Clare Mount Scheme of Learning

Subject: Design and Technology

Title of Unit: Yr10/YR11 GCSE AQA 3D design

Overview of unit:	In this unit, pupils will embark on their first major piece of GCSE coursework, an exciting and creative journey that explores the world of design movements and iconic designers. They will learn to understand and articulate meaningful responses to different styles, from Bauhaus and Art Deco to Postmodernism and Memphis, gaining insight into how design has shaped the modern world. Pupils will develop isometric sketching skills and produce a range of innovative design ideas inspired by their chosen movement. They'll translate their 2D concepts into 3D models, experimenting with card, plywood, and MDF to explore scale, form, and function. Through structured design thinking methods using ACCESSFM, pupils will refine their models and learn how to evaluate and improve their work at every stage. A strong emphasis will be placed on recording their creative journey**,** encouraging pupils to document their thoughts, design decisions, and development steps, a vital part of the design process. Regular use of a wide range **of** hand and machine tools will help pupils build confidence, precision, and independence in the workshop. This unit lays the foundation for the GCSE coursework portfolio and contributes directly to their final Year 11 grade**.** The following project will expand on these skills, challenging pupils to research influential architects and design a client-based architectural model using CAD/CAM technologies. They will produce a detailed design specification to measure the success of their final outcome, combining creativity with technical accuracy. This dynamic and hands-on course encourages pupils to think like real designers, problem-solving, experimenting, and creating purposeful designs that respond to real-world challenges.
Key skills:	**Tool Identification and Use:** Accurately identify, name, and select the correct hand tools and machinery for a range of workshop tasks. **Safe and Accurate Machine Setup:** Confidently set up and operate machines and equipment safely, following workshop protocols and risk assessments. **Material Knowledge and Selection:** Develop an understanding of a wide range of materials — including wood, metal, and plastics — and their properties, to make informed choices for specific design outcomes.

	Independent Working: Work independently and take responsibility for personal progress, organisation, and safe workshop practice. **Following Instructions and Processes:** Follow written and verbal instructions accurately to complete practical tasks and meet design briefs. **Research and Analysis:** Research a variety of **design movements and designers**, analysing their key features, influences, and impact on modern design. **Creative Development:** Produce **freehand and isometric sketches** to communicate design ideas effectively, exploring multiple solutions before selecting the most appropriate concept. **Model Making:** Accurately construct **3D models from card, plywood, and MDF**, using a range of techniques to test, refine, and develop design ideas. **Digital Design Skills (CAD/CAM):** Use **Tech Soft 2D Design** to create precise digital drawings and prepare files for **laser cutting** and **engraving**. Set up and operate the **laser cutter** safely and efficiently to produce high-quality components. **Iterative Design Thinking:** Apply design evaluation tools such as **ACCESSFM** to develop and improve ideas through continuous reflection and testing. **Digital Presentation and Documentation:** Use **Google Slides** or similar platforms to record, present, and annotate design work, showing clear evidence of progress and reflection. **Experimentation and Problem Solving:** Explore different materials, joining methods, and finishing techniques to find creative solutions to design challenges. **Critical Reflection:** Create **meaningful written and visual responses** to design tasks, demonstrating understanding, creativity, and technical competence. **Collaboration and Communication:** Engage in peer discussions and critique sessions, giving and receiving constructive feedback to improve design outcomes.
Link to focus priorities:	I am committed to continuing the development of reading and literacy across the curriculum, recognising that strong literacy skills are essential for

