

Year 6: Autumn
Does change
always lead to
progress?

Art and Design
Art: Drawing birds and skeletons .
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, inform and explain and considering the impact upon the reader.
Developing character and setting.
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.

Maths
Read write, compare and order numbers to 10 000 000
Generate and Describe linear number sequences
Use negative numbers in context, and calculate intervals across zero
Multi-set problem solving with addition, subtraction, multiplication and division

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

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.

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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 and Algebra

- ✓ read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
- ✓ round any whole number to a required degree of accuracy
- ✓ solve problems involving addition and subtraction
- ✓ Generate and describe linear number sequences
- ✓ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- ✓ Use negative numbers in context, and calculate intervals across zero
- ✓ Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- ✓ Multiply one-digit numbers with up to two decimal places by whole numbers
- ✓ Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- ✓ Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- ✓ Use written division methods in cases where the answer has up to two decimal places calculate and interpret the mean as an average
- ✓ Perform mental calculations, including with mixed operations and large numbers
- ✓ Use knowledge of the order of operations to carry out calculations involving the four operations
- ✓ 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

Geometry and Measure

- ✓ Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- ✓ Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
- ✓ Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- ✓ Draw 2-D shapes using given dimensions and angles
- ✓ Recognise, describe and build simple 3-D shapes, including making nets

Essential Knowledge

- ✓ Identify common factors (see example below), common multiples and prime numbers

The factors of a number are all numbers which divide it with no remainder.

*E.g. the factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24.
The factors of 56 are 1, 2, 4, 7, 8, 14, 28 and 56.*

The common factors of two numbers are the factors they share.

E.g. the common factors of 24 and 56 are 1, 2, 4 and 8.

The greatest common factor of 24 and 56 is 8.

Key Vocabulary:

Value of each digit, round, degree, accuracy, linear number sequences, operations (BODMAS), intervals, multi-digit, remainders, estimation, radius, diameter, circumference, geometric shapes, polygons, nets

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

Does Change Always Lead To Progress?

What was the Industrial Revolution?

When? 1750 to 1900	Where? Great Britain British Empire
What Changed? Agriculture to Industry Countryside to town Population growth Technology Living conditions	Who? 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

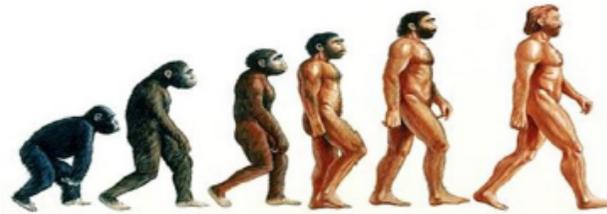
mechanisation—the introduction of machines or automatic devices into a process, activity, or place.

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

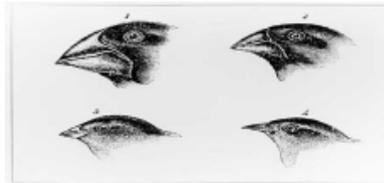
population explosion—an massive growth in the number of people living in a particular place

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?



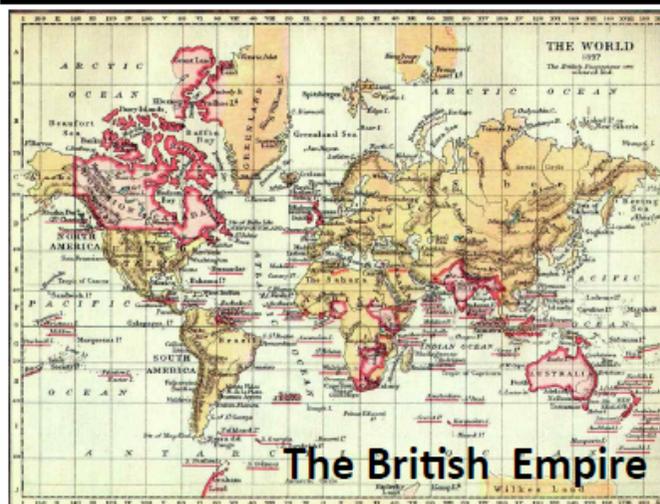
Evolution – The process by which different kinds of living organism are believed to have developed from earlier forms.



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

