Year 5 Curriculum: Rain, Steam and Speed

English

- We will continue reading books which we enjoy and talking about the themes in the books. The Train to Impossible Places by P. G. Bell, Rain Player by David Wisniewski, A Star Like Jesse Owens by Nikki Shannon Smith.
- What are the features of persuasive writing? (focus on railways and HS2 high speed train project).
- For more info on objectives see jigsaw below.
- How does the use of drama techniques improve the quality of our writing?
- Should we have closed the railway system on the Isle of Wight. Write a letter to you local MP to persuade them that it was a good/bad idea.
- Who were the Railway Children?
- Why are some stories written a long time ago still relevant today?
- What are the fastest animals in the world. How about modes of transport. Write a fact file about one of these.
- 'Bringing the Rain to Kapiti Plain' is a tale from Kenya, Africa. Can you write a picture book in a similar style?
- You discover you have a super power, one that makes you do one thing really quickly. What super power is it? Write a diary about having your super power.

Art & DT

- Can you create a chalk pastel illustration in the style of J.M.W. Turner?
- Industry changed the landscape of Britain. Can we combine natural and man-made objects to create landscape imagery?
- Can we reimagine 20th century British Railway Posters to reflect the modern day?
- How are cars powered and are there more efficient or sustainable solutions?
- If you were an engineer what would you do?

Computing

- How has Information Technology changed the way the world works around us?
- How does the internet work? Why have internet speeds had to increase?
- Using the 'Stop Motion' app can you create a small video showing how the water cycle works?
- How long does it take an email to reach the other side of the world? How quick is this? How does it work?

Diversity and Equality

- How have different cultures throughout the world contributed to social, technological and industrial advancements?
- Who was Jesse Owens? What made him special?
- What was the underground railroad and why was it so important?
- Who is Emily Roebling? Why is she important?

Geography

- How did the invention of the steam train, the steam boat and the car change the way people live and trade?
- How do countries with extreme weather adapt?
- Where did the 'Rainforest' get it's name? Why is the rainforest so important to the world's eco system?
- Rivers are an important feature of the land. How do they start? Where do they go to?
- What is coal, why was it important? Is it still important now?

Mathematics

- Use of 'White Rose' maths scheme and 'Chris Quigley' *Mastery problems.*
- How can we multiply up to four digit numbers by up to two digit numbers?
- How can we divide up to four digit numbers by up to two digit numbers?
- How can we find and compare fractions?
- How do we find equivalent fractions?
- How can we add and subtract fractions?
- How can we solve problems using fractions?
- Can we use decimals with up to two decimal places?
- Can we understand and use thousandths?
- Can we convert decimals into fractions?
- Can we round, order and compare decimals?
- How can we convert percentages into fractions and decimals?
- How can we measure the speed of light or sound?
- How long would it take to travel around the world, to the moon, mars, the sun? Convert

History

- How did the introduction of the steam railway and the industrial revolution change the Isle of Wight?
- Who was Isambard Kingdom Brunel? Why was he an important figure with regards to the way we travel?
- As the world has changed through time has life got quicker? If so why? Is this always a good thing?
- What was the 'Princess flying Boat' and how was it synonymous with the Isle of Wight.

Languages – Latin and Spanish or French

- How has Latin influenced our modern language?
- How has travel influenced our use of language and attitudes towards other languages?
- Are there any similarities in the words linked with water in other languages?

Science

- How was steam used to power engines?
- At what temperature does water need to be at to create steam? Can you have hot and cold steam? Why is this?
- Can we identify the effects of air resistance, water resistance and friction that act between moving surfaces?
- Water is used to create electricity or power machinery, how does this work? How have the uses for water in this way changed over time?
- Sir Isaac newton was an important scientist, Why?
- Water has been found on the moon, why is this important?

Music

- Can we use industrial sounds to make musical compositions?
- Sing Up! How does singing make us feel?
- Compose music to make you think of the journey of water from spring to ocean. What would it be like at different parts of that journey? How could you change the tempo of the music to show this?
- There are many songs about water why do you think this is?
- When you listen to the sound of the train on a track it sounds a little like music. Why do you think this is? Are there any songs that use the sound of the train for the rhythm of a song?

Physical Education

- How will you improve your own performance in the Golden mile and daily personal challenges?
- PE Curriculum: Invasion Games (core skills into game play).
- Sports hall athletics: How will you develop your performance in running, throwing and jumping?
- Who are you role models in sport and why?
- Perform action content with commitment within school performance.

Religious Education

Including PSHE

- How do nature and the weather feature in religion?
- Is it always good to live life at 100 mph? Why do we sometimes need to slow down and reflect?
- What are sacred places of worship for different religions?
- Is Easter just a Christian celebration? Do other religions have similar celebrations to Easter?
- What is our Trick Box trick this week?

