

## Science

### Forces

I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces.

I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

### Art

I can use sketch books to record my observations and use them to review and revisit ideas.

I can improve my mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]

I know about great artists, architects and designers in history.

### History

I can name some inventors from the past.

## May the Force Be With You Year Five



We are learning about forces and how the force of gravity acts between the Earth and falling objects.

We are looking at the effect of forces on air resistance, water resistance and friction. The children will make their own parachutes, using different variables, and will see which one falls the fastest.

## Design and Technology

### Design

I can use research and develop design criteria to inform my designs.

I can generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

### Make

I can select from and use a wider range of tools and equipment to perform practical tasks accurately.

I can select from and use a wider range of materials and components.

### Evaluate

I can investigate and analyse a range of existing products.

I can evaluate my ideas and products against my own design criteria.

### Technical knowledge

I can understand and use mechanical systems in their products [for example, gears, pulleys, levers].

I can apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

## Reading

I can maintain positive attitudes to reading and an understanding of what they read by:

continuing to read and discuss an increasingly wide range of fiction and plays

reading books that are structured in different ways and reading for a range of purposes

increasing their familiarity with a wide range of books

recommending books that they have read to their peers, giving reasons for their choices

identifying and discussing themes and conventions in and across a wide range of writing

making comparisons within and across books

learning a wider range of poetry by heart

preparing poems and plays to read aloud and to perform

I can understand what they read by:

checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context

asking questions to improve their understanding

drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence

predicting what might happen from details stated and implied

summarising the main ideas drawn from more than 1 paragraph, identifying key details that support the main ideas

identifying how language, structure and presentation contribute to meaning

I can discuss and evaluate how authors use language, including figurative language, considering the impact on the reader

I can distinguish between statements of fact and opinion

I can retrieve, record and present information from non-fiction

I can participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously

I can provide reasoned justifications for their views.

I can use grammatical features when reading.

## Writing

I can plan my writing by beginning to identify the audience for and purpose of the writing, often selecting the appropriate form and using other similar writing as models for my own.

I can plan my writing by beginning to note and develop initial ideas, drawing on reading and research where necessary.

I can plan my writing by beginning to consider how authors have developed characters and settings.

I can draft and write by beginning to select appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning.

I can draft and write by beginning to describe settings, characters and atmosphere and integrating dialogue to convey character and advance the action in narratives.

I can draft and write by beginning to precise longer passages.

I can draft and write by beginning to use a range of devices to build cohesion within and across paragraphs.

I can evaluate and edit by beginning to assess the effectiveness of my own and others' writing.

I can evaluate and edit by beginning to propose changes to vocabulary, grammar and punctuation to enhance writing.

I can evaluate and edit by beginning to use the correct tense throughout a piece of writing.

I can evaluate and edit by beginning to ensure the correct subject and verb agreement when using singular and plural, distinguishing between the languages of speech and writing and choosing the appropriate register.

I can proof-read for spelling and punctuation errors.

I can perform my own compositions, beginning to use appropriate intonation, volume so that meaning is clear.

I can indicate grammatical and other features by using brackets, dashes or commas to indicate parenthesis.

I can use grammatical terminology for Year 5 understanding devices to build cohesion within a paragraph

I can use grammatical terminology for Year 5 understanding linking ideas across paragraphs using adverbials of time

I can indicate grammatical and other features by using commas to clarify meaning or avoid ambiguity in writing.

## Maths

I can understand what percentages are.

I can recognise percentages, decimals and fractions are different ways of expressing proportions.

I can recognise simple equivalent fractions and represent them as decimals and percentages.

I understand and can use Metric units – Kg and g.

I understand and can use Metric units – mg and ml.

I understand and can use Metric units – converting units.

I can explain and use Imperial units.

I can convert units of time.

I can read and use timetables.

I can explain what volume is.

I can compare volumes.

I can estimate volumes.

I can estimate capacity.

I can add decimals within 1.

I can subtract decimals.

I can add decimals across the whole.

I can add numbers with the same number of decimal places.

I can read, write, order and compare numbers with up to three decimal places.

I can solve problems involving number up to three decimal places.

I can recognise the percent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.

I can convert between different units of metric measure (for example km and m; cm and m; cm and mm; g and kg; l and ml).

I can solve problems involving converting units of time.

I can estimate volume {for example using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)} and capacity (for example using water).

I can use all four operations to solve problems involving measures.

I can find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.