	maximizing the impact of education and supporting pupils' overall achievement. My aim is to encourage every pupil to reach their full potential by creating lessons that inspire confidence, build independence, and remove barriers to learning. I strive to design engaging and inclusive learning experiences that enable pupils to access the curriculum and achieve their best possible outcomes. Central to my approach is creating a 'settled and safe' learning environment where pupils feel a sense of belonging and are supported both academically and emotionally. Using frameworks such as the Resilience Doughnut, I focus on nurturing pupils' well-being, helping them to develop the resilience and self-belief needed to cope, thrive, and flourish in all aspects of their education.
Numeracy opportunities:	Understanding the difference between cm/mm and being able to measure in mm. Able to read and measure materials using a steel rule. This will allow pupils to mark out their own work accurately. The ability to calculate how much material they will need for their individual projects. Pupils need to understand money and how to price up parts and materials for the material lists.
Personal development:	Pupils are supported to build confidence in their new learning environment by becoming familiar with the workshop setting and understanding key health and safety expectations. Through hands-on activities, they develop the ability to work independently while also learning to support and collaborate with others, strengthening their social and communication skills. The focus is on preparing pupils for life beyond Clare Mount by equipping them with the practical skills, problem-solving abilities, and independence needed to manage real-world tasks and challenges confidently.
Cultural capital:	We explore designers and design movements from around the world, allowing pupils to build their knowledge of skills, processes, and materials associated with each movement. This exploration enables pupils to form their own opinions on style, culture, and design influences. They investigate different materials, their origins, and consider sustainable approaches, learning how to reduce waste and suggest alternative solutions in their designs.
CEIAG:	Explore careers relating to Design Technology and construction and the various career pathways and skills required. We study designers and their key skills that will link into careers. Pupils are taught in depth about machine, processes and CAD/CAM, this leads into careers in these key areas. We also look at architects and what skills they have and qualifications needs to be an architects and I have a local architect that visits and speaks with pupils.
Key assessment tasks:	Pupils will complete various focused tasks through different task in this unit of work. Some of the assessment task will be focused practical tasks that pupil have to demonstrate their ability to follow instructions and produce accurate outcomes. They will also complete tasks on the laptops, these will be accessed on their ability to produce meaningful responses.
Pathway objectives:	**Exceptional Performance (based on grade 4 to 9)** • A highly developed ability to demonstrate critical understanding of sources. • A highly developed ability to effectively select and purposefully experiment with appropriate media, materials, techniques and processes. • A highly developed ability to skilfully record ideas, observations and insights through drawing and annotation, and any other appropriate means relevant to intentions, as work progresses.

	• A highly developed ability to demonstrate understanding of visual language. **Pathway 1 Objectives (based on grade 1 to 3)** • A consistent ability to demonstrate critical understanding of sources. • A consistent ability to effectively select and purposefully experiment with appropriate media, materials, techniques and processes. • A consistent ability to skilfully record ideas, observations and insights through drawing and annotation, and any other appropriate means relevant to intentions, as work progresses. • A consistent ability to demonstrate understanding of visual language. **Pathway 2 Objectives (based on Entry Level)** • A moderate ability to demonstrate critical understanding of sources. • A moderate ability to effectively select and purposefully experiment with appropriate media, materials, techniques and processes. • A moderate ability to skilfully record ideas, observations and insights through drawing and annotation, and any other appropriate means relevant to intentions, as work progresses. • A moderate ability to demonstrate understanding of visual language. **Pathway 3 Objectives based on certificated courses** • Some ability to develop ideas through purposeful investigations. • Some ability to select and experiment with appropriate media, materials, techniques and processes. • Some ability to record ideas, observations and insights through drawing and annotation, and any other appropriate means relevant to intentions, as work progresses. • Some ability to present a personal and meaningful response and realise intentions. Some ability to demonstrate understanding of visual language.
Key questions:	Question techniques will vary on pupil's ability, verbal, none-verbal. For example, thumbs up or down for responses, choice questions A, B and C, play how wants to be a millionaire making it fun. Each lesson starts with remember this from the previous question. Encouraging pupils to use the correct terminology for the subject. Questions using wh-words, what, why, when etc.

