



# APHS CURRICULUM AND ASSESSMENT PLAN

Design & Technology 2021-22

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## Year 7 – Assessment Plan

Term	Unit	Topics	Dates
Autumn 1	<b>Paper &amp; boards: Graphics – Typography - Business Card</b>	Intro to workshop & H&S rules. Intro to typography: Design a business card focusing on use of fonts and illustrations (e.g. Google Doodles) to communicate meaning	w/b Mon 6 <sup>th</sup> Sept 2021 – Wed 20 <sup>th</sup> Oct 2021
Assessment 1 Submission: Baseline Assessment			Sept
Assessment 1 Feedback			Sept
Autumn 2	<b>Paper &amp; boards: Graphics - Pop-up Card/Calendar using paper engineering</b>	Design & make project focusing on properties of paper & boards, graphics, paper mechanisms and assembly skills.	w/b Mon 1 <sup>st</sup> Nov 2021 – Thurs 16 <sup>th</sup> Dec 2021
Assessment 2 Submission: Peer Assessment			Dec
Assessment 2 Feedback			Dec
Spring 1	<b>CORE UNIT: CAD/CAM: Laser cut Polymer (Acrylic) earphone wrap</b>	Intro to types of plastics/properties. Intro to CAD/CAM Learn to use INKSCAPE software to create artwork for laser cutting.	w/b Tue 4 <sup>th</sup> Jan 2022 – Fri 11 <sup>th</sup> Feb 2022
Assessment 3 Submission N/A			
Assessment 3 Feedback			
Spring 2	<b>Polymers: Acrylic earphone wrap artwork and packaging</b>	Design & make wrap focusing on iterative design process, modelling & physical testing. Intro to purpose of packaging: Design logo & packaging using INKSCAPE.	w/b Mon 21 <sup>st</sup> Feb 2022 – Fri 1 <sup>st</sup> Apr 2022
Assessment 4 Submission: End of Unit Assessment			Mar
Assessment 4 Feedback			Mar
Summer 1	<b>Timbers: wooden Block Bot</b>	Intro types of timbers/properties. Recap H&S in workshop. Skills: measuring, marking out and use of hand tools. Introduction to working with close tolerances, quality control (QC), orthographic drawings.	w/b Tue 19 <sup>th</sup> Apr 2022 – Fri 27 <sup>th</sup> May 2022
Assessment 5 Submission N/A			
Assessment 5 Feedback			
Summer 2	<b>Timbers: wooden Block Bot</b>	Recap H&S, complete Block Bot using workshop tools and machinery Skills: sawing, drilling, sanding, finishing. Evaluate final product against orthographic to check tolerances	w/b Mon 6 <sup>th</sup> Jun 2022 – Fri 22 <sup>nd</sup> July 2022
Assessment 6 Submission: End of Unit Assessment			July
Assessment 6 Feedback			July



