about them. *I recognise the emotions I experience when I consider people in the world who are suffering or living in difficult situations.*
- I can work with other people to help make the world a better place. *I can empathise with people who are suffering or who are living in difficult situations.*
- I can describe some ways in which I can work with other people to help make the world a better place. *I can identify why I am motivated to do this.*
- I know what some people in my class like or admire about me and can accept their praise. *I can give praise and compliments to other people when I recognise their contributions and achievements.*

#### **Working Towards**

I can tell you about something I can do, working with other people, to help make the world a better place.  
*I can tell you how I feel about people in the world*

#### **Working At**

I can describe some ways in which I can work with other people to help make the world a better place.  
*I can identify why I am motivated to do this.*

#### **Working Beyond**

I can describe a range of ways in which I can work with other people to make the world a better place, and explain and justify my group's chosen course of action.

who face hardship in their lives.		I can show how our choice is based on an awareness of the experience and the needs of the people affected.
<p><b>Science</b> Children will learn about how the brightness of a lamp or the volume of a buzzer is affected by voltage in circuits and be able to give reasons for this. They will use recognised symbols when representing a simple circuit in a diagram.</p>		
<p><b>RE</b> What qualities are important to present day religious leaders? Pupils should explore the role of at least three different religious leaders in the local community and learn about what they do; they will also learn about the similarities and differences between religious and secular leaders.</p>		
Working towards: I can <b>describe</b> the basic roles and duties of a religious leader.	Expected: I can <b>describe</b> the roles and duties of religious leaders from several religions and <b>list</b> the qualities they should have.	Greater depth: I can <b>describe</b> the roles and duties of religious leaders from several religions, and secular leaders, I can <b>compare and contrast</b> the qualities they should have and <b>explain</b> why they are important in the world of politics.
<p><b>Computing</b> This unit explores the concept of variables in programming through games in Scratch. First, learners find out what variables are and relate them to real-world examples of values that can be set and changed. Then they use variables to create a simulation of a scoreboard. In Lessons 2, 3, and 5, which follow the Use-Modify-Create model, learners experiment with variables in an existing project, then modify them, before they create their own project. In Lesson 4, learners focus on design. Finally, in Lesson 6, learners apply their knowledge of variables and design to improve their games in Scratch.</p>		
<p><b>PE</b> Parkour Dance</p>		
<p><b>Music</b> Fantastic Creatures (Bates)</p>		
<p><b>Spanish</b> To engage in conversations, ask and answer questions, express opinions and respond to those of others, seek clarification and help.</p>		
<p><b>Educational Visits and Visitors</b> -Young Imagineers Project -Science Museum - Youth VA- Bethnal Green</p>		
<p><b>Sequence of Key skills/objectives/context (Key teaching points)</b></p> <ul style="list-style-type: none"> <li>• Understand what the Industrial Revolution was, its significance and its impact on modern Britain.</li> <li>• Chronology of the Industrial Revolution – key inventions.</li> <li>• Key inventors (diverse backgrounds).</li> </ul>		
<p><b>Key Vocabulary</b> legacy, primary/secondary source, agriculture, 20th century, contrast, change, inventor, invention, solution, innovation, cause, effect, chronology, impact, significance, Industrial Revolution</p>		
<p><b>Additional Information</b> <a href="https://www.bbc.co.uk/teach/class-clips-video/history-ks1-ks2-explain-this-industrialisation/zmmx6v4">https://www.bbc.co.uk/teach/class-clips-video/history-ks1-ks2-explain-this-industrialisation/zmmx6v4</a> - Industrialisation</p>		
<p><b>Evidence in the books and on display</b> <b>History</b></p> <ul style="list-style-type: none"> <li>• Timelines, artefacts and pictures on display in the classroom of important inventions and inventors (e.g. Elijah McCoy and Madam C.J. Walker).</li> </ul>		

- End of term projects on what they consider to be the most important invention of all time.

**PSHE**

- The children will have written about their dreams and goals.

**Outcomes:**

**History**

- The children will have examined various sources of information to research inventions and inventors and will have learnt how to analyse evidence and judge its trustworthiness.
- The children will understand that most inventions are the resulting work of a group of people and that the ideas formulate over a long period of time.
- The children will understand that inventions are continuing to occur and that they have the ability to become an inventor in the future.
- The children will be able to imagine what it was like in Britain before these inventions.
- The children will have a basic understanding of the term 'industrial revolution'.
- The children will be able to name famous inventors and their inventions and be able to articulate their impact on Britain.
- The children will be able to talk about the problems that Britain faces at the moment and imagine what inventions may be created in the future in order to solve these problems.

**PSHE**

- The children will understand the need to have realistic but challenging goals and dreams and will be able to plan on how to achieve them.
- The children will understand how they can help to make a difference in this world.

**Helpful Websites**

**SMSC**

<b>Spiritual</b>	<b>Moral</b>	<b>Social</b>	<b>Cultural</b>
-Awe and wonder at the inspiring inventions and how they have changed the way we live.	-Is an invention always a good thing: can the children name inventions that have had a negative impact?	-How have inventions helped people to get along?	-What inventions have changed our culture?

**BRITISH VALUES**

<b>Democracy</b>	<b>Individual Liberty</b>	<b>Tolerance and Mutual Respect</b>	<b>Rule of Law</b>
-Which inventions promote democracy?	-Do any inventions take away our individual liberty?	-Have any inventions helped to make us more tolerant?	-What rules should inventors have to follow?

**Links to Rights Respecting Schools**

- Article 15 – the right to meet and join groups.
- Article 17 – right to reliable information.
- Article 24 – good quality healthcare.
- Article 29 – education should develop your personality, talents, mental and physical abilities.

**Links to Safeguarding**

- Safety around using different types of equipment.

**Celebrating Heritage**

- Looking at a range of inventors who include examples of people of colour and women inventors.