wk.	Title	Objectives and assessments	Prior Knowledge Required	Non-negotiable Knowledge	Literacy/Vocabulary Focus
	What is 3D Design?	Learn what 3D design is and the many different ways this can be presented. Assessment is a practical outcome, pupils completing the drawing exercises. The use of questions on what pupils think 3D design is and how it helps with designing. The importance of designing considering the user's needs and wants.	Pupils understand what DT is from Key stage 3 with the various projects they completed. Pupils learnt about different methods of drawing and how to present their work.	Pupils understand the course and how it is accessed and set up into 3 units and 1 exam. The importance of completing work to the highest standard. Developing their own drawing styles from the different techniques shown to them.	Coursework Assessment Keywords Designers Design concepts Pupil knowing key terminology for their GCSE journey.
2	Learning about isometric drawing	Learn and demonstrate the key principles to drawing in isometric. Assessment is pupils demonstrating their understanding of isometric and how to draw a set of given objects in isometric.	Key stage 3 we looked at isometric drawing and completed various drawing exercises using this technique. They will understand the angle and starting point for isometric and how to develop a simple crate to draw in.	How to draw isometric using different methods to support your design ideas. The use of crating is very effective and should always be used for rough initial sketches. The use of different drawing media to define lines and add detailing.	Isometric Freehand Orthographic Learning what each word means and breaking them down to help spell correctly.
3	Test various materials	Demonstrate how to cut and test a variety of materials and record your findings. Assessment is practical observation of pupils using the machines safety and correctly. Questions about the materials and their properties.	Pupils studied woods, plastic, metals and card in key stage 3. They know the different categories for them and working properties and how to select materials for different jobs.	Knowing the benefits of different modelling materials and their properties. We do a lot of modelling and they need to show progression using different materials and justify their choices for this.	Density Malleability Corrosion Conductor MDF = Medium density fibreboard Pine Acyclic Pupils using the correct words and learning to spell them.
4	Benefits of MDF and uses.	Learn and demonstrate how to use the hand tools and fret saw safely and correctly. Learn about the properties of MDF and different uses for it. Assessment is practical observation of pupils working independently	Pupils worked with MDF at key stage 3, using hand tools and using MDF on the laser cutter. They know it comes in different thicknesses and sizes dependent on the job. They used the fret saw	The health and safety instructions for using the fret saw and pillar drill. The use of hand tools, how to select the correct one and use it accurately. The accuracy of the laser cutter and when this	Fret saw Pillar drill Accurately Spelling keywords and reminder on previous lessons words, checking understanding.

		and use of the hand tools. Set of questions to answer about materials and tools.	and hand tools through key stage 3.	is suitable for their projects.	
5	What are permanent and none permanent joints?	Learn about different methods of joining various materials together using nails, wood screws, dowels and traditional wood joints. Assessment is practical observation on how pupils follow the instructions and demonstrate their skills to produce the various jointing methods. Question on tools, materials and advantages/disadvantages of the methods.	Key stage 3 we looked at different types of construction techniques, dowel, wood joint, wood screws, nails, glue and soldering..	The different methods of joining materials, glue joint, dowel joint, screw/nails and traditional wood joints. Benefits of each method and when it's best used.	Dowel joint Screws Soldering Permanent None-permanent Spelling permanent correctly break down into chucks.
6	Practise cutting wood joints	Demonstrate how to mark out 100mm by 50mm using the correct tools. Demonstrate how to set up your area and cut the wood using the correct saw. Assessment is on accuracy using a ruler to measure 100 x 50 using go/not gauges for quality assurance.	Pupils learnt about different types of wood joints in key stage 3. They know how to measure and mark and how to select the correct tools for the job. Pupils know about a halving joint and butt joint.	The health and safety of the workshop and how to look after himself and others. Use of the tools and how to use them correctly and accurately. Able to follow an engineering drawing to cut out the various wood joints.	Go/no gauges Quality assurance Halving joint Aim to understand the key words.
7	How to use google drive and google slides	Learn how to navigate the google drive. Set up your own folder and open google slide and add slides. Learn how to research information off the internet and use this effectively for your project. Assessment recap on previous lessons with questions and answers on A4 sheet. Practical assessment on pupils ability to navigate their email accounts and use google slides.	ICT is taught at Key Stage 3 pupils will know about how to use and log onto their school accounts.	Setting up and using google slides and accessing their work using their google accounts. They must use this and become familiar with their email address and passwords. The effective use of primary research and how to search the internet and use information.	Navigate Primary research Aim to teach pupils to create meaningful sentences. Capital letter at start, description and full stop. Scaffolding question to help them develop response.
8	Google slide research	Learn how to remove images from the internet and copy to their google slides.	Pupils know about power point and its benefits. They might have also used	How to import an image and check the copyright on it? How to use the snip tool	Copyright Cropping

