

Year 7	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Crazy Creature Project	Crazy Creature Project	CAD CAM String Puppet Project	CAD CAM String Puppet Project	Graphics Skills Project	Graphics Skills Project
Prior knowledge (from previous year/ key stage).	Knowledge of tools and equipment along with knowledge of materials from KS2	Knowledge of tools and equipment along with knowledge of materials from KS2	Knowledge of Design cycle and basic CAD from KS2	Knowledge of Design cycle and basic CAD from KS2	Knowledge of Design skills and understanding of how designs are generated from KS2	Knowledge of Design skills and understanding of how designs are generated from KS2
Key skills	Students will: Gain workshop tools and equipment knowledge Be introduced and take part in workshop health and safety training Develop measuring and marking out skills	Students will: Gain workshop tools and equipment knowledge Be introduced and take part in workshop health and safety training Develop measuring and marking out skills	Students will: Develop an understanding of how CAD software is used to create designs. Develop an understanding of how CAM machines are used to manufacture components for products. Develop an understanding of how Laser cutters run and work.	Students will: Develop an understanding of how CAD software is used to create designs. Develop an understanding of how CAM machines are used to manufacture components for products. Develop an understanding of how Laser cutters run and work.	Students will: Develop an understanding of how designs are composed Develop an understanding of Engineering design Develop Drawing skills needed to create quality design work	Students will: Develop an understanding of how designs are composed Develop an understanding of Engineering design Develop Drawing skills needed to create quality design work
Assessment	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.
Reading Pledge	• KS3 Design and Technology Dictionary. By Peter Bull • Working with Timber. By ANON • Building with Second hand stuff; How to reclaim, revamp, repurpose, and reuse salvaged and leftover	• KS3 Design and Technology Dictionary. By Peter Bull • Working with Timber. By ANON • Building with Second hand stuff; How to reclaim, revamp, repurpose, and reuse salvaged and leftover	• KS3 Design and Technology Dictionary. By Peter Bull • Working with Timber. By ANON • Building with Second hand stuff; How to reclaim, revamp, repurpose, and reuse salvaged and leftover	• KS3 Design and Technology Dictionary. By Peter Bull • Working with Timber. By ANON • Building with Second hand stuff; How to reclaim, revamp, repurpose, and reuse salvaged and leftover	• KS3 Design and Technology Dictionary. By Peter Bull • Working with Timber. By ANON • Building with Second hand stuff; How to reclaim, revamp, repurpose, and reuse salvaged	• KS3 Design and Technology Dictionary. By Peter Bull • Working with Timber. By ANON • Building with Second hand stuff; How to reclaim, revamp, repurpose, and reuse salvaged

	building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	and leftover building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae Graphic Design For Everyone: Understand the Building Blocks so You can Do It Yourself	and leftover building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae Graphic Design For Everyone: Understand the Building Blocks so You can Do It Yourself
How can you help?	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSq	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSq

Year 8	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Cubee Project	Cubee Project	CAD CAM LED Desk lamp Porject	CAD CAM LED Desk lamp Porject	Graphics Project	Graphics Project
Prior knowledge (from previous year/ key stage)	Practical workshop skills from year 7	Practical workshop skills from year 7	CAD CAM Skills from year 7	CAD CAM Skills from year 7	Graphics skills from year 7	Graphics skills from year 7
Key skills	Students will: Identify types of materials and how these materials are manufactured. Identify tools and equipment and how these are used in manufacturing processes. Develop making skills to create a practical outcome.	Students will: Identify types of materials and how these materials are manufactured. Identify tools and equipment and how these are used in manufacturing processes. Develop making skills to create a practical outcome.	Students will: Explore the use of sustainable materials and how these materials are used in the making of new products and why this is essential for the planet. Develop their skills in CAD to design components to fit specified tolerances for the project they are manufacturing. Understand how CAD files are prepared to be sent to CAM machines to manufacture components.	Students will: Explore the use of sustainable materials and how these materials are used in the making of new products and why this is essential for the planet. Develop their skills in CAD to design components to fit specified tolerances for the project they are manufacturing. Understand how CAD files are prepared to be sent to CAM machines to manufacture components.	Students will: Explore drawing styles and skills to develop design ideas Develop understanding of isometric drawing, perspective drawing and orthographic drawings. Develop an understanding of graphic design concepts	Students will: Explore drawing styles and skills to develop design ideas Develop understanding of isometric drawing, perspective drawing and orthographic drawings. Develop an understanding of graphic design concepts
Assessment	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.
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Year 9	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Sweet Dispenser Project	Sweet Dispenser Project	CAD CAM Robot Project	CAD CAM Robot Project	Graphics Project	Graphics Project
Prior knowledge (from previous year/ key stage)	Year 7 & 8 practical projects	Year 7 & 8 practical projects	Year 7 & 8 CAD CAM Projects	Year 7 & 8 CAD CAM Projects	Year 7 & 8 Graphics Projects	Year 7 & 8 Graphics Projects
Key skills/ powerful knowledge	Students will: Develop their manufacturing skills further to introduce a variety of materials to create a practical outcome. Develop their understanding of polymers and how these are used in product design and manufacture. Students will develop their understanding of tools and equipment to problem solve in the creation of their project.	Students will: Develop their manufacturing skills further to introduce a variety of materials to create a practical outcome. Develop their understanding of polymers and how these are used in product design and manufacture. Students will develop their understanding of tools and equipment to problem solve in the creation of their project.	Students will: Be introduced to a 3D CAD package and lead through tutorials on how this is used to create products. Develop their own designs and create a Robot in this online 3D modelling software. Develop an understanding of how 3D CAD files are prepared and sent to CAM machines for manufacture.	Students will: Be introduced to a 3D CAD package and lead through tutorials on how this is used to create products. Develop their own designs and create a Robot in this online 3D modelling software. Develop an understanding of how 3D CAD files are prepared and sent to CAM machines for manufacture.	Students will: Explore the use of graphical software to develop design ideas Be introduced to using Photoshop to develop and improve images when designing. Be introduced to using Illustrator to put together design ideas to create professional looking promotional posters.	Students will: Explore the use of graphical software to develop design ideas Be introduced to using Photoshop to develop and improve images when designing. Be introduced to using Illustrator to put together design ideas to create professional looking promotional posters.
Assessment	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.	Project work will be assessed using each section of the design cycle. Students will be assessed with an end of unit written test.
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	salvaged and leftover building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	revamp, repurpose, and reuse salvaged and leftover building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae	revamp, repurpose, and reuse salvaged and leftover building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae Graphic Design For Everyone: Understand the Building Blocks so You can Do It Yourself	revamp, repurpose, and reuse salvaged and leftover building materials. By Chris Peterson • Woodworking Manual. By Jackson Day • Choosing and using hand tools. By Andy Rae Graphic Design For Everyone: Understand the Building Blocks so You can Do It Yourself
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Year 10 Engineering Design	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Principles of Engineering design Skills for: R038 Examination unit	Principles of Engineering design Skills for: R038 Examination unit	Communicating Design Skills for: R039 NEA coursework		Communicating Design Skills for: R039 NEA coursework	Design, Evaluation and modelling Skills for: R040 NEA coursework
Prior knowledge (from previous year/ key stage)	KS3 – D&T project work KS3 – Engineering design and graphics project work	KS3 – D&T project work KS3 – Engineering design and graphics project work	KS3 – D&T project work KS3 – Engineering design and graphics project work	KS3 – D&T project work KS3 – Engineering design and graphics project work	KS3 – D&T project work KS3 – Engineering design and graphics project work	KS3 – D&T project work KS3 – Engineering design and graphics project work
Assessment objectives (specific skills and knowledge students are expected to demonstrate)	<u>OCR Cambridge National Engineering Design R038 Assessment Objectives:</u> Teaching content Assessment Guidance 1.1 • Students may be required to recommend a design strategy for a particular product and justify their choice. 1.2.1 • Students will need to be able to identify the key stages of the iterative design process and describe the stages involved in carrying out each process. 1.2.2 • Students will need to know how to analyse existing products using ACCESS FM. - Students will need to understand how the stages of the iterative design process allow the development of the design based on a cyclic process of designing, making, evaluating, and refining of the prototype. 2.1 - 2.3 • Students will need to know how to use ACCESS FM to produce an engineering design specification and knowledge of the scale of manufacture. - Students should know at least one example of a product produced by each scale of manufacture. - Students will need to know how designs are made sustainable through the consideration of the 6Rs, and should know at least one example of how a product is made sustainable by one of the 6Rs. - Students will need to be able to describe the influences on engineering product design. 3.1 • Students will need to know each of the engineering drawing techniques and may be expected to identify each of the conventions or representations stated. - Students may also be expected to add dimensions using the conventions to provided drawings. 4.2 • Students will need to describe at least one modelling method in the creation of a product prototype and give one example of a product produced using one of the modelling methods. <u>OCR Cambridge National Engineering Design R039 Assessment Objectives:</u> Task 1 • Students must be able to produce freehand sketches for a range of design ideas for their design proposals using rendering techniques: thick/thin lines; texture; shading and annotation to demonstrate the design. It would be highly unusual to see the same output from students in a cohort. - Ensure that students produce a range of design ideas and proposals that respond to					

