

Summary Curriculum Map and Expectations

Subject:

Design Technology

Subject leader / Head of Faculty: Mr Cooke

Year 7	Autumn term	Spring term	Summer term
ROTATION	Technology runs on a 13 week rotation so Autumn, Spring and Summer Term content is the same for each rotation.		
Key content; Main learning objectives, Knowledge, Skills, Understanding,	<ul style="list-style-type: none"> • Introduction to 3D Drawing: Drawing in isometric, shading and rendering isometric cubes • Further Isometric Drawing: Drawing and rendering isometric cylinders and house • Isometric Drawing Task: Accurately draw and render iPod and dock Self-assessment of isometric drawing skills and DIRT time to improve where needed • Introduction of Bird box Project: Explore how trees grow and how long and short grain will affect design. • Write a brief and specification. • Develop initial ideas for design. • Evaluation of Designs: Continue design work and evaluate designs against specification points. Select and complete final design idea • Introduction to Practical Work: Workshop safety and tool safety. Prepare front of bird box, measuring, marking out, sanding and cutting scots pine. • Continuing cutting and sanding bird box fronts. Checking against template. Drill holes for birds • Design back of bird box; use completed front as a template for the shape of the back and create design in top third of the wood. Start to cut design using coping saw/tenon saw. • Begin assembly of birdbox – Prepare sides and base, sanding. Assemble front/sides/base using PVA glue and nails • Assembly continued – Assemble front section and back piece using PVA and nails. Prepare roof pieces. • Final Assembly - ensure good fit, sand all pencil marks. Add pyrography if needed. • Protection – apply surface finish to protect the birdbox Evaluating the birdbox using ACCESSFM and self assessment • Introduction to keyring focussed practical task. • Introduction to 2DDesign – Use tutorial to help draw a bird/snowman • Introduction to 2DDesign – Use tutorial to help draw a house • Develop the keyring template – Use measurement tools in CAD to ensure accuracy • Finalise keyring designs – submit best ideas for cutting • Follow tutorial to try to draw the 3d mobile phone EXT: Draw iPod/PS4 controller/X-Box controller 		
Formal Assessments	<p>Assessed piece of isometric drawing work.</p> <p>Assessed practical outcome against Lancashire Levels framework.</p> <p>Assessed piece of 2DDesign CAD work.</p> <p>Assessed piece of CAD/CAM work.</p>		
Homework	Spelling/Quiz homework 10-20 minutes (three per rotation)		

expectations (frequency, time commitment)	Safety poster homework – 30 minutes Wood knowledge homework – 30 minutes
---	---

Summary Curriculum Map and Expectations

Subject: Design Technology Subject leader / Head of Faculty: Mr Cooke

Year 8	Autumn term	Spring term	Summer term
ROTATION	Technology runs on a 13 week rotation so Autumn, Spring and Summer Term content is the same for each rotation.		
Key content; Main learning objectives, Knowledge, Skills, Understanding,	<ul style="list-style-type: none"> • Recap on 3D Drawing: Drawing in isometric. Combining isometric shape – Crating techniques • Introduction to orthographic projection: Drawing simple shapes in orthographic • Orthographic projection: Developing orthographic drawing skills. Hidden lines. • Presentation techniques: Producing a presentation sheet of isometric/orthographic drawings Self-assessment of presentation drawing skills and DIRT time to improve where needed <ul style="list-style-type: none"> • Introduction to pewter casting project. • Demonstration of process of pewter casting • Introduction of design limitations – sizes/materials/costs/ layered designs • Introduction of moulds and jigs • Analysis of existing products using ACCESSFM • Pupils research simple jewellery/keyring designs • Write a simple brief and specification. • Select a target market for their product • Analysing target market • Pupils to produce a moodboard based on their target market • Pupils to research existing designers • Produce a moodboard based on the work of a design • Initial design ideas – pupils to develop initial design ideas using their target market and designer as inspiration • Evaluation of design ideas including peer evaluation • Development of design ideas based on evaluation • Use 2DDesign to develop initial ideas for laser cutting • Evaluate design ideas and modify if needed • Test cut design ideas in card • Develop final design ideas and cut in mdf • Cast designs using pewter • Drill holes for lanyard/keyring as needed • Start finishing processes – cutting/filing/sanding/polishing • Evaluation and self assessment 		

