# PIONEERS STEAM CURRICULUM PLANNING (Remote Learning & Recovery Curriculum)

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<tr><td colspan="2">CYCLE B<br>Spring 2nd Half</td><td>Virtue Focus:<br>Integrity</td><td>Science Enquiry Focus:<br>Measure & Record</td><td>SCARF Focus:<br>Rights & responsibilities</td><td colspan="2">Children's own questions from knowledge elicitation in addition to…<br>The Big Question: Can you keep a secret? Can crack a code?</td></tr>
<tr><td>S</td><td colspan="4">Science Capital: Alan Turing and Enigma Code (link to WWII), Marie Curie and developing x-rays – What is a chemist?<br>Science Curriculum: Y5 Properties and Changes of Materials:<ul><li>compare and group together everyday materials based on their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li><li>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li><li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li><li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li><li>demonstrate that dissolving, mixing and changes of state are reversible changes</li><li>explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda</li></ul>Working Scientifically: Measure & Record - Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate; Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</td><td colspan="2">Purpose & Outcome: The purpose of this topic is for the children to study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066. They will be able to link their historical understanding to important discoveries that have positively contributed to recognisable components of modern society. By the end of this topic, the children will be able to explain the important work that Marie Curie contributed to chemistry, including the creation of two new elements on the period table and her contribution to the development of x-rays. The children will also complete a study of World War 2. They will consider reasons why the war began, rationing, evacuation and the role of women, including key events from 1939-1945. The children will link their developing understanding of World War 2 to Alan Turing, the Enigma Code and the creation of the Bombe machine. The children will explore a range of codes that have been invented, including Caesar Cipher, Morse Code and the International Phonetic Alphabet.</td></tr>
<tr><td>T</td><td colspan="4">Technology: Children will continue to develop their awareness and understanding of Coding by participating in activities linked to the Hour of Code initiative. Children will consider the origins of the binary code and will learn how it assigns a pattern of binary digits, also known as bits, to each character or instruction. They will apply this to their understanding of other types of code.</td><td colspan="2" rowspan="2">Key Topic Texts:<br>My Mood Journal – Fearne Cotton<br>Code Cracking for Beginners (Guided Reading)<br>Little People, Big Dreams: Alan Turing by Maria Isabel Sanchez Vegara<br>Little People, Big Dreams: Marie Curie by Maria Isabel Sanchez Vegara<br>Woeful Second World War by Terry Deary</td><td rowspan="2">Hook / Trip/ Visits & Visitors:<br>Sadly, we cannot have visitors at this time but will plan memorable learning experiences as part of our STEAM curriculum, such as World War 2 day.</td></tr>
<tr><td>E</td><td colspan="4">Engineering: Children will link their understanding of the role of women in World War 2 to the important work of engineer Dame Caroline Haslett.</td></tr>
<tr><td>A</td><td colspan="4">Arts: Children will know how art and design both reflect and shape our history and contribute to the culture of our nation through looking at World War 2 propaganda images and designing their own.</td><td colspan="2">Physical Education & School Sport:<br>Physical skills – jumping and throwing<br>Sport: Four Square (A game originally created during WW2, now a sport in its own right).</td><td>Links to Local Industry / Real Life:<br>Chemists<br>Female engineers</td></tr>
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**M**

**Mathematics:** Pupils should be taught to:

- convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]
- understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- calculate and compare the area of rectangles (including squares), including using standard units, square centimetres ($cm^2$) and square metres ($m^2$), and estimate the area of irregular shapes
- estimate volume [for example, using 1 $cm^3$ blocks to build cuboids (including cubes)] and capacity [for example, using water]
- solve problems involving converting between units of time
- use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling

**English Curriculum:**

**Spelling:** Weekly spelling rules, set on Spelling Shed and through Google Classroom.
**Grammar:** Revision of KS2 Punctuation, Time and Cause Conjunctions and Relative Clauses.
**Reading:** Children will refamiliarise themselves with the six reading domains: vocabulary, inference, prediction, explanation, retrieval and summary. They will recap different types of questions which may be asked of them through each domain. Our Guided Reading text focus will the 'Code Cracking for Beginners'.
**Writing:** Children will develop their continuous cursive handwriting using Letter-join Handwriting resources. They will develop their understanding of diary writing and will write a diary in role as Alan Turing on the day he cracked the Enigma Code and as a child who had been evacuated during World War Two. The children will demonstrate their knowledge of narrative writing by writing an adventure story.
**Key Fiction Texts:** Code Cracking for Beginners (Guided Reading)
**Key Non-fiction Texts:** Woeful Second World War by Terry Deary

**Spring 2021 Remote Learning & Recovery Curriculum**

Our Remote Learning Curriculum acknowledged that every family is facing different circumstances and school closures and lockdown caused disruption to learning. Unlike in the Summer of 2020, our Remote Learning provision provided 4 hours of teaching and learning activities daily to help move children through the Key Stage 2 Curriculum whether they were accessing the Remote Learning provision from home or at school. We also kept a focus on wellbeing (Weekly Wellbeing Menu), knowing this is essential as the act of recovery is at least as much an emotional and social one as it is academic. Our academic content continued to focus on the key fundamental skills such as spelling, reading, writing and maths. The curriculum included daily spelling activities, English and Maths. As a school with an inquiry-based STEAM curriculum, we provided 2 afternoons of STEAM curriculum content and an hour of code weekly during the period of Lockdown.
As schools reopened to all pupils on 8th March, we're mirroring a timetable similar to Remote Learning. There will be daily English and Maths lessons, 2 afternoons of STEAM curriculum, one afternoon consisting of PE and Coding and a full afternoon focussed on wellbeing and SCARF. Additionally, pupils will benefit from physical challenges and short wellbeing session bespoke to the needs of the class throughout the week. Addressing the negative impact of school closures will require a sustained response but will work hard to get our pupils back on track, returning to our full and broad curriculum by the end of the Summer Term. During Spring 2, we will assess the children's knowledge and understanding so we are able to provide for their learning needs through 'Catch Up'.