

**Year 6: Autumn**  
Does change always lead to progress?

**Art and Design**  
Art: Sewing embroidered name tags using similar techniques to those used during the Industrial Revolution.  
DT: Design and create a parallel circuit.  
Include LEDs, resistors and chips in designs and creations.

**Geography**  
United Kingdom:  
Victorian Cities  
Transport Links  
Empire  
Map Skills

**History**  
A study of British history beyond 1066:  
The Industrial Revolution

**Literacy**  
Writing to entertain and inform, considering the impact upon the reader..  
Discussing and evaluating an author's use of vocabulary.  
Making inferences and justifying them.  
Write and perform poems.

**PSHE**  
To engage in constructive self-reflection.  
To self-regulate using a positive growth mind-set and managing strong emotions.  
To separate fact and reasoned arguments from rumour and opinion.

**Music**  
Sing songs inspired by Victorian music hall  
Compose a piece of music that reflects the sounds of machines

**Computing**  
Create a database to manipulate and evaluate data.

**Maths**  
Read, write, order and compare any number to 10,000,000  
Round any whole number  
Add, subtract, multiply and divide using formal written methods  
Order and compare fractions  
Add, subtract, multiply and divide fractions  
Use unit of measurements and convert between them

**Science**  
Classifying living things  
How living things have changed over time  
Building and drawing electrical circuits

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## Literacy

### Writing

#### Planning

- ✓ Identify the audience and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own.
- ✓ Develop characters and settings inspired by reading.

#### Draft & Write

- ✓ Selecting appropriate grammar and vocabulary, understanding how choices change and enhance meaning
- ✓ Describing settings, characters and atmosphere and integrating dialogue.
- ✓ Use Relative clauses; adverbials; conjunctions and connectives for cohesion.
- ✓ Using headings, bullet points and underlining to guide the reader.
- ✓ Recognise differences between formal/informal language - use contractions and colloquial language for informality.
- ✓ Use a variety of sentence lengths, structures or subjects.
- ✓ Use an age-appropriate dictionary to check spelling & a thesaurus to explore new words.
- ✓ Prepare poems to read aloud and perform using intonation and expression to create meaning.

#### Evaluate & Edit

- ✓ proof-read for spelling and punctuation errors ensuring the consistent and correct use of tense throughout writing.
- ✓ assessing the effectiveness of their own and others' writing
- ✓ make changes to vocabulary, grammar & punctuation to enhance effects and clarify meaning.
- ✓ Use a thesaurus.

### Grammar

- ✓ Use brackets and dashes for parenthesis.
- ✓ Use semicolons between independent clauses and use colons for lists and independent clause linking.
- ✓ Use inverted commas accurately.
- ✓ Use expanded noun phrases to convey information concisely.
- ✓ Use commas to clarify meaning.
- ✓ Use relative clauses beginning with who, which and that.

### Reading

- ✓ Discuss how authors use language including figurative language and consider its impact upon the reader – linking to meaning of words (connotations/associations).
- ✓ Predict future events from details stated and implied.
- ✓ Discuss understanding of texts, including exploring meaning of words in context.
- ✓ Discuss books building on own and others' ideas and challenging views courteously.
- ✓ Summarising the main ideas from more than one paragraph & identify key details that support the main ideas.
- ✓ Make inferences & deductions about characters; justify those with explanations and evidence.
- ✓ Recommending books, with justification, that they have read to their peers.
- ✓ Make comparisons within books.
- ✓ Learn a wider range of poetry by heart.

#### Key vocabulary:

Figurative language – simile, metaphor, personification, summarise, infer/inference, deduce/deduction, justify, logical connotation & association, parenthesis, main and subordinate clause.

## Mathematics

### Number – Place Value

- ✓ Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit
- ✓ Round any whole number to a require degree of accuracy
- ✓ Use negative numbers in context, and calculate intervals across zero
- ✓ Solve number and practical problems that involve the above

### Number – Addition, Subtract, Multiplication and Division

- ✓ Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use (and why)
- ✓ Solve problems involving addition, subtraction, multiplication and division
- ✓ Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
- ✓ Identify common factors, common multiples and prime numbers
- ✓ Multiply multi-digit numbers up to four digits by a 2-digit whole number using a formal written method of long multiplication
- ✓ Perform mental calculations, including with mixed operations and large numbers
- ✓ Divide numbers up to four digits by a 2-digit number, using the formal written method of short division where appropriate, interpreting remainders according to the context
- ✓ Use their knowledge of the order of operations to carry out calculations involving the four operations