		Demonstrate how to crop and manipulate the images to create a mood board. Assessment is observations on how pupils copy/paste and manipulate images on their screen and access their spatial awareness to create their mood board.	google slides which are similar.	to copy an image? Arrange the images on the slide to make it appealing, size detailing, cropping and adding other images.	Aim to be aware of the meaning of words. Encourage detailed responses when describing their work of others.
9	Learning to analyse products	Learn to critique a product considering the materials, user, needs and wants, cost and function. Assessment pupils completing their critique on a given object, detail they provide and supporting whole school literacy.	We analysed several different products in key stage 3 using ACCESSFM, pupils know what it stands for and how it helps with the design cycle.	Discuss the good/bad points of a product, compared to other products. The effective use of ACCESSFM and also using 6R's as a designer would. The client needs and wants are very important in the design life cycle.	Analysis Function Aesthetics Aim to encourage written responses that explain the point they are making. A4 sheet with starters for the questions.
10	What does ACCESSFM stand for?	Learn what each of the letters in ACCESSFM stand for. Demonstrate your understanding using ACCESSFM to create a specification for a product. Assessment on pupils explaining what each letter of ACCESSFM stands for and explaining what it means.	Pupils have a good working knowledge of ACCESSFM we used it to analyse products. It is also used to write a specification that helps with the design cycle and evaluation of a product.	Pupils know what each of the letters are called for ACCESSFM and are able to give a detailed fully justified point to each.	Aesthetics Cost Specification Aim to write a specification in full sentences. A4 sheet with sentence starters.
11	Research design movements	Demonstrate your understanding of design movements by researching several and pointing out the key features of them. Assessment, A4 sheet with various images of the design movements they have been researching and learning about. Pupils to name the movements and pick one to describe 3 points about it.	Yr9 we looked at what a design movement is and researched Memphis, Pupils know how to recognise this and discuss the key features about Memphis.	Able to describe in some details the different design movements explaining key features and da design for each. Memphis, Bauhaus, Gerrit Reitveld, Charles Rennie Mackintosh	Memphis Charles Rennie Mackintosh Gerrit Reitveld Aim for pupils to develop strong written responses about designers, support A4 sheet with sentence starters.
12	Pick 2 design movements to research	Demonstrate your understanding of design movements by	They know how to research a design movement and	Confident with what design movements are and pick to	Influences High gloss Sharp

		picking out key facts about them and how this influenced the consumers. Assessment recap at start of the lesson about design movements, power point with images for them to name and answer questions.	justify their views and explain the views of the designer, this is something we looked at in Yr9.	discuss in detail, features how they came about and a designer for each.	Symmetry Contrast Aim for pupils to use descriptive words to help explain the design movements. A4 Sheet of keywords.
13	What is ergonomics?	Learn what ergonomics is and how it supports the design process. Assessment is by pupil outcome on their research on ergonomics. Summary, images on the board pupils to explain the ergonomics relating to the image and how it supports the user.	Pupils understand comfort and will relate to this. The best example is hand controllers and how they are designed for the user's comfort.	Pupils understand the meaning of ergonomics and give an example. Compare to products explaining the ergonomic features and how they aid the user for example a chair with armrest.	Ergonomics Comfort Compare Aim for pupils to explain ergonomics and pick points. A4 prompt sheet keywords and sentence starters.
14	How does anthropometrics support design?	Demonstrate how anthropometrics informs your design thinking in relation to your design ideas. Assessment, recap on previous lesson, checking pupils' understanding. Questions on anthropometrics, use of images pupils to describe how anthropometric data has supported the design of the product.	Pupils will understand sizes of people and how things differ from one person to another.	The use of anthropometrics in sizing a product and how manufacturers use this date when designing for example mobile phone, hands. The use of ergonomics with anthropometrics to make effective products for customers.	Anthropometrics Dimensions human Aim pupils to focus on key points and producing detailed sentences.

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1	Continue to develop your understanding about design movements	Demonstrate your understanding of design movements and how they shape Our world. Assessment recap start of lesson on Design movements from previous lessons. Observations on their ability to retrieve information from the internet and show their understanding.	Pupils know about Memphis, Bauhaus and Charles Rennie Mackintosh, with some understanding of key features.	They know what a design movement is and what it stands for. Pupils explain the differences and understand the influences of the times that created different design movements. Knowledge of several different movements and describe key factors.	Pupils writing detailed responses about the design movements they are studying. Support sheet with questions and sentence starters.
2	Using ACCESSFM analyse images	Learn what each of the letters stands for in ACCESSFM and demonstrate how to use ACCESSFM to analyse a product. Assessment starter activity to see what they have remembered from previous lessons. Pupils use this to critique an image from the design movement of their choice.	Pupils have used ACCESSFM over the last few years and are familiar with it. They know it supports the design cycle and is used to evaluate products.	Explain what each of the ACCESSFM stand for and give a verbal and written examples of a specification. The use of it and how it shapes and guides the design process. the value of using it to evaluate products.	Reinforce ACCESSF M and what each letter stands for. Pupils to use each letter to develop a written response.
3	Sketching using a tangram	Learn how drawings are made of shapes. Demonstrate how to use a tangram to develop initial ideas quickly. Assessment pupils ability to create rapid drawings using shapes and add definition using 6B and other drawing equipment.	Yr9 we used a tangram for initial basic ideas. They know how it helps them design their ideas by rearranging the shapes.	Sketching ideas, creating feasible solutions and avoiding design fixation. Creating rapid ideas using the tangram for support.	Tangram Design fixation Definition Encourage pupils to annotate their designs, materials, function, construction
4	Exploring ideas through card modelling	Demonstrate how to mark out and cut card using a craft knife to create rapid models using card. Assessment pupils are required to produce one 3D model of	We have used card modelling through key stage 3 to support the design process. Pupils know how to cut, fold, strengthen the card to make feasible models.	Producing quality 3D models from card. Measuring and cutting accurately, effective joining methods. Health and safety using the craft knife, scissors and glue gun.	Quality Construction strength feasible

