



Cramlington Village Primary School
REAL projects Y3/4 Summer

Project overarching key question	Project summary What you're going to do and why	Essential questions This should be inspiring, not able to be 'googled', requiring you to conduct in depth research and relate to a real world issue	Final project outcome Deadline date? How you will promote? Who will be invited?
Can we beat the greatest invention?	Find out about the history of robotics and how robots have been developed to help us. What do we use robots for now? How will robots be used in the future? Learn about coding simple systems and investigate how robots work and the effect they have in society.	What are robotics? How are they used in everyday life? How has robotics developed over the years (technological revolution)? Can we use programming? What are the greatest 10 robots? Who was the world's greatest robot inventor? Where would we be without robots? What will robots do for us in the future? Can we get a job in robotics or programming	A game that children have designed and can play - link with Little Inventors? A robotic device/ system that improves life in the classroom

Wow moment This needs to happen within the first week of term - preferably on the first day	Key staff	Key contact numbers/websites/resources	Classroom environment What will you be doing to your classroom? What resources do you need	Key text
Robotics Workshop Lego MAKEYMAKEY robots Scratch coding	Michael Mullaghan Melissa Costello Allison Morton Tanya Morrow	https://www.bbc.com/teach/class-clips-video/computing-ks1--ks2-programming-robots-to-play-football/zjyvri6 https://www.littleinventors.org/collections/ https://www.teachprimary.com/learning_resources/view/pie-corbett-resource-robots https://www.literacysshed.com/the-inventors-shed.html http://www.literacysshedplus.com/assets/girl-and-robot-planning.pdf Heseyin Seker leads the Institute of coding: My personal web site: http://computing.unn.ac.uk/staff/yqqd6/home.htm Bio-Health Informatics Research Team: http://computing.unn.ac.uk/staff/yqqd6/biohealthteam.htm Big Data Analytics Clinic: http://computing.unn.ac.uk/staff/yqqd6/BigDataAnalyticsClinic.htm SekerBigDataLab: https://github.com/sekerbigdatalab/ My Research Gate Profile: https://www.researchgate.net/profile/Huseyin_Seker My Northumbria Research Link can be found here https://www.tharsus.co.uk/ -robotics company Blyth http://www.st-marks-southampton.org.uk/files/Curriculum%20overviews/Year%204/B3B39761FBEC173AD1A949CB86DF9792.pdf Iron man cross curricular activities.	Library book in learning area to support research Large iron man sculpture Artefacts like old telephones etc to investigate	Y3 The Iron Man Information books about robots and computing LEO the Maker Prince: Journeys in 3D Printing – Carla Diana (2013) Y4 Frank Einstein and the Antimatter Motor by Jon Scieszka. Operation Gadgetman! By Malorie Blackman.

Key dates Include specific dates	Key question	Products What are you going to do/write/create/build?	Learning goals What key parts of the curriculum will this include? (long term plan holds all of the curriculum content) What skills will be practised?	Exhibition plan How will you promote the exhibition? How will you exhibit your work? Who will you be inviting?
Week 1 2/9/19	What are robotics? How are they used in everyday life? Where are the robots	Sets of instructions for programmable toys	Y3 Literacy - WAGOLL - explanation text on robots. Learn text add actions. Start to explore vocabulary, ask questions about the text; develop text map	Photos and instructions