**Key vocabulary:** Roman numerals, digit, place value, negative numbers, rounding, decimals, decimal place, prime number, square numbers ( $^2$ ), cube numbers ( $^3$ ), long multiplication

### Number – Fractions

- ✓ Use common factors to simplify fractions; use common multiples to express fractions in the same denominator
- ✓ Compare and order fractions, including fractions  $>1$
- ✓ Compare and order fractions, including fractions  $>1$
- ✓ Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- ✓ Identify common factors, common multiples and prime numbers
- ✓ Solve problems involving addition, subtraction, multiplication and division
- ✓ Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
- ✓ Multiply simple pairs of proper fractions, writing the answer in its simplest form
- ✓ Divide proper fractions by whole numbers
- ✓ Associate a fraction with division and calculate decimal fraction equivalents

**Key vocabulary:** denominator, numerator, equivalent fractions, tenths, hundredths, improper fractions, mixed number, proper fractions, decimal numbers, thousandths, decimal place

### Geometry – Measurement (converting units)

- ✓ Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places
- ✓ Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation

**Key vocabulary:** converting between units, decimal place, mm, cm, m, volume, squared

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<p><b>Geography</b></p> <p><u>Locations</u></p> <ul style="list-style-type: none"> <li>✓ locate the world's countries, using maps to focus on countries, and major cities</li> <li>✓ name and locate counties and cities of the United Kingdom, their identifying human and physical characteristics and land-use patterns; and understand how some of these aspects have changed over time</li> <li>✓ identify the position and significance of the Prime/Greenwich Meridian and time zones (including day and night)</li> </ul> <p><b>Key vocabulary:</b> empire, hemisphere, continent, border, city, town, time zone</p> <p><u>Skills</u></p> <ul style="list-style-type: none"> <li>✓ use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</li> </ul> <p><b>History</b></p> <p><u>Chronology of events</u></p> <ul style="list-style-type: none"> <li>✓ Timeline of the Industrial Revolution 1712-1908 (from the invention of the steam engine to the first car)</li> </ul> <p><b>Key vocabulary:</b> inventions, mechanized, Spinning Jenny, Telegraph, Bessemer Method of Processing Steel, vaccines, dynamite</p> <p><u>Comparing and contrasting periods and happenings</u></p> <ul style="list-style-type: none"> <li>✓ Analyse first models and newer models of machinery</li> <li>✓ Recognise similarities and differences between this time and the present day</li> </ul> <p><b>Key vocabulary:</b> development, techniques, revolution, industrialised, urbanised</p> <p><u>Change and continuity</u></p> <ul style="list-style-type: none"> <li>✓ Discuss how the past has influenced the present and how the present will shape the future</li> </ul> <p><b>Key vocabulary:</b> banking, communication, production, safety</p> <p><u>Cause and effect</u></p> <ul style="list-style-type: none"> <li>✓ Draw simple conclusions as to why change has happened</li> </ul> <p><b>Key vocabulary:</b> question words "who, what, why, when, where, how"</p> <p><u>Historical enquiry and forming conclusions from a variety of sources</u></p> <ul style="list-style-type: none"> <li>✓ Examine the importance of archaeological discoveries</li> <li>✓ Analyse the significance of the Industrial Revolution</li> <li>✓ Debate what did not improve during this time</li> </ul> <p><b>Key vocabulary:</b> improvements, living standards, job opportunities, expansion, inequality, labour unions</p> <p><b>MFL</b></p> <p><u>Oracy</u></p> <ul style="list-style-type: none"> <li>✓ Listen for specific words and phrases</li> <li>✓ Recognise and respond to sound patterns and words</li> </ul> <p><u>Literacy</u></p> <ul style="list-style-type: none"> <li>✓ Read and understand a range of familiar written phrases</li> </ul> <p><u>Intercultural understanding</u></p> <ul style="list-style-type: none"> <li>✓ Locate country/countries where the language is spoken</li> </ul> <p><b>Key vocabulary:</b> See homework Books for full list of vocabulary and translations</p>	<p><b>Science</b></p> <p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> <li>✓ Explain how living things are classified into broad groups</li> <li>✓ Provide reasons for classifying plants and animals into these groups</li> </ul> <p><b>Key vocabulary:</b> micro-organisms, domain, Carl Linnaeus, kingdom, phylum, class, order, family, genus, species, characteristics, vertebrates, invertebrates</p> <p><u>Evolution and inheritance</u></p> <ul style="list-style-type: none"> <li>✓ Explore how living things have changed over time</li> <li>✓ Understand how fossils provide information about prehistoric times</li> <li>✓ Recognise that living things produce offspring of the same kind</li> <li>✓ Investigate how animals and plants have adapted to their environment and how these adaptations can lead to evolution</li> </ul> <p><b>Key vocabulary:</b> characteristics, offspring, variation, survival, inherited traits, adaptive traits, natural selection, DNA, genes</p> <p><u>Electricity</u></p> <ul style="list-style-type: none"> <li>✓ Understand how a circuit works in order to build one</li> <li>✓ Use recognised symbols to draw a simple circuit</li> <li>✓ Compare and give reasons for variations in how components of a circuit function</li> <li>✓ Research how Thomas Edison invented the light bulb in 1879 – link to History</li> </ul> <p><b>Key vocabulary:</b> components, switches, bulbs, buzzers, bulbs, motors, symbols, series circuits, voltage, resistance</p> <p><b>DT</b></p> <p><u>Research:</u></p> <ul style="list-style-type: none"> <li>✓ Research parallel circuits.