		something they have sketched.			
5	Evaluate your 3D models referring to the design movement	Learn to evaluate your work referencing your chosen design movement. Assessment pupils writing an evaluation on their chosen design movement. Showing their understanding of the design. 3 to 5 bullet points with key information.	Pupils have worked to constraints in and know how to develop 3D models using cardboard and include the customer needs and wants.	Written responses that justify their reading and compare their work to the design brief and specification. Skills required throughout this GCSE course.	Evaluation Constraints Reference Aim for pupils to write a full sentence describing features, materials.
6	Analyse your 3D card models using ACCESSFM	Demonstrate how to use ACCESSFM to analyse your models. Assessment pupils using ACCESSFM to analyse their own models.	Making 3D models using cardboard in Yr 8/9. They worked to a designer and specification, know what it is and how a designer must fulfil the design brief.	Using ACCESSFM, clearly providing justified reasons for each. Use of peer feedback to inform the decision process for further developing models.	Aesthetics Environment Function Enforcing pupil's ability to use ACCESSFM and write clear measureable point for each. Support sheet available, it has questions to support pupils.
7	Develop your original ideas further	Learn how to develop your design using SCAMPER, consider the points and how to develop your idea. Assessment pupils developing an A3 sheet that shows development of their original design.	Created 3D models in yr 8/9 for their design briefs. Used feedback to create new ideas. Making one idea is classed as design fixation the more creative can give surprise outcomes.	Ability to create new 3D models, using feedback from clients and specification. Use different processes and materials to refine ideas, recording as they create.	Substitute Combine Adapt Modify Eliminate Reverse Support sheet to help pupils their responses and improve pupil's responses.
8	Ergonomics, anthropometrics and scale	Learn what ergonomics, anthropometrics and scale are and how designers use the information to support their designs. Assessment is practical pupils ability to measure and plan a	Ergonomics and scale have been covered in Yr9 design projects. pupils know scale is from maths lessons and how to calculate the ratio. Ergonomics is covered in product	How ergonomics supports design and the everyday objects we use. How to calculate scale and present the information for others? The use anthropometrics data	Ergonomics Anthropometrics Scale Recap on keywords and pupils to relate this to their design work.

		new model with the data.	analysis and how humans relate to products.	and mode and mean stand for.	
9	Develop 3D models using ergonomic doll	Learn how to use the measurements from the ergonomic doll to create scale models. Assessment scale model that fits the ergonomic doll.	They know how to create 3D models from cardboard and MDF. They can measure, mark and cut with a level of accuracy.	How to relate the sizes from the ergonomic doll to a design they are making? The process of using measurements and scaling their models to work within the sizes. Using tools safety and following health and safety guidelines.	Scale Ergonomics Accuracy Quality Recap on keywords to enforcing correct terminology.
10	develop, test, record,	Demonstrate how to test your idea using the ergonomic doll, stability and strength of your chair. Record your findings and develop the idea. Assessment testing and evaluating their models, evidence will be on their power point explaining their findings.	Pupils know how to develop ideas from initial sketches and create 3D models. Evaluate and record their findings.	Recording information and acting on client feedback and justifying the design against the specification. Design is about developing and finding out how a design works and redefining it until the designer has the best fit for the client's needs.	Stability Structure Justification Supporting pupil's responses to key questions ensuring they understand how to justify their point. Support sheet with keywords and sentence starters.
11	Record your design journey	Demonstrate how to display and show the key information regarding your designs and findings. Assessment evidence is pupils' power points and sketching. This is against AO1, AO2, AO3 and AO4.	How to record information using preformatted sheets? Use of questions to help develop fuller responses. Keywords relating to the topic and subject. The use of power points and sketching using design sheets and prompts for annotation.	Clear diary of the process they are following. This can be in the form of a sketchbook and power point. Recording of ideas through sketching and photographic evidence is key to the process. GCSE grades awarded for analysis and creation of prototypes, clearly evidenced.	Pupils creating meaningful responses in a sentence format. Capital letter, description and full stop.
12	Refine your final idea	Demonstrate how you can create a new idea from your findings. This can be in the form of sketches or models. Assessment is pupil reacting to the feedback from previous lesson and	Pupils have developed skills through key stage 3 on refining their ideas. This involved using feedback to produce the final 3D product. A	Pupils refine ideas and prototypes using the following skills, drawing isometric with clear annotation. Practically create a new improved prototype, different materials, sizes,	Annotation Isometric Feedback Accuracy Pupil to annotate their refined ideas, using the