			<p>- pick out key words/phrases/ideas and explore meaning Grammar focus: paragraphs, subordinating conjunctions Numeracy - Place value Science/technology - where are robots all around us? Art :local artist John Martin look at examples of pictures and discuss likes and dislikes PSHE - welcome back, class rules Forest School History where are the robots? Investigate programmable toys. PE 1.30 to 2.15 pilates RE - know about some Old Testament stories which Christians believe reveal aspects of God's "character" - creation story (Genesis 1-2), music-</p> <p>Y4 Literacy - Discussions and debates about robotics: Our ideal Robot. Look into key vocabulary related to robotics, coding and inventions. Look at explanation texts based on famous inventions. T4W - Story map - internalise actions and vocabulary. Numeracy - Place Value Science - Electronics / computing Beebots - Simple coding. instructions . Art - Focus on developing our sketching techniques and skills. Religion - Focus on Food and Fasting topic. 'How do we think about food?' History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	
Week 2 9/9	How has robotics developed over the years?	Time line of technology	<p>Y3 explanation text read as a writer, box up the text, develop writer's tool kit for explanation text, continue to widen vocabulary including lists form topic work Grammar focus:questions as subheadings, present tense Literacy Numeracy - place value Science - Electronics / Computing Art sketching - figures from framework to whole figure PSHE Together Everyone Achieves More Forest School History/Geography the beginning of computing and robotics - Turing PE 1.30 to 2.15 pilates RE know about some Old Testament stories which Christians believe reveal aspects of God's "character" - the Tower of Babel (Genesis 11)</p> <p>Y4 Literacy - Continue to focus on T4W text. Children will analyse written text: Look at structure - boxing up activity. Discuss features of an explanation text. Continue to build up knowledge of a range of robotics. Numeracy - Place Value Science - Electronics / Computing Art - Focus on developing our sketching techniques and skills. Religion - Focus on Food and Fasting topic. 'Rules about food' History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	Time line
Week 3 16/9 18.09.19 training day	Can we devise a simple programme?	Set of simple B bot instructions	<p>Y3 Literacy explanation text, drama - advert for own invaluable robot, explain how they work and what they do - record video, draft own explanation of their robot and what it does, develop and refine finished text Grammar focus: dropping in relative clauses Numeracy place value Science/tech use B-bots to navigate Art sketching - figures in perspective</p> <p>PSHE working together Forest School History/Geography PE 1.30 to 2.15 pilates RE know about some Old Testament stories which Christians believe reveal aspects of God's "character" - , Moses and the Exodus (Exodus 2-17)</p> <p>Y4 Literacy - Focus on a heading - Description of invention, It's purpose, How it was designed, instructions. Design their own robot. Mind Map - Focus on sub heading each day going into detail on each aspect of the explanation. Numeracy - Place Value</p>	

			<p>Science - Electronics / Computing Art - Developing our sketching through 3D drawing and shading. Religion - Focus on Food and Fasting topic. 'Fasting and giving up on food' History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	
<p>Week 4 23/9</p>	<p>Can we use more complex instructions?</p>		<p>Y3 Literacy Iron Man- narrative -listen to the extract, learn text extract, addactions, act out, drama to discuss what is happening in the village, explore word choices and use of repetition. Grammar focus: pattern of three for descriptive sentences Numeracy addition and subtraction Science /tech use B-bots to navigate a simple maze Art sketching adding expression - investigate changes PSHE being considerate Forest School History/Geography PE 1.30 to 2.15 pilates RE tell stories told by Jesus about what God is like: The Unforgiving Servant (Matthew 18),</p> <p>Y4 Literacy - Focus on instruction: How does your invention work? Innovating the text in sections. Change certain areas of our chosen text. Using a range of vocabulary from our working wall. Numeracy - Addition and Subtraction Science Electronics / Computing Art sketching - figures in perspective Religion - Focus on Food and Fasting topic. 'Fasting year' PSHE respect Forest School - Technological revolution - Chronological understanding.- timeline of key events in history. History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	
<p>Week 5 30/9</p>	<p>Can we make our own wigglerobot?</p>		<p>Y3 Literacy Iron Man- narrative reading as a writer, box up text, innovate by inventing their own robot, focused writing on description of their character. Grammar focus Vary long and short sentences: Long sentences to add description or information. Short sentences for emphasis and making key points e.g. Sam was really unhappy. Visit the farm now Numeracy addition and subtraction Science computing introduction to Scratch junior - movinga around the screen Art watercolour - making tones and tints PSHE when things go wrong Forest School History/Geography PE RE ell stories told by Jesus about what God is like: Labourers in the Vineyard (Matthew 20),</p> <p>Y4 Literacy - Model Writing activity - supported by adults and peers to write an explanation text with all the desired features. Numeracy - Addition and Subtractions. Science - Electronics / Computing Art sketching - figures in perspective Religion - Focus on Food and Fasting topic. 'Feasting' PSHE Forest School History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	
<p>Week 6 7/10</p> <p>Assessment week: STAR test NEFER reading NEFER maths</p>	<p>Can We develop our own virtual game?</p>		<p>Literacy :Y3 Iron Man- narrative hot write their own extended robot invasion story- talk the story through, drama still pictures for beginning middle and end. Story map. Grammar focus 5 story parts: Introduction –should include detailed description of setting or characters Build-up –build in some suspense towards the problem or dilemma Problem / Dilemma –include detail of actions / dialogue Resolution - should link with the problem Ending – clear ending should link back to the start, show how the character is feeling, how the character or situation has changed from the beginning.</p> <p>Numeracy addition and subtraction Science/computing - introduction to scratch junior, make a simple maze game Art- watercolour backgrounds sky and horizon PSHE responsibilities Forest School History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE -</p>	

