 **Theme 10 **

**Inventing a Board Game**

**National Curriculum**

Theme 10 provides opportunities for:

**English**

**Spoken English**

**KS2, Y5 & Y6**

* listen and respond appropriately to adults and their peers

#### articulate and justify answers, arguments and opinions

#### give well-structured explanations for different purposes, including for expressing feelings

* maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
* use spoken language to develop understanding through speculating, imagining and exploring ideas
* participate in discussions and presentations
* consider and evaluate different viewpoints, attending to and building on the contributions of others

**KS 3**

* using Standard English confidently in formal contexts, including classroom discussion
* giving short presentations, expressing their own ideas and keeping to the point

**Reading Comprehension**

**KS2, Y5 & Y6**

* continuing to read and discuss non-fiction
* reading for a range of purposes
* retrieve, record and present information from non-fiction

**KS3**

* reading a wide range of non-fiction

**Writing; Composition**

**KS2, Y5 & Y6**

**Planning**

* identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
* noting and developing initial ideas, drawing on reading and research where necessary

**Drafting**

* selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning

**Evaluating and Editing**

* assessing the effectiveness of their own and others’ writing
* proposing changes to grammar and vocabulary to improve consistency
* ensuring the consistent and correct use of tense throughout a piece of writing

**KS3**

* writing for a wide range of purposes and audiences, including a range of non-narrative texts
* summarising and organising material
* applying their growing knowledge of vocabulary, grammar and text structure to their writing and selecting the appropriate form

Plan, draft, edit and proof-read through:

* considering how their writing reflects the audiences and purposes for which it was intended
* amending the vocabulary, grammar and structure of their writing to improve its coherence and overall effectiveness

**Mathematics**

**Fluency:** conceptual understanding; recall and apply knowledge

**Reasoning:** follow lines of enquiry; conjecture relationships and generalisations; develop arguments, justification or proof

**Solving problems:** apply maths to routine and non-routine problems, breaking down into simpler steps

Make connections across different concepts.

Apply mathematical knowledge to other subjects.

## KS2 Y5-Y6

* solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation

**Y5 Number; Number and Place Value**

* read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit

**Y6 Number; Number and Place Value**

* read, write, order & compare numbers to at least 10 000 000 & determine the value of each digit

**Y5 Number; Addition and Subtraction**

* add and subtract numbers mentally with increasingly large numbers

**Y6 Number; Addition, Subtraction, Multiplication and Division**

## perform mental calculations, including with mixed operations and large numbers

## solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

* use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

### KS3

#### Develop fluency

* use language and properties precisely to analyse numbers, probability and statistics.

#### Reason mathematically

* make and test conjectures about patterns and relationships; look for proofs or counter-examples
* explore what can and cannot be inferred in statistical and probabilistic settings, and begin to express their arguments formally.

#### Solve problems

* develop mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems
* select appropriate concepts, methods and techniques to apply to unfamiliar and non-routine problems.

**Number**

* recognise and use relationships between operations including inverse operations

### Probability

* record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale
* understand that the probabilities of all possible outcomes sum to 1
* generate theoretical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities.

**Art and Design**

* produce creative work, exploring their ideas and recording their experiences
* become proficient in drawing, painting, sculpture and other art, craft and design techniques
* evaluate and analyse creative works using the language of art, craft and design

### KS2

Pupils should be taught:

* to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.
* to improve their mastery of art and design techniques, including drawing and painting with a range of materials [for example, pencil, charcoal, paint]

### KS3

Pupils should be taught:

* to develop their creativity and ideas, and increase proficiency in their execution. They should develop a critical understanding of artists, architects and designers, expressing reasoned judgements that can inform their own work.
* to use a range of techniques and media, including painting
* to increase their proficiency in the handling of different materials
* to analyse and evaluate their own work, and that of others, in order to strengthen the visual impact or applications of their work

**Design and Technology**

* build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
* critique, evaluate and test their ideas and products and the work of others

### KS2

* They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

#### Design

* use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
* generate, develop, model and communicate their ideas through discussion, annotated sketches

#### Make

* select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
* select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to functional properties and aesthetic qualities

#### Evaluate

* investigate and analyse a range of existing products
* evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

**KS3**

They should work in a range of domestic and local contexts [e.g., the home, health, leisure and culture], and industrial contexts [e.g., engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion].

#### Design

* use research and exploration, e.g. the study of different cultures, to identify and understand user needs
* identify and solve their own design problems and understand how to reformulate problems given to them
* develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations
* use a variety of approaches [e.g., biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses
* develop and communicate design ideas using annotated sketches, detailed plans

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#### Evaluate

* analyse work of past & present professionals and others to develop and broaden understanding
* test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups

**History**

to develop understanding of:

* the history of these islands as a coherent, chronological narrative, from the earliest times to the present day
* place, historical context and chronology
* historical concepts such as continuity and change, cause and consequence, similarity, difference and significance, and use them to make connections, draw contrasts, analyse trends
* gain historical perspective by placing their growing knowledge into different contexts
* the connections between local, regional and national history
* the connections between between cultural, economic and social history
* the connections between short- and long-term timescales

**KS2**

* develop a chronologically secure knowledge and understanding of British and local history, establishing clear narratives within and across the periods they study
* note connections, contrasts and trends over time and develop the appropriate use of historical terms
* regularly address and sometimes devise historically valid questions about change, cause, and significance
* construct informed responses that involve thoughtful selection and organisation of relevant historical information
* a local history study

**KS3**

* extend and deepen chronologically secure knowledge and understanding of British, and local history, so that it provides a well-informed context for wider learning
* identify significant events, make connections, and analyse trends within periods
* use historical terms and concepts in increasingly sophisticated ways
* understand how different types of historical sources are used rigorously to make historical claims
* ideas, political power, industry and empire: Britain, 1745-1901
* society, economy and culture across the period
* a local history study