		improving any necessary sections.	good level of accuracy, prepping for surface finish and detailing the product.	construction methods, high quality finish. AQA is clear about developing and refining for the higher grades.	correct terminology.
13	Complete evaluation of final 3D model	Demonstrate how to evaluate your final model using ACCESSFM. Assessment pupils ability to use ACCESSFM to create detailed responses to the points.	Pupils develop evaluation skills all the way through key stage 3. Firstly, likes and dislikes, areas to develop. Peer feedback from others to help improve their work. Evaluation against design brief, client needs and wants and finally the specification.	Understanding the detail required for the evaluation. Using the AQA marking matrix and examples of past work to support their understanding. Responses that refer to what they have done, photo evidence is key to show their findings.	Peer feedback Client needs ACCESSFM Aim for detailed responses from pupil to help move their up the matrix grading system.
14	Detailed evaluation against design brief and specification	Learn how to evaluate your idea against the design brief and specification, consider the needs and wants of the user. Assessment pupils ability to reflect against the specification and explain how their design meets the needs and wants of the user.	Pupils followed a format for accessing and evaluating their design idea and prototypes using the design brief and specification. They learnt how to justify their decisions and measure their work against the specification.	Pupils have to produce detailed written responses about their work, relating to the design brief, client needs and wants. The specification is good to measure the success of the prototype against. Finally suggesting modifications and feedback from peers.	Complete a detailed evaluation that access and measures the product. Pupil need to use keywords and justify their answers in full sentences. Capital letter. Connectives, does it make sense, full stop.

wk.	Title	Objectives and assessment	Prior Knowledge Required	Non-negotiable Knowledge	
1	Research 3 architects	Learn what architects are and how they develop ideas from start to finish. Demonstrate your understanding of architects by researching 3 and discussing their key features. Assessment observation of work completed on laptops and Q&A about architects, their roles and how they support design, what skills they have and qualifications they need.	Pupils know how to research effectively using the internet and how to copy and paste images and manipulate them in google slides. This has been covered on key stage 3 and developed further in Yr. 10.	Need to research 3 possible ones. Frank Lloyd Wright, Bauhaus, George Clark, Norma Foster or Mies Van der Rohe. Key features of their work with pupils own opinion about their work.	Architect Features Structure Encourage pupils to produce insightful responses with their written work. Structure of sentences, justifying the points and offering their opinion.
2	Key features of the architects work	Demonstrate your understanding of an architect and pick one to develop further with images and their design theories. Assessment ability to explore an architect of their choice, images to support their research and a rationale about the architect's work.	We looked at how to find key information in Key stage 3 and what this means in relation to a design movement. Pupils revisited this in Yr10 looking at primary and secondary research.	Develop detailed analysis on their chosen architects, pick one to develop further with images and physiology of their work. Using various methods to produce details insightful responses.	Design theories Primary research Secondary research
3	Experiment with different drawing methods	Learn how you can use different methods to create purposeful ideas. Assessment pupils creating feasible drawings of the architects they are researching. What techniques do they use and are they drawn in perspective?	Pupils developed various drawing skills through key stage and in Art at Key stage 3. They can draw basic shapes in isometric and use the various drawing media to define lines and shade areas.	Experiment with various drawing techniques, must be a mix, thick, thin lines, shading, textures, half drawing, half computer image. This allows the moderator to see pupils' skills, and more techniques in the higher bound category.	Texture Isometric Feasible perspective
4	Analysis of design briefs	Demonstrate how to use a given design brief and pull key information from it to create the client's needs and wants. Assessment evidence	Yr 9 pupils learnt how to take key information from a design brief and use it to inform the design processes. They know how to	Pupils need to show understanding, a mind map of the design brief, picking key areas for design consideration and client needs and	Client needs and wants Style strength