</li> <li>✓ Find out about resistors, chips and LEDs.</li> </ul> <p><u>Design:</u></p> <ul style="list-style-type: none"> <li>✓ Design a parallel circuit to include a functioning LED, chip and resistor.</li> </ul> <p><u>Create:</u></p> <ul style="list-style-type: none"> <li>✓ Create the circuit from designs.</li> </ul> <p><u>Evaluate:</u></p> <ul style="list-style-type: none"> <li>✓ Check if the finished circuit is functioning correctly and adapt as needed.</li> </ul> <p><b>Key vocabulary:</b> circuit, LED, resistor, chip, battery, design, edit, cause and effect.</p> <p><b>Outdoor Learning</b></p> <p><u>Research</u></p> <ul style="list-style-type: none"> <li>✓ Work in pairs to research inventions and design from the Industrial Revolution</li> </ul> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>✓ Design a brand-new product needed in today's world.</li> </ul> <p><u>Create/Evaluate</u></p> <ul style="list-style-type: none"> <li>✓ Use any available resources to create the product</li> <li>✓ Reflect on the materials used and purpose of product</li> </ul> <p><b>Key vocabulary:</b> Industrial Revolution, invention</p> <p><b>Computing</b></p> <p><u>Information Technology – Using a range of software</u></p> <ul style="list-style-type: none"> <li>✓ Identify information to record in the database</li> <li>✓ Create commands to retrieve information</li> </ul> <p><b>Key vocabulary:</b> Records, Fields, Data, Database, Commands, Retrieve, Relationships, Organise</p>	<p><b>Music</b></p> <p><u>Appreciate</u></p> <ul style="list-style-type: none"> <li>✓ Listen and respond to Leroy Anderson's syncopated clock</li> <li>✓ John Adams Short Ride in a Fast Machine</li> </ul> <p><u>Perform and Share</u></p> <ul style="list-style-type: none"> <li>✓ Learn, sing and perform a variety of Victorian music hall songs</li> </ul> <p><u>Play, Sing and Create</u></p> <ul style="list-style-type: none"> <li>✓ Create musical motifs and ostinatos to compose a piece of minimalist music</li> </ul> <p><b>Key vocabulary:</b> minimalist, motifs, ostinato, syncopation, music hall</p> <p><b>RE</b></p> <p><u>Judaism</u></p> <ul style="list-style-type: none"> <li>✓ Understand how and why Jews show commitment to their god</li> </ul> <p><u>Buddhism</u></p> <ul style="list-style-type: none"> <li>✓ Understand how and why Buddhists show commitment through their actions</li> </ul> <p><b>Key vocabulary:</b> Commitment, sacrifice, actions Sabbath, Bar Mitzvah, Bat Mitzvah, Torah, Karma</p> <p><b>PSHE</b></p> <p><u>Rights and responsibilities:</u> How can we make a mark on this world?</p> <ul style="list-style-type: none"> <li>✓ Social Media</li> <li>✓ Value of money and paying taxes</li> <li>✓ Democracy</li> </ul> <p><u>Me and My Relationships:</u> What are the consequences of pressure in relationships?</p> <ul style="list-style-type: none"> <li>✓ Negotiation, compromise and assertiveness</li> <li>✓ Peer influence and pressure</li> <li>✓ Appropriate and inappropriate touch</li> </ul> <p><b>Key vocabulary:</b> fact, opinion, biased, reality, democracy, unbiased, assertive, bystander, collaboration,</p> <p><b>Art</b></p> <p><u>Media:</u></p> <ul style="list-style-type: none"> <li>✓ Drawing</li> </ul> <p><u>Appreciation:</u></p> <p><u>Artist:</u> Carol Lambert</p> <ul style="list-style-type: none"> <li>✓ To understand how artists work has developed</li> <li>✓ To understand where artists inspiration has come from and how this has influenced their own</li> <li>✓ To use art as an stimulus for their own art explaining where inspiration was sought from</li> </ul> <p><u>Exploring and developing ideas:</u></p> <ul style="list-style-type: none"> <li>✓ To explore how blending can add tone, shadow and depth to a picture</li> </ul> <p><u>Investigating and making art:</u></p> <ul style="list-style-type: none"> <li>✓ To select appropriate media to achieve a specific effect</li> </ul> <p><u>Evaluating and developing art:</u></p> <ul style="list-style-type: none"> <li>✓ To discuss the overall effect of the finished product</li> <li>✓ To describe the design process and justify why techniques and effects were used</li> </ul> <p><b>Key vocabulary:</b> Blending, charcoal, pastel, shadow, tones, media, effect techniques</p> <p><b>PE</b></p> <ul style="list-style-type: none"> <li>✓ Health, Fitness &amp; Wellbeing – Circuits</li> <li>✓ Control/Pass &amp; Receive/Target – Football</li> <li>✓ Catching/Throwing/Agility – Tag Rugby</li> <li>✓ Catching/Throwing/Target/Strategy – Netball</li> </ul>
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# Does Change Always Lead To Progress?

