



North Durham Academy – Engineering Curriculum 2022-23

 NORTH DURHAM ACADEMY	DT Rotation 1	DT Rotation 2	DT Rotation 3	DT Rotation 4
Year 7	Food preparation and nutrition: Bronze level chef de partie	Design & make task Maze / Keyring	Design & make task Pop up card	Coding micro bit / Robots.
Year 8	Food preparation and nutrition: Silver level Executive Chef	Design & make task Picture frame	Design & make task Action figure design	Design & make task Coat hook
Year 9	Food preparation and nutrition: Gold Level	Design & make task Joining cor- ner box	Design & make task Speaker	Multi-Cultural Cuisines

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 NORTH DURHAM ACADEMY	Autumn Term		Spring Term		Summer Term	
	Practical Activity	Theory Focus	Practical Activity	Theory Focus	Practical Activity	Theory Focus
Year 10	<p>Multitool</p> <ul style="list-style-type: none"> -Disassemble & researching existing product. -Planning for manufacture -understanding a working drawing -Steel fabrication and workshop practice <p>Phone holder</p> <ul style="list-style-type: none"> -Redesigning a product -Orthographic drawing Manufacturing using aluminium -Product evaluation 	<p>Braking exam question - Testing Friction.</p> <ul style="list-style-type: none"> -Making predictions -Devising and carrying out a suitable test. -Recording results. <p>Exam question – Wire tensioner</p> <ul style="list-style-type: none"> -Product evaluation -Product development -Planning for manufacture <p>Research – Engineering sectors.</p> <ul style="list-style-type: none"> -learning about the different engineering sectors. -Learning how different engineering companies collaborate on projects 	<p>Plug</p> <ul style="list-style-type: none"> -Disassembly & reassembly of a plug. -Product evaluation of a plug. -manufacture 1 component of the plug to tolerance <p>Wooden puzzle</p> <ul style="list-style-type: none"> -Interpreting engineering drawing - Measuring and marking out within tolerance. -Shaping and forming Wooden products. - Finishing materials. 	<p>Helicopter cable exam question- Elasticity</p> <ul style="list-style-type: none"> -Making predictions -Devising and carrying out a suitable test. -Recording results. <p>Exam question – screw-driver holder</p> <ul style="list-style-type: none"> Product evaluation -Product development -Planning for manufacture <p>Paper modeling – Bridge</p> <ul style="list-style-type: none"> -Creative design -Problem solving -Collaboration 	<p>Aluminum bridge</p> <ul style="list-style-type: none"> -Problem solving -Material selection. -manufacturing structures form aluminum. -Collaboration during manufacture. 	<p>Clock exam question - pendulum</p> <ul style="list-style-type: none"> -Making predictions -Devising and carrying out a suitable test. -Recording results. <p>Exam question -Cable storage</p> <ul style="list-style-type: none"> Product evaluation -Product development -Planning for manufacture <p>Paper modeling – Tower</p> <ul style="list-style-type: none"> -Creative design -Problem solving -Collaboration

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Year 11	<p style="text-align: center;">NEA Unit 1</p> <ul style="list-style-type: none"> -Understanding engineering drawings -Planning Manufacturing -Using engineering tools and equipment -implementing the engineering processes. 		<p style="text-align: center;">NEA Unit 2</p> <ul style="list-style-type: none"> -Understanding and meeting requirements. -Proposing design solutions. -Communicating an engineered design solution. -Solving engineering problems. 			<p style="text-align: center;">Exam revision for Unit 3</p> <ul style="list-style-type: none"> -understanding the effects of engineering achievements -understanding the properties of engineering materials. -understanding methods of preparation, forming, joining and finishing of engineering materials. -Solving engineering problems.
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