	the specification provided, using both 2D and 3D techniques and utilise graphical communication methods to enhance their ideas. Task 2 • Students are required to develop one design proposal further using rendering techniques to present both 2D and 3D sketches. - Detailed annotation and labelling should be used to help describe the function, features, material choices, assembly methods etc. - Students should explain how their design meets the design specification provided. Task 3 • Students must be able to produce a 3rd angle orthographic drawing and an assembly drawing for a design proposal. They must use the correct standards and conventions. - Production of drawings refers to either the use of drawing boards or CAD software. - You should ensure that students produce a range of engineering drawings following standard conventions (BS 8888). - To demonstrate their design proposal, students should utilise a range of assembly drawing techniques. Task 4 • You should ensure that students use CAD software to produce formal presentation design proposals. - Students must include photographic evidence of their CAD work. - Students must demonstrate skill in using 3D CAD modelling					
Key skills	Manual production of freehand sketches Production of engineering drawings Use of computer aided design (CAD)	Manual production of freehand sketches Production of engineering drawings Use of computer aided design (CAD)	Manual production of freehand sketches Production of engineering drawings Use of computer aided design (CAD)	Designing processes. Design requirements. Communicating design outcomes. Communicating design outcomes. Communicating design outcomes.	Designing processes. Design requirements. Communicating design outcomes. Communicating design outcomes. Communicating design outcomes.	Designing processes. Design requirements. Communicating design outcomes. Communicating design outcomes. Communicating design outcomes.
Assessment	Knowledge quiz NEA Assessment criteria check sheets for each section covered	Knowledge quiz NEA Assessment criteria check sheets for each section covered	Knowledge quiz NEA Assessment criteria check sheets for each section covered		Knowledge quiz NEA Assessment criteria check sheets for each section covered	Knowledge quiz NEA Assessment criteria check sheets for each section covered
Reading Pledge	- The Essential Engineer: Why Science Alone Will Not Solve Our Global Problems - Sustainable Materials – With Both Eyes Open - The Gecko's Foot: How Scientists are Taking a Leaf from Nature's Book	- The Essential Engineer: Why Science Alone Will Not Solve Our Global Problems - Sustainable Materials – With Both Eyes Open - The Gecko's Foot: How Scientists are Taking a Leaf from Nature's Book	- The Essential Engineer: Why Science Alone Will Not Solve Our Global Problems - Sustainable Materials – With Both Eyes Open - The Gecko's Foot: How Scientists are Taking a Leaf from Nature's Book - Sustainable Energy – Without the Hot Air - The Measure of Man and Woman: Human Factors in Design - Invention by Design – How Engineers get from Thought to Thing		- The Essential Engineer: Why Science Alone Will Not Solve Our Global Problems - Sustainable Materials – With Both Eyes Open - The Gecko's Foot: How Scientists are Taking a Leaf from Nature's Book	- The Essential Engineer: Why Science Alone Will Not Solve Our Global Problems - Sustainable Materials – With Both Eyes Open - The Gecko's Foot: How Scientists are Taking a Leaf from Nature's Book - Sustainable Energy – Without the Hot Air