		on laptops, pupils building a clear outline of the design brief, highlighting the Ussr needs and wants.	develop a mind map, using key information and develop client needs and wants.	wants, materials, construction, scale, manufacture, surface finish, intended use etc.	
5	Create your one specification	Demonstrate how to use ACCESSFM to write a detailed specification for your design brief. Assessment creating a specification for their design brief. Detailed responses to each point that they have justified with reference to the design brief.	Pupils know what an evaluation is and how it is used to support the design cycle and effective use of the specification helps create feasible design solutions. They are familiar with ACCEFM as they used this through key stage 3.	Clear specification using ACCESSFM, each point is justified and can be used to measure the success of prototypes. It needs to reflect the client's needs and wants to be valued part of the design cycle.	Aesthetics Cost Customer Environment Safety Size Function Materials Recap on the meaning of each word, sentences starters for each to support pupils.
6	What is primary and secondary research?	Learn about primary and secondary research and how it supports the design process. Assessment recap on previous lessons with Q&A. Pupils will add relevant research on materials, pros and cons, joining methods to their power points.	Pupils have researched their ideas, designers, materials, processes etc. in key stage 3. They know how to produce research and display information.	Clear understanding of how primary and secondary research support the designer and client. How to use the information to inform their designs? Primary is product analysis of a building by one of the architects, ergonomics and anthropometrics. Secondary example is internet information and data.	Primary research Secondary research Analysis Reinforce pupils perception of each word, examples to test their understanding.
7	Record your design process	learn how to record useful relevant information about your initial ideas. Assessment is by their outcome on power points. It needs relevant references to the design brief/specifications.	Pupils have learnt how to record their findings at KS3 with analysis of products and of their work. They know to add written responses and support this with drawing and photos.	They must consider the design brief, needs and wants of the user. The specification in relation to their initial design as this helps measure the success of their work. ,	Focus is pupils written work, they need to produce meaningful responses to all sections to enable them to get the higher marks in AO1, AO2, AO3 and Ao4. Support with keyword mats, sentence starters and connective support.
8	Initial sketches and annotation	Demonstrate how to create a selection of sketches that fit your design brief. Assessment will	Pupils know from Key stage about initial sketches and the value they have on the design cycle.	Sketching in isometric, selection of feasible ideas avoiding design fixation. Showing	Isometric Annotation Materials Function

		observe pupils' initial ideas, style of drawing, isometric, detailing, considering the needs of the user and quality of annotation.	Annotation is something they understand and know materials and their properties to discuss this clearly.	different pan and pencil techniques, use of CAD to demonstrate different design skills. The more the pupils experiments with style and techniques this increasing the grading at GCSE,	Pupils need to annotate their ideas, giving their opinions and making suggestions, keywords and DT terminology to support this.
9	3D card modelling	Learn how to make a 3D rapid model of one of your ideas using a card net. Assessment pupils ability to follow instructions and complete the manufacture of nets.	Key stage 3 we modelled ideas using card, MDF and laser cut sections. Pupils know about scale and ergonomics from previous projects and how to relate this to scale models. Health and safety of using cutting equipment and hot glue guns.	Quality 3D models, using different materials and construction techniques. Evidencing their decisions, photographic and written responses. The use of scale to make the models is important that windows doors etc. are in proportion. Health and safety is followed for pupils and others in the workshop.	Structure Strength Quality Scale
10	3D card modelling	Learn how to add the finishing detail using various methods to make it reflect your initial sketch. Assessment is practical pupils detailing the windows, doors, garden design etc. The quality of the work and scale of windows etc.	Key stage 3 we modelled ideas using card, MDF and laser cut sections. Pupils know about scale and ergonomics from previous projects and how to relate this to scale models. Health and safety of using cutting equipment and hot glue guns.	Quality 3D models, using different materials and construction techniques. Evidencing their decisions, photographic and written responses. The use of scale to make the models is important that windows doors etc are in proportion. Health and safety is followed for pupils and others in the workshop.	Quality Construction Ergonomics Scale Reinforce key terminology
11	CAD/CAM and using tech soft	Learn to set up your techsoft page and use gridlock to draw your sections for the container home. Assessment practical	Pupils know how to use the basic tools on Tech soft. For example grid lock, copy/paste, resize, vectorise and	Set up grid lock, size their image, use REC for support, and part delete lines. Drawing to set dimensions.	CAD/CAM full meaning of both. Gridlock Contour

