

	Year 7	Year 8	Year 9
<b>Computer Science</b>	<p><b>Algorithms-</b> unplugged activity            Robot to create shapes: using <b>design, make, test, evaluate cycle</b>            Assessment- producing own algorithms based on sequence and problem solving            Spring Term 2.2            Algorithm, problem-solving using Python            Turtle: using <b>design, make, test, evaluate cycle</b>            Assessment- practical skills showing Python turtle</p> <p>Programming using Click Team Fusion            Assessment- <b>design, make, test, evaluate cycle</b></p> <p>3D and <b>CAD designing- use of CAD software to design and use 3D printers to create.</b>            Use <b>Design, create, test evaluate cycle</b></p> <p><b>Physically computing:</b> students to build Arduino to <b>create</b> interactive <b>electronic objects:</b> use of breadboards and LED lights. <b>Design, create, test evaluate cycle</b></p>	<p>Python programming - PRIMM            Assessment Python- practical assessment on creating a GUI or Chat bot: <b>design, make, test, evaluate cycle</b></p> <p>Pygame: <b>design, make, test, evaluate cycle</b>            Assessment- producing a game</p> <p>3D and <b>CAD designing- use of CAD software to design and use 3D printers to create.</b>  <b>Use Design, create, test evaluate cycle</b></p> <p><b>Physically computing:</b> students to build Arduino to <b>create</b> interactive <b>electronic objects:</b> use of breadboards and LED lights.  <b>Design, create, test evaluate cycle</b></p>	<p>Computation thinking using Python: <b>design, make, test, evaluate cycle</b> Assessment- practical Python tasks</p> <p>Data Representation of graphics            Assessment- creating a game in Click Team Fusion based on a Retro Theme: <b>design, make, test, evaluate cycle</b></p> <p>3D and <b>CAD designing- use of CAD software to design and use 3D printers to create.</b>  <b>Use Design, create, test evaluate cycle</b></p> <p><b>Physically computing:</b> students to build Arduino to <b>create</b> interactive <b>electronic objects:</b> use of breadboards and LED lights. <b>Design, create, test evaluate cycle</b></p>
<b>Maths</b>	<p><b>Geometry:</b>            Using mathematical tools to <b>create</b> and <b>evaluate</b> accurate angles.  <b>Create</b> Scaled Drawings using appropriate scales  <b>Design</b> 3D models and <b>create</b> Plans and Elevations</p>	<p><b>Geometry:</b>  <b>Create</b> nets from 3D Models  <b>Create</b> and <b>design</b> Scaled Drawings linking with ratios</p>	<p><b>Geometry</b>            Using mathematical tools to <b>create</b> and <b>evaluate</b> accurate angles.  <b>Create</b> accurate mathematical constructions &amp; Loci  <b>Create</b> Scaled Drawings using appropriate scales            Triangle construction  <b>Number:</b>            Converting measurements</p>

	<p><b>Evaluate</b> the relationship between Volume and 3D models</p> <p><b>Statistics:</b></p> <p><b>Evaluate</b> data using Mathematical Modelling</p>		
<b>Science</b>	<p><b>Motion</b></p> <p><b>Design</b> a vehicle that will travel at high speed.</p> <p><b>Forces</b></p> <p><b>Design</b> an experiment to test the effects of friction. <b>Evaluate</b> the experimental design.</p> <p><b>Energy Transfers</b></p> <p><b>Evaluate</b> the effectiveness of different insulating materials.</p> <p><b>Design</b> an effective insulation system for a house.</p> <p><b>Make</b> an insulator using materials available to keep a liquid warm.</p>	<p><b>Electricity</b></p> <p><b>Design</b> a lighting circuit suitable for a house.</p> <p><b>The Digestive System</b></p> <p><b>Design</b> a nutritious food bar containing the correct percentages of nutrients.</p> <p><b>Evaluate</b> the likelihood of people purchasing such a bar, considering cost, flavour and alternatives.</p> <p><b>Space</b></p> <p><b>Design</b> a suitable space habitat for explorers visiting mars.</p> <p><b>Create</b> an aerodynamic rocket for launch and parachute to land.</p> <p><b>Inheritance and Evolution</b></p> <p><b>Evaluate</b> the impact of selective breeding on consumer choice and animal welfare or farming practices.</p>	<p><b>Models of the Atom</b></p> <p><b>Evaluate</b> the experiment used by Rutherford to disprove the plum pudding model of the atom.</p> <p><b>Electricity</b></p> <p><b>Design</b> a system to activate a light or heater depending on environmental conditions.</p>
<b>Art and Design</b>	<p>Line: <b>Create</b> a range of line drawings using various techniques e.g. continuous, blind, contour, etc.</p> <p>Learn how to create lines with and without intention to develop artistic thinking</p> <p><b>Develop</b> and <b>evaluate</b> experiments using line</p> <p>Tone: <b>Create</b> a range of tonal artworks showing an understanding of what variational and gradual tone is</p>	<p>Balance: <b>Create</b> a range of artworks showing an understanding of what balance in art is</p> <p>Develop and <b>evaluate</b> experiments using balance as a theme</p> <p><b>Recreate</b> 'The Starry Night' by Van Gogh to replicate the balance in the painting</p> <p>Contrast: Develop and <b>evaluate</b> experiments using a variety of mixed medias and materials</p> <p>Research and <b>create</b> interesting artist sketchbook pages</p> <p><b>Create</b> final piece inspired by chosen artist</p>	<p>Model-Making: <b>Create</b> observational drawings of various modern, brutalist and futuristic buildings from secondary images</p> <p>Research artists and architects that create highly-detailed 2D images and 3D structures of buildings</p> <p><b>Create</b> interesting artist research pages that develop understanding of 3D model making and construction</p> <p><b>Create</b> illustrations and plans for how to build a 3D model building</p> <p><b>Create</b> final piece using a variety of mixed medias and materials</p>

	<p><b>Develop</b> and <b>evaluate</b> experiments using tone</p> <p>Shape and Form: <b>Develop</b> and <b>evaluate</b> experiments using shape (2D and 3D) Research sculpture artists that create large scale artwork (both in galleries and in public spaces)</p> <p><b>Create</b> a maquette of your sculpture showing form and <b>evaluate</b></p>	<p>Emphasis: <b>Create</b> a range of artworks showing an understanding of what emphasis in art is (look at 3D drawings/vector drawings of names)</p> <p>Develop and <b>evaluate</b> experiments using a variety of mixed medias and materials</p>	<p>GCSE Taster: 6-week carousel Art&amp; Design Workshops programme</p> <p>Weekly presentation on following 6 arts areas: painting, sculpting, drawing, animation, photography and filmmaking and design</p>
<p><b>Food and Nutrition</b></p>	<p><b>Design, make</b> and <b>evaluate</b> snack products</p> <p>Research, <b>design, make</b> and <b>evaluate</b> traditional British food products</p> <p>Design project-<b>Design, make</b> and <b>evaluate</b> a handheld snack product that could be sold in a school canteen</p>	<p><b>Design, make</b> and <b>evaluate</b> balanced lunch products</p> <p><b>Design, make</b> and <b>evaluate</b> cultural food products</p> <p><b>Design, make</b> and <b>evaluate</b> seasonal food products</p> <p>Design project-<b>Design, make</b> and <b>evaluate</b> a packed lunch product aimed at Year 6 students</p>	<p><b>Design, make</b> and <b>evaluate</b> balanced meals for teenagers</p> <p>Design project-<b>Design, make</b> and <b>evaluate</b> a balanced pasta product for a teenager</p>