	- Sustainable Energy – Without the Hot Air - The Measure of Man and Woman: Human Factors in Design - Invention by Design – How Engineers get from Thought to Thing	- Sustainable Energy – Without the Hot Air - The Measure of Man and Woman: Human Factors in Design - Invention by Design – How Engineers get from Thought to Thing			- Sustainable Energy – Without the Hot Air - The Measure of Man and Woman: Human Factors in Design - Invention by Design – How Engineers get from Thought to Thing	- The Measure of Man and Woman: Human Factors in Design - Invention by Design – How Engineers get from Thought to Thing
How can you help?	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp

Year 10 Design & Technology GCSE	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Woods Skills for: Examination unit NEA Project work	Metals Skills for: Examination unit NEA Project work	Plastics and Technologies Skills for: Examination unit NEA Project work		Energy generation and storage Skills for: Examination unit NEA Project work	Modern materials and textiles Examination unit NEA Project work
Prior knowledge (from previous year/ key stage)	KS3 – D&T project work	KS3 – D&T project work	KS3 – D&T project work	KS3 – D&T project work	KS3 – D&T project work	KS3 – D&T project work
Assessment objectives (specific skills and knowledge students are expected to demonstrate)	GCSE Design and Technology assessment objectives: The exams and non-exam assessment will measure how students have achieved the following assessment objectives. • AO1: Identify, investigate and outline design possibilities to address needs and wants. • AO2: Design and make prototypes that are fit for purpose. • AO3: Analyse and evaluate: design decisions and outcomes, including for prototypes made by themselves and others wider issues in design and technology. • AO4: Demonstrate and apply knowledge and understanding of: technical principles designing and making principles.					
Key skills	AO1-AO2	AO1-AO2	AO3	AO3	AO4	AO4
Assessment	Knowledge quiz. Assessment of progress made by the students using exam style questions and NEA assessment criteria on work completed	Knowledge quiz. Assessment of progress made by the students using exam style questions and NEA assessment criteria on work completed	Knowledge quiz. Assessment of progress made by the students using exam style questions and NEA assessment criteria on work completed		Knowledge quiz. Assessment of progress made by the students using exam style questions and NEA assessment criteria on work completed	Knowledge quiz. Assessment of progress made by the students using exam style questions and NEA assessment criteria on work completed
Reading Pledge	• Small Things Considered: Why there is No Perfect Design • Product Design (Portfolio) • Material Innovation: Product Design • Process: 50 Product Designs from Concept to Manufacture	• Small Things Considered: Why there is No Perfect Design • Product Design (Portfolio) • Material Innovation: Product Design • Process: 50 Product Designs from Concept to Manufacture	• Small Things Considered: Why there is No Perfect Design • Product Design (Portfolio) • Material Innovation: Product Design • Process: 50 Product Designs from Concept to Manufacture • The New Science of Strong Materials – or Why You Don't Fall Through the Floor		• Small Things Considered: Why there is No Perfect Design • Product Design (Portfolio) • Material Innovation: Product Design • Process: 50 Product Designs from Concept to Manufacture	• Small Things Considered: Why there is No Perfect Design • Product Design (Portfolio) • Material Innovation: Product Design • Process: 50 Product Designs from Concept to Manufacture

	The New Science of Strong Materials – or Why You Don't Fall Through the Floor	The New Science of Strong Materials – or Why You Don't Fall Through the Floor			The New Science of Strong Materials – or Why You Don't Fall Through the Floor	The New Science of Strong Materials – or Why You Don't Fall Through the Floor
How can you help?	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp	Encourage your child to: Look at how things are made Look at what materials things are made from Use the useful websites linked to help with homework and understanding WWW.technologystudent.com https://www.bbc.co.uk/bitesize/subjects/zmhs34j https://www.youtube.com/c/StuffMadeHere https://www.youtube.com/playlist?list=PLqsiHeS18sC_Mc6iDw9zmgkx0zgBvxSqp

