

Theme: Ingenious Geniuses		Year: 4/5/6		Main concepts: History & DT	
<b>What should children already know?</b>				<b>What will the children learn?</b>	
<p><b>Children should be able to:</b></p> <ul style="list-style-type: none"> <li>✓ Use dates and terms related to the study unit and passing of time</li> <li>✓ Sequence several events or artefacts</li> <li>✓ Compare with our life today</li> <li>✓ Identify reasons for and results of people's actions</li> <li>✓ Use a range of sources to find out about a period</li> <li>✓ Observe small details – artefacts, pictures</li> <li>✓ Select and record information relevant to the study</li> <li>✓ Begin to use the library and internet for research</li> </ul>				<p>By the end of this topic the children should be able to:</p> <ul style="list-style-type: none"> <li>• Understand how key events and individuals in design and technology have helped shape the world</li> <li>• To understand the development of computing and know some influential people involved.</li> <li>• Name some influential people in the development of computing.</li> <li>• Discuss some of the key inventions in the history of computing.</li> <li>• To investigate the invention of the World Wide Web</li> <li>• Reflect on how an invention has changed their lives and changed the world</li> <li>• Identify a problem and begin to think of solutions (or inventions) to solve the problem.</li> <li>• Researching ideas or gathering information to help you solve the problem</li> <li>• Sketching and writing down several ideas that satisfy your requirements.</li> <li>• Selecting and developing the idea that will best solve the problem.</li> <li>• Identifying any risks to yourself and others during the making and using of the model*</li> <li>• Making a model of your invention</li> <li>• Testing the model to see if it solves your problem</li> <li>• Evaluating your model to consider any modifications that could be made to improve your model.</li> </ul>	
<b>Key vocabulary</b>					
computer	Analytical engine	innovative	software	essential	appropriate
internet	invention	philanthropy	code	modification	design
World wide web	solution	programming	website	technique	evaluate
influential	algorithm	hardware	URL	specification	develop
<b>Historical skills</b>					
<ul style="list-style-type: none"> <li>❖ Make comparisons between different times in the past</li> <li>❖ Identify key features and events of time studied</li> <li>❖ Look for links and effects in time studied</li> <li>❖ Study different aspects of different people - differences between men and women</li> <li>❖ Examine causes and results of great events and the impact on people</li> <li>❖ Use a range of sources to find out about an aspect of time past</li> </ul>					
<b>DT skills</b>			<b>Transferable skills</b>		
<p>*Draw up a specification for their design *Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail *Use results of investigations, information sources, including ICT when developing design ideas * Select appropriate materials, tools and techniques * Use skills in using different tools and equipment safely * Cut and join with accuracy to ensure a good-quality finish to the product * Evaluate a product against the original design specification * Evaluate their work both during and at the end of the assignment * Evaluate against their original criteria identifying strengths, areas for development and suggest ways that their product could be improved</p>			<p>During this theme, children will continue to develop and expand their use of the following transferable skills:</p> <p><b>Personal Effectiveness</b></p> <ul style="list-style-type: none"> <li>*Self-improvement (including through constructive self-reflection, seeking and utilising constructive feedback and effective goal setting)</li> <li>*Resilience (including self-motivation, perseverance and adaptability)</li> <li>*Self-regulation (including promotion of a positive growth mindset and managing emotions and impulses)</li> <li>*Clarifying own values and re-evaluating values and beliefs in light of new learning, experiences and evidence</li> <li>*Recalling and applying knowledge creatively and in new situations</li> </ul> <p><b>Interpersonal and Social Effectiveness</b></p> <ul style="list-style-type: none"> <li>*Empathy and compassion (including impact on decision making and behaviour)</li> <li>*Respect for others' right to their own beliefs, values and opinions</li> <li>*Teamworking</li> <li>*Leadership skills</li> <li>*Presentation skills</li> <li>*Recognising, evaluating and utilising strategies for managing influence</li> </ul> <p><b>Managing Risk and Decision Making (integral to above)</b></p> <ul style="list-style-type: none"> <li>*Identification, assessment and management of positive and negative risk to self and others</li> <li>*Formulating questions (as part of enquiring approach to learning and assessing value of information)</li> <li>*Analysis (including separating fact and reasoned argument from rumour, speculation and opinion)</li> <li>*Assessing the validity and reliability of information</li> <li>*Identify links between values and beliefs, decisions and actions</li> <li>*Making decisions</li> </ul> <p>(Essential skills and attributes taken from the PHSE Association POS 2017)</p>		
<b>English curriculum links</b>					
<p>Use information texts and the internet to research and record information about a topic                  Write a persuasive text                  Use headings and sub-headings to organise information in writing                  Write instructions</p>					
<b>Mathematics curriculum links</b>					
<p>Measuring accurately                  Converting between units of measurement</p>					
<b>PHSE &amp; Values</b>					
<p>Core theme 1 - Health &amp; Wellbeing                  H2, H8, H9, H10, H11, H12, H16, H21, H23                  Core theme 2 – Relationships                  R1, R7, R10, R11, R12                  Core theme 3 – Living in the wider world                  L1, L2, L3, L4, L7, L8, L9, L10, L12, L13, L15, L17, L18                  Objectives taken from the PHSE Association POS 2017</p>					
<b>RE Links</b>			<b>Computing</b>		
			<p>Use the internet for research                  Complete safe searches and choose relevant information                  Use software to produce a digital presentation including text and pictures</p>		
<b>Art</b>			<b>Science Links</b>		
<ul style="list-style-type: none"> <li>• Compare ideas, methods and approaches in their own and others' work and say what they think and feel about them.</li> <li>• Plan, design, make and adapt models.</li> <li>• Adapt their work according to their views and describe how they might develop it further.</li> </ul>			<p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect                  Identify forces that act between moving surfaces</p>		