## Year 8 – Assessment Plan

Term	Unit	Topics	Dates
Autumn 1	<b>CORE UNIT: COMMUNICATING DESIGN IDEAS: 2D &amp; 3D drawing skills</b>	Lego themed drawing skills: 2D & 3D sketching, orthographic, isometric, perspective and exploded drawings	w/b Mon 6 <sup>th</sup> Sept 2021 – Wed 20 <sup>th</sup> Oct 2021
Assessment 1 Submission: Baseline Drawing Assessment			Sept
Assessment 1 Feedback			Sept
Autumn 2	<b>CORE UNIT: COMMUNICATING DESIGN IDEAS: 3D physical modelling</b>	Use of orthographic drawing to make Lego card model in teams.	w/b Mon 1 <sup>st</sup> Nov 2021 – Thurs 16 <sup>th</sup> Dec 2021
Assessment 2 Submission: Sketching Challenge			Dec
Assessment 2 Feedback			Dec
Spring 1	<b>CORE UNIT: CAD/CAM: 3D virtual modelling</b>	Introduction to TinkerCAD and advantages & disadvantages of CAD/CAM focusing on 3D printing. Learn to use TinkerCAD software to create model for 3D printing.	w/b Tue 4 <sup>th</sup> Jan 2022 – Fri 11 <sup>th</sup> Feb 2022
Assessment 3 Submission N/A			
Assessment 3 Feedback			
Spring 2	<b>CORE UNIT: CAD/CAM: 3D virtual modelling</b>	Complete Lego CAD modelling challenge to create own Lego themed promotional gift (USB/ Key ring) to be 3D printed.	w/b Mon 21 <sup>st</sup> Feb 2022 – Fri 1 <sup>st</sup> Apr 2022
Assessment 4 Submission: End of unit Assessment			Mar
Assessment 4 Feedback			Mar
Summer 1	<b>Mechanical systems - gear trains, pulleys and drive mechanisms</b>	Use of forms of movement: linear & rotary, gear trains, pulleys and drive mechanisms, levers, cams & followers to collaborate in designing and making card based automata.	w/b Tue 19 <sup>th</sup> Apr 2022 – Fri 27 <sup>th</sup> May 2022
Assessment 5 Submission			
Assessment 5 Feedback			
Summer 2	<b>Automata with slot-together characters</b>	Applying knowledge of types of motion, cams and followers to design and make a moving toy/automata with at least 3 cams using card modelling skills	w/b Mon 6 <sup>th</sup> Jun 2022 – Fri 22 <sup>nd</sup> July 2022
Assessment 6 Submission: End of Unit Assessment			July
Assessment 6 Feedback			July



## Year 9 – Assessment Plan

Term	Unit	Topics	Dates
Autumn 1	<b>CORE UNIT: COMMUNICATING DESIGN IDEAS: 2D &amp; 3D drawing skills</b>	Lego themed drawing skills: 2D & 3D sketching, orthographic, isometric, perspective and exploded drawings	w/b Mon 6 <sup>th</sup> Sept 2021 – Wed 20 <sup>th</sup> Oct 2021
Assessment 1 Submission: Baseline Drawing Assessment			Sept
Assessment 1 Feedback			Sept
Autumn 2	<b>CORE UNIT: COMMUNICATING DESIGN IDEAS: 3D physical modelling</b>	Use of orthographic drawing to make Lego card model in teams.	w/b Mon 1 <sup>st</sup> Nov 2021 – Thurs 16 <sup>th</sup> Dec 2021
Assessment 2 Submission: Sketching Challenge			Dec
Assessment 2 Feedback			Dec
Spring 1	<b>CORE UNIT: CAD/CAM: 3D virtual modelling</b>	Introduction to TinkerCAD and advantages & disadvantages of CAD/CAM focusing on 3D printing. Learn to use TinkerCAD software to create model for 3D printing.	w/b Tue 4 <sup>th</sup> Jan 2022 – Fri 11 <sup>th</sup> Feb 2022
Assessment 3 Submission N/A			
Assessment 3 Feedback			
Spring 2	<b>CORE UNIT: CAD/CAM: 3D virtual modelling</b>	Complete Lego CAD modelling challenge to create own Lego themed promotional gift (USB/ Key ring) to be 3D printed.	w/b Mon 21 <sup>st</sup> Feb 2022 – Fri 1 <sup>st</sup> Apr 2022
Assessment 4 Submission: End of unit Assessment			Mar
Assessment 4 Feedback			Mar
Summer 1	<b>Textiles: Ugly Doll/ Monster toy using recycled materials</b>	Intro to textiles/properties Natural/Synthetic fibres. Sustainability & identifying fabrics. Hand-stitching/machine sewing	w/b Tue 19 <sup>th</sup> Apr 2022 – Fri 27 <sup>th</sup> May 2022
Assessment 5 Submission			
Assessment 5 Feedback			
Summer 2	<b>Textiles: Ugly Doll/ Monster toy using recycled materials</b>	Design and make own Ugly Doll/ Worry Monster selecting fabrics & using hand-stitching/machine sewing	w/b Mon 6 <sup>th</sup> Jun 2022 – Fri 22 <sup>nd</sup> July 2022
Assessment 6 Submission: End of Unit Assessment			July
Assessment 6 Feedback			July



