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| **Logo  Description automatically generated** | **Logo, company name  Description automatically generated** | Topic Overview KS2 (Year 5) - Spring 2 2021 |

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| **Key Texts English** | The Miraculous Journey of Edward Tulane by Kate DiCamillo | | | | | | | |
| **Subject** | ***Science*** | ***Computing*** | ***Geography*** | ***History*** | ***Art & Design*** | ***Design & Technology*** | ***MFL*** | ***RE/PSHE*** |
| NC  Objectives / links | Pupils should be taught to:  -plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  - take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate  - record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs  - use test results to make predictions to set up further comparative and fair tests.  - report and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations – identify scientific evidence that has been used to support or refute ideas or arguments. | Pupils should be taught to:  - use technology safely, respectfully and responsibly;  - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts  - use sequence, selection, and repetition in programs; work with variables and various forms of input and output  - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs | Pupils should be taught to:  -understand climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle  -understand human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water |  |  | Pupils should be taught to:  -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, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.  - 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 their functional properties and aesthetic qualities. | Pupils should be taught to:  - listen attentively to spoken language and show understanding by joining in and responding  - explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words  - engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help\*  - speak in sentences, using familiar vocabulary, phrases and basic language structures  - develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases\* | Pupils should be taught to: |

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| **Week/session** | * Lesson QfL (Learning Intentions / Lesson Titles) * Further QfLs linked to learning activities (additional questions for differentiated learning) * **Opportunities for Sparkle (see separate suggestions)** | | | | | | | |
|  | ***Science*** | ***Computing*** | ***Geography*** | ***History*** | ***Art & Design*** | ***Design & Technology*** | ***MFL*** | ***RE*** |
| **Big Question** | ***What is the purpose of having different materials?*** | ***How can music be created using technology?*** | ***How does flooding impact a community?*** |  |  | ***What makes the best habitat for a bird?*** | ***How do we greet people in Spanish?*** | ***What are British Values?*** |
| **Week 1** | **What is the best material for keeping food at a certain temperature?**  What is insulator?  How is temperature measured? | **What are musical algorithms?**  What is the purpose musical micro:bit program?  What is an algorithm? | **What is the water cycle?**  Why do we live around rivers?  Why doesn’t it rain all the time?  What is transpiration?  Why doesn’t the whole ocean evaporate? | **What is a design specification?**  What is a bird box?  What it the purpose of the bird box? |  | **What are British Values?**  What can we learn about British values?  How do British Values relate to Britain?  What is Rule of Law? |
| **Week 2** | **What material is the most environmentally friendly?**  Which is the best food storage?  What materials are best for the environment?  What are micro-plastics? | **How can musical programming be** debugged?  How to bugs impact on programs?  How can existing knowledge improve programs? | **What is flooding?**  What different types of flooding are there?  How is coastal flooding different?  What is erosion? | **What materials are best for building?**  How can we test materials?  Why are the properties of materials important? | **What are common Spanish greetings?**  How do we greet in Spanish?  Is there different words for male and females? |  |
| **Week 3** | **Why is electricity dangerous?**  What are insulators and conductors?  How can we protect ourselves from electrical equipment? | **What are musical gestures?**  How are algorithms analysed and modified?  Why is identifying patterns important?  What is repetition and selection? | **How can we plan and prepare for a flood?**  What is a flood kit and flood plan?  How do we evaluate our flood risk?  What do flood warning levels mean? | **Why do we brainstorm?**  What does trial and error mean?  Why is more than one design crucial?  How can a mood boards present ideas? |  | **How can British values help me?**  What is Tolerance and Respect?  Who is helped by British Values?  Why do British Values exist? |
| **Week 4** | **What are the properties of materials?**  What does soluble mean?  Which materials dissolve in liquid the quickest?  How does a sugar cube change in water? | **How can music be controlled with inputs?**  What is the difference between an input and output?  How can an accelerometer be applied? | **What are the dangers of flooding?**  What impact can flood water have on livelihoods?  What are the dangers of entering flood water?  Where does flooding happen? | **How are bird boxes built?**  What materials are needed to build?  How are bird boxes assembled? | **How do we show the time of day?**  What greeting words are used for morning, afternoon and night?  Is there a word used for any time of day? |  |
| **Week 5** | **Do all materials stretch in the same way?**  What is elastic?  Why do materials stretch do different lengths?  Which material is the most flexible? | **How can programs be modified to meet given criteria?**  How can micro:bit be evaluated as a musical device? | **How do towns recover from flooding?**  What services help with recovery?  What other effects does flooding have? | **Why is camouflage significant?**  What is camouflage?  How can this protect species of birds? |  | **Is democracy useful for everyone?**  What is democracy?  Does individual liberty work alongside democracy? |
| **Week 6** | **Are changes to materials reversible?**  What are reversible and irreversible changes?  How do materials change when burnt? | **How can musical micro:bit skills be applied?**  What are the main skills using the program?  What might these skills be used for? | **How can flooding be reduced?**  What is a catchment?  What is a flood scheme?  What is resistance and resilience? | **What went worked and what didn’t?**  Why is evaluating a product necessary?  How do we evaluate and critic? | **How do we say our name in Spanish?**  How do we ask someone what their name is?  How can we answer this question? |  |