## What was the Industrial Revolution?

<b>When?</b> 1750 to 1900	<b>Where?</b> Great Britain British Empire
<b>What Changed?</b> Agriculture to Industry Countryside to town Population growth Technology Living conditions	<b>Who?</b> Richard Arkwright Isambard Kingdom Brunel George Stephenson Thomas Edison Charles Darwin

## Key Vocabulary

**industrialise**— when a country builds up a system of industries (factories) to manufacture products

**urban**—relating to the town rather than the countryside

**rural**—relating to the countryside rather than the town

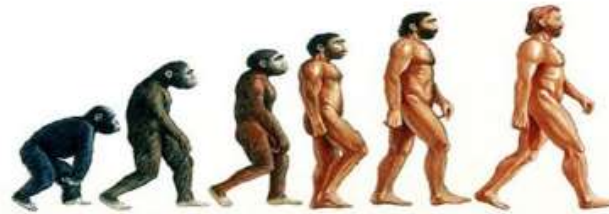
**mechanisation**—the introduction of machines or automatic devices into a process, activity, or place.

**mass production**—manufactured in large quantities by an automated mechanical process

**population explosion**—an massive growth in the number of people living in a particular place

**empire**—an large group of states or countries ruled over by a single monarch, an oligarchy, or a sovereign state.

## Does Evolution lead to Progress?



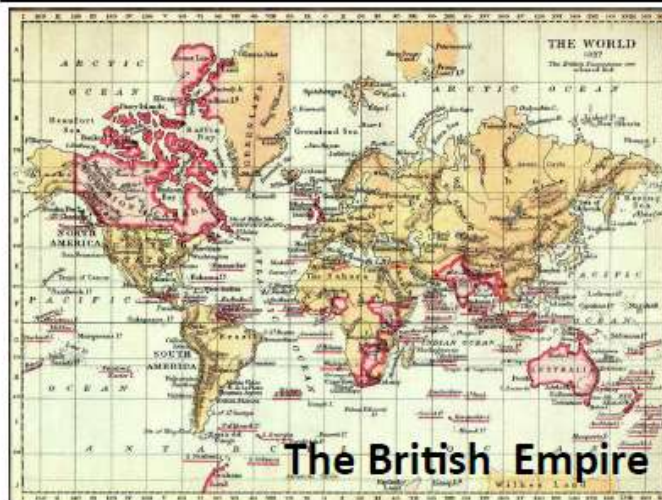
**Evolution** – The process by which different kinds of living organism are believed to have developed from earlier forms.



**Darwin's Finches.**  
Different species of finches have different shaped beaks

**Adaptation**—The process of change so that an organism or species can become better suited to their environment

## The Effects on the Wider World



## Timeline

1775	Invention of Arkwright's water frame
1870	Invention of the Spinning Jenny
1812	Invention of the steam train
1828	Slavery is abolished in the British Empire
1830	Stephenson's Rocket transports passengers from Manchester to Liverpool
1840	Reading Railway Station was built
1842	The Mines Act –Women and girls were forbidden to go down the mines. Boys had to be over 10 years old
1851	The Great Exhibition The Origin of Species is published
1862	The cotton famine. Lancashire cotton workers support the campaign against slavery
1877	Queen Victoria becomes Empress of India
1878	Thomas Edison invents the lightbulb

## Electricity