## Year 10 – Assessment Plan

Term	Unit	Topics	Dates
Autumn 1	<b>New &amp; Emerging Technologies</b>	<ul style="list-style-type: none"> <li>Industry &amp; Automation</li> <li>Enterprise</li> <li>Sustainability &amp; LCA</li> <li>Scales of Production</li> <li>CAD/CAM</li> <li>People &amp; Society</li> <li>Design Decisions</li> </ul>	w/b Mon 6 <sup>th</sup> Sept 2021 – Wed 20 <sup>th</sup> Oct 2021
Assessment 1 Submission: <b>Unit Paper 1</b>			<b>w/b 1<sup>st</sup> Nov 2021</b>
Assessment 1 Feedback			w/b 1 <sup>st</sup> Nov 2021
Autumn 2	<b>Energy, Materials &amp; Systems</b>	<ul style="list-style-type: none"> <li>Energy Generation &amp; Storage</li> <li>Smart &amp; Modern Materials</li> <li>Composite Materials</li> <li>Electronic Systems</li> <li>Mechanical Systems (types of movement, levers &amp; linkages, gears, pulleys, cams and followers)</li> </ul>	w/b Mon 1 <sup>st</sup> Nov 2021 – Thurs 16 <sup>th</sup> Dec 2021
Assessment 2 Submission: <b>Unit Paper 2</b>			<b>w/b 4<sup>th</sup> Jan 2022</b>
Assessment 2 Feedback			w/b 4 <sup>th</sup> Jan 2022
Spring 1	<b>Papers &amp; Boards</b> (specialist material)	<ul style="list-style-type: none"> <li>Material Properties</li> <li>Types of Papers &amp; Boards</li> <li>Sources &amp; Manufacture</li> <li>Printing Processes</li> <li>Print Finishes &amp; Treatments</li> <li>Die-cutting</li> <li>Binding &amp; Standard Components</li> </ul>	w/b Tue 4 <sup>th</sup> Jan 2022 – Fri 11 <sup>th</sup> Feb 2022
Assessment 3 Submission: <b>Unit Paper 3</b>			<b>w/b 21<sup>st</sup> Feb 2022</b>
Assessment 3 Feedback			w/b 21 <sup>st</sup> Feb 2022
Spring 2	<b>Timbers</b> (specialist material)	<ul style="list-style-type: none"> <li>Types of Timbers</li> <li>Forestry Management</li> <li>Manufactured Boards</li> <li>Working with Timbers</li> <li>Treatments &amp; finishes</li> </ul>	w/b Mon 21 <sup>st</sup> Feb 2022 – Fri 1 <sup>st</sup> Apr 2022
Assessment 4 Submission: <b>Unit Paper 4</b>			<b>w/b 19<sup>th</sup> April 2022</b>
Assessment 4 Feedback			w/b 19 <sup>th</sup> April 2022
Summer 1	<b>Metals, Polymers &amp; Textiles</b>	<ul style="list-style-type: none"> <li>Metals (Ferrous &amp; Non-ferrous) &amp; Alloys (Pewter Casting)</li> <li>Polymers (Thermoforming &amp; Thermosetting)</li> <li>Textiles (Natural &amp; Synthetic Fibres)</li> </ul>	w/b Tue 19 <sup>th</sup> Apr 2022 – Fri 27 <sup>th</sup> May 2022
Assessment 5 Submission: <b>Unit Paper 5</b>			<b>w/b 6<sup>th</sup> June 2022</b>
Assessment 5 Feedback			w/b 6 <sup>th</sup> June 2022