Curriculum Overview for Year 5

English

Reading
- Apply knowledge of morphology & etymology when reading new words
- Reading & discuss a broad range of genres & texts
- Identifying & discussing themes
- Make recommendations to others
- Learn poetry by heart
- Draw inference & make predictions
- Discuss authors' use of language
- Retrieve & present information from non-fiction texts.
- Formal presentations & debates

Writing
- Secure spelling, inc. homophones, prefixes, silent letters, etc.
- Use a thesaurus
- Legible, fluent handwriting
- Plan writing to suit audience & purpose
- Develop character, setting and atmosphere in narrative
- Use organisational & presentational features
- Use consistent appropriate tense
- Proof-reading
- Perform own compositions

Grammar
- Use expanded noun phrases
- Use modal & passive verbs
- Use relative clauses
- Use commas for clauses
- Use brackets, dashes & commas for parenthesis

Speaking & Listening
- Give well-structured explanations
- Command of Standard English
- Consider & evaluate different viewpoints
- Use appropriate register

Art & Design (UKS2)

- Use sketchbooks to collect, record, review, revisit & evaluate ideas
- Improve mastery of techniques such as drawing, painting and sculpture with varied materials
- Learn about great artists, architects & designers

Computing (UKS2)

- Design & write programs to solve problems
  - Use sequences, repetition, inputs, variables and outputs in programs
  - Detect & correct errors in programs
- Understand uses of networks for collaboration & communication
- Be discerning in evaluating digital content

Mathematics

Number/Calculation
- Secure place value to 1,000,000
- Use negative whole numbers in context
- Use Roman numerals to 1000 (M)
- Use standard written methods for all four operations
- Confidently add & subtract mentally
- Use vocabulary of prime, factor & multiple
- Multiply & divide by powers of ten
- Use square and cube numbers

Geometry & Measures
- Convert between different units
- Calculate perimeter of composite shapes & area of rectangles
- Estimate volume & capacity
- Identify 3-d shapes
- Measure & identify angles
- Understand regular polygons

Reflect & translate shapes

Data
- Interpret tables & line graphs
- Solve questions about line graphs

Fractions
- Compare & order fractions
- Add & subtract fractions with common denominators, with mixed numbers
- Multiply fractions by units
- Write decimals as fractions
- Order & round decimal numbers
- Link percentages to fractions & decimals

Design & Technology (UKS2)

- Use research& criteria to develop products which are fit for purpose and aimed at specific groups
- Use annotated sketches, cross-section diagrams & computer-aided design
  - Analyse & evaluate existing products and improve own work
  - Use mechanical & electrical systems in own products, including programming
- Cook savoury dishes for a healthy & varied diet

Geography (UKS2)

- Name & locate counties, cities, regions & features of UK
- Understand latitude, longitude, Equator, hemispheres, tropics, polar circles & time zones
- Study a region of Europe, and of the Americas
- Understand biomes, vegetation belts, land use, economic activity, distribution of resources, etc.
- Use 4- and 6-figure grid references on OS maps
- Use fieldwork to record & explain areas

Modern Languages (UKS2)

- Listen & engage
- Engage in conversations, expressing opinions
- Speak in simple language & be understood
- Develop appropriate pronunciation
- Present ideas & information orally
- Show understanding in simple reading
- Adapt known language to create new ideas
- Describe people, places & things
- Understand basic grammar, e.g. gender

Music (UKS2)

- Perform with control & expression solo & in ensembles
  - Improvise & compose using dimensions of music
- Listen to detail and recall aurally
- Use & understand basics of staff notation
- Develop an understanding of the history of music, including great musicians & composers

Science

Biology
- Life cycles of plants & animals (inc. mammal, insect, bird, amphibian)
- Describe changes as humans develop & mature

Chemistry
- Classify materials according to a variety of properties
- Understand mixtures & solutions
- Know about reversible changes; identify irreversible

Physics
- Understand location and interaction of Sun, Earth & Moon
- Introduce gravity, resistance & mechanical forces

History

British History (taught chronologically)
- Anglo-Saxons & Vikings, including:
  - *Roman withdrawal from Britain; Scots invasion*
  - *Invasions, settlements & kingdoms*
  - *Viking invasions; Danegald*
  - *Edward the Confessor*

Broader History Study
- Ancient Greece, i.e.
  - *A study of Greek life and achievements and their influence on the western world*

Physical Education (UKS2)

- Use running, jumping, catching and throwing in isolation and in combination
- Play competitive games, applying basic principles
- Develop flexibility & control in gym, dance & athletics
- Take part in Outdoor & Adventurous activities
- Compare performances to achieve personal bests
- *Swimming proficiency at 25m (KS1 or KS2)*

Religious Education

Continue to follow locally-agreed syllabus for RE