Year 11 Graphics	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	NEA Coursework	NEA Coursework	NEA Coursework	NEA Coursework Examination Revision	Examination Revision	Examination Revision
Prior knowledge (from previous year/ key stage)	Year 10 project work and theory lessons	Year 10 project work and theory lessons	Year 10 project work and theory lessons	Year 10 project work and theory lessons	Year 10 project work and theory lessons	Year 10 project work and theory lessons
Assessment objectives (specific skills and knowledge students are expected to demonstrate)	NCFE Graphic Design Assessment Objectives: AO1- Recall knowledge and show understanding The emphasis here is for learners to recall and communicate the fundamental elements of knowledge and understanding. AO2- Apply knowledge and understanding The emphasis here is for learners to apply their knowledge and understanding to real-world contexts and novel situations. AO3- Analyse and evaluate knowledge and understanding The emphasis here is for learners to develop analytical thinking skills to make reasoned judgements and reach conclusions. NCFE Level 1/2 Technical Award in Graphic Design (603/7011/7) 13 DRAFT/Version 1.0 November 2021 Visit ncfe.org.uk Call 0191 239 8000 AO4- Demonstrate and apply relevant technical skills, techniques and processes The emphasis here is for learners to demonstrate the essential skills relevant to the vocational sector by applying the appropriate processes, tools and techniques. AO5- Analyse and evaluate the demonstration of relevant technical skills, techniques and processes The emphasis here is for learners to analyse and evaluate the essential technical skills, processes, tools and techniques relevant to the vocational sector.					
Key skills	AO1 to AO5	AO1 to AO5	AO1 to AO5	AO1 to AO5	AO1 to AO5	AO1 to AO5
Assessment	Knowledge Quiz Assessment of NEA using assessment criteria	Knowledge Quiz Assessment of NEA using assessment criteria	Knowledge Quiz Assessment of NEA using assessment criteria	Knowledge Quiz Assessment of NEA using assessment criteria.	Exams	Exams
Reading pledge	- Graphic Design: The New Basics" by Ellen Lupton and Jennifer Cole Phillips - Just My Type: A Book About Fonts" by Simon Garfield - How to Be a Graphic Designer Without Losing Your	- Graphic Design: The New Basics" by Ellen Lupton and Jennifer Cole Phillips - Just My Type: A Book About Fonts" by Simon Garfield - How to Be a Graphic Designer Without Losing Your Soul" by Adrian Shaughnessy	- Graphic Design: The New Basics" by Ellen Lupton and Jennifer Cole Phillips - Just My Type: A Book About Fonts" by Simon Garfield - How to Be a Graphic Designer Without Losing Your	- Graphic Design: The New Basics" by Ellen Lupton and Jennifer Cole Phillips - Just My Type: A Book About Fonts" by Simon Garfield - How to Be a Graphic Designer Without Losing Your	- Graphic Design: The New Basics" by Ellen Lupton and Jennifer Cole Phillips - Just My Type: A Book About Fonts" by Simon Garfield - How to Be a Graphic Designer Without Losing Your	- Graphic Design: The New Basics" by Ellen Lupton and Jennifer Cole Phillips - Just My Type: A Book About Fonts" by Simon Garfield - How to Be a Graphic Designer Without Losing Your Soul" by Adrian Shaughnessy