		pupils creating their initial idea on Tech soft, using grid lock and various other tools on tech soft.	contour an image from the internet.		Using the key words and terminology
12	Creating ideas using tech soft	Learn how to add the windows and doors to your CAD work and set it up for cutting. Assessment, checking line details high lighting cutting lines black and engraving lines red. Exporting the file to a DXF file for RD works.	Pupils know how to use the basic tools on Tech soft. For example grid lock, copy/paste, resize, vectorise and contour an image from the internet.	Using the various tools on techsoft. importing imaging and setting them to enable the laser to cut/engrave. Setting the lines for cutting and engraving, black=cut and red=engrave.	Exporting Importing Techsoft Key words to support pupils when they have to do their write up and evidence what they have done.
13	Cutting final idea using CAM	Demonstrate how to import your CAD to RD works and set the laser for cutting. Assessment demonstrating how to import your work to RD and set up the laser, cut your design.	Pupils used CAD/CAM in Yr9, they know how to save and export files. The setting up of the laser has temperature and speed dependent on the material. The bed on the laser needs to be altered to suit the thickness of the material.	Exporting the image as an DXF file for the RD works to recognise. Checking lines are highlighted correctly for cutting/engraving. Set the laser depth for the material, frame the material to check position before imprinting. Set and check speed temp and power.	Exporting Cutting/engraving Thickness Depth Speed/temperature Keywords on the processes pupils will use to complete the cutting task and need for their written work.
14	Assembly process	Learn how to assemble your container home using supporting bars to give it structure. Assessment recap at start of lesson on key terminology to remind them and help with their annotation. Practical on how they follow instruction to create an accurate 3D model.	Pupils know how to logically plan construction of projects; this is something they have done all through Key stage 3. They know how to select the correct glues or choose the correct jointing method depending on the materials. How to clamp and support work when assembling things together.	Health and safety using tools and the hot glue guns. Choosing The correct process to join their projects together. Making any necessary alterations to aid the assembly process.	Construction Support Stability Quality

What?	What is it? Explain your work. This is a drawing I made of a……. This is a series of photos I took of…. This is an experiment using …. This is a collection of…. On this page I have tried……
Why?	Why did you make it? How does it help…. To get ideas about…. To show what I have learned about…. To explore the idea of…… To look at shape/ size/ colour……. To analyse the style of …… To develop my making skills….
How?	How did you make it? I built it by…… I constructed it from…… I experimented with…. I measure and cut my pieces….
Quality?	How good is it? What works/ what doesn't? I am pleased with…. The best part of the work is…… I am not happy with…. If I had the chance I would……
Learning?	What did you learn? I improved my skills in …. I am getting better at…. I feel more confident with…… Next I should…… To make progress I must……..


SEQUENCE
The order in which things
happen in a story.
First
Once upon a time
At first
Before
Earlier
Next
Second
Afterwards
Later
The next day
Then
Once
Meanwhile
After
Soon
Last
At the end
They lived happily ever after.
Finally

SEQUENCE WORDS

BEGINNING

- In the beginning
- First of all
- Once upon a time
- One day
- First/ Firstly
- To begin
- To start
- Once

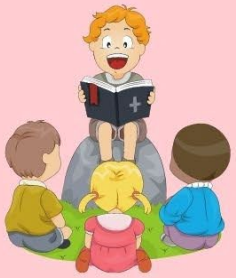
MIDDLE

- Soon
- Meanwhile
- Then
- After that
- Third/ Thirdly
- And
- In addition
- Also
- Later
- After/ Before
- Next
- Second/ Secondly
- Furthermore
- Subsequently
- Moreover
- Another

INTERRUPTION

(something unexpected)

- Suddenly
- All of a sudden
- But then



ENDING

- Finally
- At last
- In conclusion
- To summarise
- After all
- By the end
- At the end
- Afterward
- In the end
- Lastly
- By this point
- Eventually