	<p style="text-align: center;">Extension task – develop packaging for product</p> <ul style="list-style-type: none"> • Introduction to Earphone wrap focussed practical task. • Develop a brief and specification • Measure earphones • Produce initial ideas to scale • Develop skills in 2D Design • Create a template for earphone wraps • Ensure template allows design to meet the specification • Create range of 2D Design ideas based on initial ideas and specification • Develop design ideas • Cut ideas for testing using card • Evaluate ideas • Modify design ideas in relation to evaluation • Re-cut and test if needed • Analyse and select best design ideas • Cut designs in acrylic • Test final design <p style="text-align: center;">Evaluation and self-assessment</p>
Formal Assessments	<p style="text-align: center;">Assessed orthographic drawing task Assessed 2D Design CAD work Assessed practical outcome using Lancashire Levels framework Assessed CAD/CAM task</p>
Homework expectations (frequency, time commitment)	<p style="text-align: center;">Spelling/Quiz homework 10-20 minutes (three per rotation) Metal knowledge homework – 30 minutes extended homework task</p>

Summary Curriculum Map and Expectations

Subject:

Design Technology

Subject leader / Head of Faculty: Mr Cooke

Year 9	Autumn term	Spring term	Summer term
ROTATION	Technology runs on a 13 week rotation so Autumn, Spring and Summer Term content is the same for each rotation.		

<p>Key content; Main learning objectives, Knowledge, Skills, Understanding,</p>	<ul style="list-style-type: none"> • Introduction to project and design process • Design limitations – lamination, materials, size of phone • Writing a situation and brief • Mindmapping needs of users • Developing a simple specification • Type up design brief and spec, produce cover page for project • Analysing existing products using ACCESSFM EXT-Moodboard of Target Market • Drawing skills – Isometric drawing and recap on orthographic projection EXT – Initial design ideas • Initial design ideas (overall design) • Develop ideas relating to the specification • Consider static or adjustable stands, • Initial design ideas for laminated parts of stand • Initial sketches using template sheets • Evaluate design ideas – self and peer evaluation • Explain preferred choice and develop design further • Model design idea using paper strips • Materials and Manufacturing processes – Research the materials you are using and how to laminate wood, the tools and processes involved • 6RS – Sustainability – Produce a slide explaining the environmental issues relating to this project. EXT – Produce 2D Design drawing of your design • DIRT SESSION – Look at the feedback you have been given by staff and peers and act upon the feedback. • Complete any outstanding design work. • Initial workshop session – Health and Safety recap • Pupils to select and start to cut materials for laminating • Pupils to continue cutting and laminating materials • Pupils to complete cutting and lamination. • Start sanding fronts and developing stands • Pupils continue sanding, producing stands, applying finishes • Pupils to complete phone stands • Evaluation of phone stands – Use ACCESSFM to evaluate stands against specification • Evaluation of phone stands – Suggest and design modifications to improve phone stands • Final design drawings using 2D Design – compare and evaluate actual design against ideas • Packaging design – develop flat pack cardboard box for point of sale <p style="text-align: center;">Self Assessment and review</p>
<p>Formal Assessments</p>	<p style="text-align: center;">Assessed presentation drawing task Assessed computer based design portfolio Assessed practical outcome using Lancashire Levels framework Assessed extended homework tasks</p>
<p>Homework expectations</p>	<p style="text-align: center;">Spelling/Quiz homework 10-20 minutes (three per rotation) Environmental knowledge homework – 30 minutes extended homework task</p>

(frequency, time commitment)	Wood processing homework - 30 minutes extended homework task
------------------------------	--