Summer 2	<b>Designing &amp; Making Principles</b> (Mock NEA)	<ul style="list-style-type: none"><li>▪ Investigating (Primary &amp; Secondary Research)</li><li>▪ Product Analysis</li><li>▪ Ergonomics &amp; Anthropometrics</li><li>▪ The Work of Others</li><li>▪ Brief &amp; Specification</li><li>▪ Drawing Techniques</li><li>▪ Prototyping &amp; Modelling</li></ul>	w/b Mon 6 <sup>th</sup> Jun 2022 – Fri 22 <sup>nd</sup> July 2022
Assessment 6 Submission: <b>End of Year 10 Exam</b>			<b>w/b Mon 20<sup>th</sup> Jun 2022</b>
Assessment 6 Feedback			w/b Mon 4 <sup>th</sup> July



## Year 11 – Assessment Plan

Term	Unit	Topics	Dates
Autumn 1	<b>NEA Coursework</b> <b>Section A:</b> Identifying & investigating design possibilities (10 marks)	Context Analysis Identifying the Problem Client/User Needs Existing Products Work of Others Technical Research Environment/ Social Issues	w/b Mon 6 <sup>th</sup> Sept 2021 – Wed 20 <sup>th</sup> Oct 2021
Assessment 1 Submission: <b>WAVE 1 TRIAL EXAM PAPER</b>			<b>November 4<sup>th</sup> 2021</b>
Assessment 1 Feedback			w/b Nov 22 <sup>nd</sup> 2021
Autumn 2	<b>NEA Coursework</b> <b>Section B:</b> Producing a design brief & specification (10 marks)	Research Analysis Design Brief Specification	w/b Mon 1 <sup>st</sup> Nov 2021 – Thurs 16 <sup>th</sup> Dec 2021
Assessment 2 Submission: <b>NEA SECTION A &amp; B</b>			w/b 13 <sup>th</sup> Dec 2021
Assessment 2 Feedback: <b>NEA CHECKLIST 1</b>			w/b 13 <sup>th</sup> Dec 2021
Spring 1	<b>NEA Coursework</b> <b>Section C:</b> Generating Design Ideas (20 marks)  <b>Section D:</b> Developing Design Ideas (20 marks)	Initial ideas Develop Designs Model Ideas Review ideas  Further Design Development Research & Testing Modelling & Feedback Final Design Technical Drawings Parts List	w/b Tue 4 <sup>th</sup> Jan 2022 – Fri 11 <sup>th</sup> Feb 2022
Assessment 3 Submission: <b>WAVE 2 TRIAL EXAM PAPER</b>			<b>February 24<sup>th</sup> 2022</b>
Assessment 3 Feedback			w/b Mar 7 <sup>th</sup> 2022
Spring 2	<b>NEA Coursework</b> <b>Section E:</b> Realising Design Ideas (20 marks)  <b>NEA Section F:</b> Analysing & evaluating (20 marks)	Record of manufacturing Final prototype  User testing Specification Modifications Final Checks	w/b Mon 21 <sup>st</sup> Feb 2022 – Fri 1 <sup>st</sup> Apr 2022
Assessment 4 Submission: <b>NEA COURSEWORK DEADLINE</b>			<b>March 31<sup>st</sup> 2022</b>
Assessment 4 Feedback			w/b April 25 <sup>th</sup> 2022
Summer 1	Exam Preparation	Revision & Exam Skills	w/b Tue 19 <sup>th</sup> Apr 2022 – Fri 27 <sup>th</sup> May 2022
Assessment 5 Submission: <b>PRACTICE PAPER 3</b>			<b>w/b Mon 25<sup>th</sup> Apr 2022</b>
Assessment 5 Feedback			w/b Mon 25 <sup>th</sup> Apr 2022



Summer 2	Exam Preparation	Revision & Exam Skills	w/b Mon 6 <sup>th</sup> Jun 2022 – Fri 22 <sup>nd</sup> July 2022
Assessment 6 Submission: <b>PRACTICE PAPER 4</b>			<b>w/b Mon 9<sup>th</sup> May 2022</b>
Assessment 6 Feedback			w/b Mon 9 <sup>th</sup> May 2022

**Date of Final Exam:** Wednesday 15<sup>th</sup> June 2022 PM (2 hours)