			<p>RE Tell stories told by Jesus about what God is like: The Rich Fool (Luke 12)</p> <p>Y4 Literacy - Introduce independent idea. Children draw and design own Robot before writing an explanation text about their Robot. Plan independent writing with boxing up activity, mind maps and success criteria. Children complete independent writing followed by reviewing and assessing their writing. Numeracy - Addition and Subtraction Science - Electronics / Computing Art sketching - sketching 3D shapes to link to our robot. Religion - Focus on Food and Fasting topic. 'Food for celebrating' Links to harvest festival. Links to songs and performances celebrating harvest festival. History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	
<p>Week 7 14/10</p> <p>Harvest Festival</p>	Can we develop our maze game?		<p>Y3 Iron Man- narrativ hot write their own extended robot invasion story using checklist devised from toolkit. Peer mark and redraft. Punctuation focus inverted commas. Writing Diary Literacy Numeracy addition and subtraction Science / computing add own features to maze game to personalise Art - devising scene and sketching ideas for biblical epic illustration in style of John Martin PSHE harvest around the world Forest School History/Geography PE Pilates RE can explain where Nazareth is and who Mary and Joseph were.</p> <p>Y4 Literacy - Assess our writing, redraft and improve. Highlight areas to focus on. Special books writing Numeracy - Multiplication and Division. Science Electronics / Computing Art - sketching 3D shapes to link to our robot. Religion - Focus on Food and Fasting topic. 'Food for celebrating' Links to harvest festival. Links to songs and performances celebrating harvest festival. History/Geography - Technological revolution - Chronological understanding.- timeline of key events in history. PE - Pilates: Monday 2:15 - 3:00</p>	
<p>Week 8 4/11</p>			<p>Y3 Literacy Instructions WAGOLL - how to work my robot vacuum cleaner. Learn text. Explore imperative verbs and how they work in sentences, develop lists of imperative verbs, how do statements differ from orders? Numeracy addition and Subtraction Science Art plan out sketch using perspective lines Religion - Focus on Christianity. PSHE pride Forest School History/Geography PE RE christianity - what do we know about Christianity?</p> <p>Y4 Literacy - 2 week newspaper reports. Focus - School Experiences. Ian Wylie support with reports. Numeracy - Multiplication and Division Science Electronics / Computing Art - paint in background using wash Religion - Focus on Christianity. History/Geography - countries using advanced robots. PE Gymnastics</p>	
<p>Week 9 11/11</p>			<p>Y3 Literacy instructions, read as a writer and develop toolkit. Write set of instructions for their own robot. Focus More specific / technical vocabulary to add detail Improve and redraft Numeracy multiplication and division. Science Art - paint in figures and add in tints and tones PSHE feelings</p>	