Summary Curriculum Map and Expectations

Subject: AQA Design Technology GCSE Subject leader / Head of Faculty: Mr Cooke

Year 10	Autumn term	Spring term	Summer term
Key content; Main learning objectives, Knowledge, Skills, Understanding,	Sustainable lighting project <ul style="list-style-type: none"> • Iterative design process • Understanding a context • Research • Work of others • Understanding analysis • Electronic theory • Developing ideas • Understanding of materials • Environmental issues • CAD work • Evaluation of ideas • Accuracy/measurements • Critical Analysis • Understanding design movements DIRT <ul style="list-style-type: none"> • Understanding materials • Health and Safety-metalwork • Accuracy/measurement • Understanding processes • Health and Safety – electronics • Testing/QC • Practical skills • Testing/QC/Modifications • Peer assessment • Critical analysis/self reflection • DIRT Graphic design skills – understanding the needs of users	Moving toy project <ul style="list-style-type: none"> • Target Market • Mechanisms • CAD/CAM Iterative design process Understanding a context Research Work of others Understanding analysis <ul style="list-style-type: none"> • Developing ideas • Understanding of materials • Environmental issues • CAD work • Evaluation of ideas • Accuracy/measurements • Critical Analysis • Accuracy/measurement • Understanding processes • Testing/QC • Practical skills • Testing/QC/Modifications • Peer assessment • Critical analysis/self reflection • DIRT 	Introduction to NEA NEA – Contextual Challenge – AO1 <ul style="list-style-type: none"> • Investigation of problem • Developing a brief • Finding a client • Research existing solutions • Developing a specification • Initial design ideas <ul style="list-style-type: none"> • Analysing the contextual challenge • Interviewing a client to understand their needs • Writing a brief and specification • ACCESSFM AO1 = 20 marks

Formal Assessments	Mid/end project tests based upon content – electronics/ohms law/sustainability Assessed digital portfolio based upon NEA requirements	Mid/end project tests based upon content – mechanisms/materials/processes Assessed digital portfolio based upon NEA requirements	Tests based upon environmental/social/moral issues NEA portfolio continually assessed in line with specification
Homework expectations (frequency, time commitment)	Homework will be given regularly throughout projects to reinforce the understanding and knowledge required of the GCSE. Maths in DT homeworks Materials and processes homeworks Homeworks should take between 30 – 60 minutes depending upon the topics		

Summary Curriculum Map and Expectations

Subject:

AQA Design Technology GCSE

Subject leader / Head of Faculty: Mr Cooke

Year 11	Autumn term	Spring term	Summer term
Key content; Main learning objectives, Knowledge, Skills, Understanding,	<p>NEA – Contextual Challenge – AO1 AO2</p> <ul style="list-style-type: none"> Initial design ideas Review ideas against specification Select designs to develop Develop design ideas Modelling Review Ideas against specification Develop design ideas Manufacturing plan <p>AO1 = 20 Marks AO2 = 60 Marks Generating Ideas = 20 Developing ideas = 20 Realising ideas = 20</p>	<p>NEA – Contextual Challenge – AO2 AO3</p> <ul style="list-style-type: none"> Realising design ideas Building product / prototype Review against specification Testing Modify product Testing / review / evaluation Analysis of product / prototype <p>AO2 = 60 Marks AO3 = 20 Marks DEADLINE FOR ALL MAKING TO BE COMPLETE IS 15th FEBRUARY</p> <p>ABSOLUTE DEADLINE FOR ALL FOLDER AND PRACTICAL WORK IS MID MARCH</p>	Exam Preparation and revision

	AO1/AO2 Deadline mid October AO2 Design deadline end of November		
Formal Assessments	<p>Mock examinations Exam style questions</p> <p>All NEA work will be assessed when section deadlines are met – individual feedback is not allowed by the exam board but students will be given generic feedback and expected to modify their work accordingly if they think the generic feedback applies to their folder.</p>		
Homework expectations (frequency, time commitment)	<p>NEA research should be completed as homework Revision should be done as homework using the resources available on the school network. Assessed pieces of homework will be given once per half term</p>		