

Medium Term Plan

Year 6 Term 3 Topic Name: Robots and Circuits				
Overarching Question?	Have you tried turning it off and on again?			
Stunning Start	Coding @ HGS/BH			
Fantastic Finish	Robo-boogie/Dance recital			
Subject		NC Programme of study	Possible Tasks	Outcomes 'I can
English Genres and Focus		Poetry -Create atmosphere – Pie Corbett ‘City Jungle’ – Personification. Fiction – Character Flaw. Suspense ‘The Nightmare Man’ Non Fiction – Recount. News report.	Poems that create atmosphere – Pie Corbett ‘City Jungle’ – Personification. Write a story using suspense techniques. Write news report about machines going wrong.	Write describing settings, characters and atmosphere using dialogue to further the narrative.
Maths		Decimals Percentages Measurement		Identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1000 giving answers up to 3 decimal places (dp). Multiply one digit numbers with up to 2dp by whole numbers. Use written division methods in cases where the answer has up to two decimal places. Solve problems which require answers to be rounded to specified degrees of accuracy. Number: Percentages Solve problems involving the calculation of percentages [for example, of measures such as 15% of 360] and the use of percentages for comparison. Recall and use equivalences between simple FDP including in different contexts. Measurement Solve problems involving the calculation and conversion of units of measure, using decimal

				<p>notation up to three decimal places where appropriate. Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. Convert between miles and kilometres. Recognise that shapes with the same areas can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume of shapes. Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm³, m³ and extending to other units (mm³, km³).</p>
Science		<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>Create an Iron Man model with light up eyes.</p> <p>Create a circuit with a switch, buzzer or light.</p>	<p><i>I can show that the brightness of a lamp or the volume of a buzzer depends on the number and voltage of cells used in the circuit.</i></p> <p><i>I can compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.</i></p> <p><i>I can draw a diagram using recognised symbols to represent a simple circuit.</i></p>
PE				
		<p>Use different techniques, colours and textures when</p>	<p>Create dramatic drawings of the Iron</p>	<p><i>I can use different techniques, colours and textures in my artwork and</i></p>

Art/DT		designing and making pieces of work and explain his/her choices	Man using shade.	<i>explain the choices I have made</i>
PSHE				
RE				
Computing		<p>Include use of sequences, selection and repetition with the hardware used to explore real world systems</p> <p>Solves problems by decomposing them into smaller parts</p> <p>Create programs which use variables</p> <p>Use variables, sequence, selection, and repetition in programs</p> <p>Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently</p> <p>Use technology respectfully and responsibly</p> <p>Identify a range of ways to report concerns about content and contact in and out of school</p> <p>Independently select, use and combine a variety of software to design and create content for a given audience, including</p>	<p>Create Scratch maze game.</p> <p>Use Lego Wedo to programme Lego robots.</p> <p>Contribute to whole school e-safety by creating posters and powerpoints.</p>	<p><i>I can combine software and hardware to solve real life problems</i></p> <p><i>I can break code up into related instructions, making debugging easier and quicker</i></p> <p><i>I can store and retrieve variables in a program</i></p> <p><i>I can use loops, variables and IF statements to alter the way my programs run</i></p> <p><i>I can use logical thinking to identify and solve potential bugs during coding</i></p> <p><i>I understand how to protect my computer or device from harm on the internet</i></p> <p><i>I understand how to report concerns about content and contact in and out of school</i></p> <p><i>I can use more than one piece of software to complete a task</i></p> <p><i>I can design a program for a given audience</i></p> <p><i>I understand how computers are able to communicate and share information</i></p> <p><i>I can use and combine services on the internet to share information</i></p>

		<p>collecting, analysing, evaluating and presenting data and information</p> <p>Design and create a range of programs, systems and content for a given audience</p> <p>Understand how computer networks enable computers to communicate and collaborate</p> <p>Begin to use internet services within his/her own creations to share and transfer data to a third party</p>		
History	Not covered in this topic			
KS2 MFL		<p>Understand longer and more challenging texts on a range of topic areas, recognising some details and opinions heard</p> <p>Apply knowledge of phonemes and spelling to attempt the reading of unfamiliar words</p> <p>Write a range of phrases and sentences from memory and adapt them to write his/her own sentences on a similar topic</p> <p>Select appropriate adjectives to describe</p>		<p>I can understand the main points and some details from spoken passages on a range of subjects</p> <p>I can use my knowledge of spelling to help me read unfamiliar words</p> <p>I can write several phrases and sentences from memory and can change them to express my own ideas</p> <p>I can choose the best adjectives to describe people, places and things and the right verb to describe an action</p> <p>I can discuss a topic with others giving my</p>

		<p>a range of things, people and places and appropriate verbs to describe actions</p> <p>Begin to use some adverbs</p> <p>I am beginning to use some adverbs</p> <p>Engage in longer conversations, asking for clarification when necessary</p> <p>Create his/her own sentences using knowledge of basic sentence structure</p> <p>Use pronunciation and intonation effectively to accurately express meaning and engage an audience</p> <p>Read aloud and understand a short text containing unfamiliar words, using accurate pronunciation</p> <p>Attempt to read a range of texts independently, using different strategies to make meaning</p> <p>Use vocabulary learnt from reading in different contexts and use dictionaries to find a wide range of words</p> <p>Know how to conjugate a range of high frequency verbs</p> <p>Understand how to use some adverbs in sentences</p> <p>Have an awareness of similarities and differences in grammar between different languages</p>		<p>own ideas and asking for help when I need it</p> <p>I can create my own extended sentences</p> <p>I can use the way I speak to make my meaning clear and keep my audience interested</p> <p>I can understand the main points and some details from a text which includes unfamiliar language</p> <p>I can try to read and understand a range of different texts using clues to help me</p> <p>I can use words and phrases I have learnt from reading and from dictionaries</p> <p>I know the different forms of a variety of verbs and when to use each form</p> <p>I understand how to use some adverbs in sentences</p> <p>I know that different languages have different rules about grammar</p>
Music		Create a simple composition and record using formal notation	Create Robotic musical accompaniment to the Iron Man story.	<p>I can create a simple composition and record it using formal notation</p> <p>I can listen with</p>

		Listen with attention to detail and recall sounds with increasing aural memory and accuracy		attention to detail and recall sounds with increasing aural memory and accuracy
Local focus	Harvey Grammar Coding Workshop.			
Key Vocabulary	Circuit, buzzer, electricity, robotics, machine, programming, algorithm, sequence, variables.			
Language Enrichment Opportunities	'R-Time' Talk for writing – drama and oral rehearsals Group discussions around topic: using Subject Specific Language			
Visitors or trips	Secondary Computing teachers			
Special Focus Days/Weeks	Robotic Dance Show			