			<p>Forest School History/Geography PE RE explain the journey Mary and Joseph went on to Bethlehem. explain where Jesus was born and why he was born there.</p> <p>Y4 Literacy - 2 week newspaper reports. Focus - School Experiences. Ian Wylie support with reports. Numeracy - Multiplication and Division Science - Electronics / Computing Art - painting - developing brush strokes. Religion - Focus on Christianity. History/Geography - countries using advanced robots. PE Gymnastics</p>	
Week 10 18/11			<p>Y3 Literacy Narrative read Gussie the robot (Pie Corbett) internalise text, devise actions, warm up the text - moving as robots, giving instructions developing vocabulary and wow words. Read as a reader look for adverb starters to add detail e.g. Carefully, she crawled along the floor Numeracy multiplication and division Science Art complete biblical painting and evaluate PSHE express yourself Forest School History/Geography PERE explain how the shepherds heard about Jesus' birth and the message they told Mary and Joseph.</p> <p>Y4 Literacy - Focus on Frank Einstein Antimatter Motor text. Discuss characters, describe their appearance and personalities. Klink and Klank were made out of household devices. Which 3 devices would you use to create your robot? Draw your robot. Numeracy - Multiplication and Division Science - Electronics / Computing Art painting - developing brush strokes. Religion - Focus on Christianity. History/Geography - countries using advanced robots. PE Gymnastics</p>	
Week 11 25/11			<p>Y3 Literacy Narrative Gussie the robot (Pie Corbett) box up text and identify 5 part story - use to map out text. Focus: Powerful verbs e.g. stare, tremble, slither Numeracy multiplication and division Science Art PSHE know your mind Forest School History/Geography PERE retell the story of the wise men.</p> <p>Y4 Literacy - Focus on writing a narrative - What might your robot get up to? What type of story will yours be? Grammar games and T4W text. Numeracy - multiplication and division Science - Electronics / Computing Art Painting .Exploring different effects on wet, dry and textured paper. Religion - Focus on Christianity. History/Geography - countries using advanced robots. PE Gymnastics</p>	
Week12 2/12			<p>Y3 Literacy Narrative Gussie the robot (Pie Corbett) innovate and add their own characters and disaster following the same structure. Focus - '-ing' clauses as starters e.g. Sighing, the boy finished his homework. Grunting, the pig lay down to</p>	

			<p>sleep. Numeracy multiplication and division Science Electricity Art PSHE media wise Forest School History/Geography- countries using advanced robots. PERE explain why King Herod wanted to find Jesus and how Jesus managed to stay safe.</p> <p>Y4 Literacy - features of a narrative. Reading a range of robot short stories. Numeracy - multiplication and division Science Electronics / Computing Art <i>Finding out how different materials behave and react with each other.</i> Religion - Focus on Christianity. History/Geography - countries using advanced robots. PE Gymnastics</p>	
<p>Week 13 9/12</p> <p>Assessment Week STAR Reading Assessments. NFER Maths NFER Reading 12.12.19</p>			<p>Y3 Literacy descriptive poetry - robot description. Play poetry sentences picking two adjectives and a noun. Extend vocab to describe what a robot looks like, how it moves, what it does. What is it thinking and feeling? Numeracy consolidation Science Art PSHE making it right Forest School History/Geography PERE</p> <p>Y4 Literacy Writing our narrative story about our robot. Self assess and peer assess. Redraft. Numeracy - Multiplication and Division Science Electricity Art <i>The pupils do an experimentation with different painting techniques, materials and types of paint.</i> Religion - Focus on Christianity. History/Geography - - countries using advanced robots. PE Gymnastics</p>	
<p>Week 14 16/12</p>			<p>Y3 Literacy poetry write and revise poems, extend adjectives and adverbs through thesaurus work Numeracy consolidation Science Art PSHE Forest School History/Geography PE RE</p> <p>Y4 Literacy Writing our narrative story about our robot. Self assess and peer assess. Redraft. Numeracy - Multiplication and Division Science Electricity Art <i>The pupils do an experimentation with different painting techniques, materials and types of paint.</i> Religion - Focus on Christianity. History/Geography - - countries using advanced robots. PE Gymnastics</p>	