	Soul" by Adrian Shaughnessy "Logo Design Love" by David Airey	"Logo Design Love" by David Airey	Soul" by Adrian Shaughnessy "Logo Design Love" by David Airey	Soul" by Adrian Shaughnessy "Logo Design Love" by David Airey	Soul" by Adrian Shaughnessy "Logo Design Love" by David Airey	"Logo Design Love" by David Airey
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Year11 Engineering Design	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum Content	Design, Evaluation and modelling Skills for: R040 NEA coursework unit	Design, Evaluation and modelling Skills for: R040 NEA coursework unit	Design, Evaluation and modelling Skills for: R040 NEA coursework unit		Principles of Engineering design Skills for: R038 Examination	Principles of Engineering design Skills for: R038 Examination
Prior knowledge (from previous year/ key stage)	KS3 – D&T project work KS3/4 – Engineering design and graphics project work	KS3 – D&T project work KS3/4 – Engineering design and graphics project work	KS3 – D&T project work KS3/4 – Engineering design and graphics project work	KS3 – D&T project work KS3/4 – Engineering design and graphics project work	KS3 – D&T project work KS3/4 – Engineering design and graphics project work	KS3 – D&T project work KS3/4 – Engineering design and graphics project work
Assessment objectives (specific skills and knowledge students are expected to demonstrate)	<u>OCR Cambridge National Engineering Design R038 Assessment Objectives:</u> Teaching content Assessment Guidance 1.1 • Students may be required to recommend a design strategy for a particular product and justify their choice. 1.2.1 • Students will need to be able to identify the key stages of the iterative design process and describe the stages involved in carrying out each process. 1.2.2 • Students will need to know how to analyse existing products using ACCESS FM. - Students will need to understand how the stages of the iterative design process allow the development of the design based on a cyclic process of designing, making, evaluating, and refining of the prototype. 2.1 - 2.3 • Students will need to know how to use ACCESS FM to produce an engineering design specification and knowledge of the scale of manufacture. - Students should know at least one example of a product produced by each scale of manufacture. - Students will need to know how designs are made sustainable through the consideration of the 6Rs, and should know at least one example of how a product is made sustainable by one of the 6Rs. - Students will need to be able to describe the influences on engineering product design. 3.1 • Students will need to know each of the engineering drawing techniques and may be expected to identify each of the conventions or representations stated. - Students may also be expected to add dimensions using the conventions to provided drawings. 4.2 • Students will need to describe at least one modelling method in the creation of a product prototype and give one example of a product produced using one of the modelling methods. <u>OCR Cambridge National Engineering Design R040 Assessment Objectives:</u> Task 1 • Students should use ACCESS FM to analyse the specified product and compare products using an appropriate customer driven engineering matrix. - Students are expected to use the most appropriate form(s) of research to gather the information needed. The focus is on the comprehensiveness and appropriateness of					

	the research, not specifically whether the research is primary, secondary or both. This should be completed individually, so it would be highly unusual to see the same output from all students in a cohort. Task 2 • You should ensure that students observe a product disassembly in order to analyse the variety and function of components, and establish the most suitable materials, production, assembly and manufacturing methods. - Students should include their own commentary of the disassembly explaining potential hazards, and safety considerations taken when disassembling the product. Task 3 • Students will require access to 3D CAD software in order to produce a virtual 3D model from the product specification provided. - Different views of the virtual 3D model should be evidenced, and you should ensure that students simulate the operation of the product. - You must make a note on the Unit Recording Sheet (URS) of any assistance students required when demonstrating complex industry-related CAD activities. Task 4 • Students are required to plan the production of a prototype, and will need to identify and plan the different stages required to manufacture the it. - We provide a template for a risk assessment that students can use as part of their production plan. Task 5 • Students should follow their production plan in order to produce a prototype, working safely at all times. - When making their prototype students should create a photographic diary explaining each key stage, referencing the tools and processes used. - You should complete a Teacher Observation Record for this task. Task 6 • Students should evaluate their manufactured prototype against the product specification, suggesting and justifying a range of potential design improvements.					
Key skills	Manual production of freehand sketches Production of engineering drawings Use of computer aided design (CAD) Product evaluation. Modelling design ideas	Manual production of freehand sketches Production of engineering drawings Use of computer aided design (CAD) Product evaluation. Modelling design ideas	Manual production of freehand sketches Production of engineering drawings Use of computer aided design (CAD) Product evaluation. Modelling design ideas	Designing processes. Design requirements. Communicating design outcomes. Communicating design outcomes. Communicating design outcomes. Product evaluation. Modelling design ideas	Designing processes. Design requirements. Communicating design outcomes. Communicating design outcomes. Communicating design outcomes. Product evaluation. Modelling design ideas	Designing processes. Design requirements. Communicating design outcomes. Communicating design outcomes. Communicating design outcomes. Product evaluation. Modelling design ideas
Assessment	Knowledge quiz NEA Assessment criteria check sheets for each section covered	Knowledge quiz NEA Assessment criteria check sheets for each section covered	Knowledge quiz NEA Assessment criteria check sheets for each section covered		Knowledge quiz NEA Assessment criteria check sheets for each section covered	Knowledge quiz NEA Assessment criteria check sheets for each section covered
How can you help?	Encourage your child to:	Encourage your child to: Look at how things are made	Encourage your child to:	Encourage your child to:	Encourage your child to: Look at how things are made	Encourage your child to: Look at how things are made

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