Holy Family Catholic School – Faculty of Maths – **DT** Half-Term 3 Year 11

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
Week 16 Lesson 1 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.	N/A	Produce the required paperwork independently as per the **AQA** coursework guidelines
Lesson 2 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.	N/A	Produce the required paperwork independently as per the **AQA** coursework guidelines

Holy Family Catholic School – Faculty of Maths – **DT** Half-Term 3 Year 11

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
Week 17 Lesson 3 Metal based material and fixings Part 1	Stock forms Standardisation Fixings Pop riveting Cold formed riveting	Materials and processes in DT	Stock forms Standardisation Fixings Pop riveting Cold formed riveting	**I can identify** standard forms and shapes **I can explain** the advantages of stock forms for designers and manufacturers **I can describe** the process of cold and pop forming rivets	Which of the following fixings is most suitable for creating a permanent, strong joint between two pieces of sheet metal? - Pop rivet - Machine screw and nut - Self-tapping screw	Complete the worksheet
Lesson 4 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.	NA	Produce the required paperwork independently as per the **AQA** coursework guidelines
Lesson 5 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs.	NA	Produce the required paperwork independently as per the **AQA** coursework guidelines

Holy Family Catholic School – Faculty of Maths – **DT** Half-Term 3 Year 11

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
				I can develop my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.		
Week 18 Lesson 6 Metal based material and fixings Part 2	Stock forms Drilling Cutting Wasting Abrading Brazing Welding	Materials and processes in DT	Stock forms Drilling Cutting Wasting Abrading Brazing Welding	**I can identify** standard shaping and machining techniques **I can explain** the safe procedure for each technique **I can describe** the different applications for each of the techniques studied	Which statement best explains why welding is used to join metal components in manufacturing? - It creates a permanent joint by melting and fusing the metal pieces together - It allows the joint to be easily undone for maintenance - It joins metals using mechanical pressure only, without heat	Complete the worksheet
Lesson 7 NEA	Generate Develop Justify Present		Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling,	N/A	Produce the required paperwork independently as per the **AQA** coursework guidelines

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
				testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.		
Week 19 Lesson 8 **Practical learning**	Safety Tools Equipment Accuracy Planning Focus	Applied Design Skills	Safety Tools Equipment Accuracy Planning Focus	**I can complete** practical tasks with accuracy and independence. **I can use** tools, equipment, and materials safely and correctly **I can adapt** the techniques used for NEA applications	Why should long hair be tied back during practical work? A) To look professional B) To prevent it from getting caught in machinery C) To keep it clean	Complete the practical task safely to a high standard
Lesson 9 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.	N/A	Produce the required paperwork independently as per the **AQA** coursework guidelines

Holy Family Catholic School – Faculty of Maths – **DT** Half-Term 3 Year 11

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
Lesson 10 Metal based treatments and finishes	Commercial Stainless steel Hardening Milling turning	Material treatments and finishes in DT	Commercial Stainless steel Hardening Milling turning	**I can identify** standard treatments and finishes **I can explain** the advantages of different treatments and finishes for metals **I can describe** the various common finishes for metals	What is the main purpose of galvanising a steel product? - To give the metal a decorative shiny finish - To protect the steel from corrosion by coating it with zinc - To make the steel stronger and harder through heat treatment	Complete the worksheet
Week 20 Lesson 11 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.	N/A	Produce the required paperwork independently as per the **AQA** coursework guidelines

Holy Family Catholic School – Faculty of Maths – **DT** Half-Term 3 Year 11

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
Lesson 12 Polymer based materials and fixings	Stock forms Standardisation Powders Granules Foams Films Cutting Sawing	Materials and processes in DT	Stock forms Standardisation Powders Granules Foams Films Cutting Sawing	**I can identify** different types of polymer-based stock forms **I can explain** the differences between the forms and their respective applications **I can describe** basic shaping and processing techniques used for polymers	When drilling acrylic or other thermoplastics, which method helps prevent the material from cracking or melting? - Using a high drill speed with heavy pressure - Using a slow–medium speed with light, steady pressure - Using a hammer drill to break through quickly	Complete the worksheet
Week 21 Lesson 13 NEA	Generate Develop Justify Present	Iterative Design Thinking	Generate Develop Justify Present	**I can generate** and refine design ideas that respond creatively to the design brief and user needs. **I can develop** my design through modelling, testing, and iterative improvements. **I can justify** design decisions using research, feedback, and technical understanding.	Why should you wear goggles when sanding wood? A) To keep your eyes warm B) To protect your eyes from dust and particles C) To improve visibility D) To avoid glare from lights	Produce the required paperwork independently as per the **AQA** coursework guidelines

Holy Family Catholic School – Faculty of Maths – **DT** Half-Term 3 Year 11

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions for this lesson	Red Zone
Lesson 14 Polymer based processes	Laminating Line bending Vacuum forming 3D printing	Material processes in DT	Laminating Line bending Vacuum forming 3D printing	**I can identify** different types of polymer-based processes **I can explain** the key characteristics of each of the processes **I can describe** the advantages to manufacturers and designers of each process	When vacuum forming a thermoplastic sheet, which step is essential to ensure the plastic forms accurately around the mould? - Heating the plastic until it becomes soft and flexible before lowering it over the mould - Keeping the plastic cool and rigid so it holds its shape during forming - Removing the mould before the vacuum is applied to avoid sticking	Complete the worksheet
Lesson 15 **Practical learning**	Safety Tools Equipment Accuracy Planning Focus	Applied Design Skills	Safety Tools Equipment Accuracy Planning Focus	**I can** complete practical tasks with accuracy and independence. **I can use** tools, equipment, and materials safely and correctly **I can adapt** the techniques used for NEA applications	What is the correct way to carry a saw in the workshop? A) Hold it by the blade B) Hold it by the handle with the blade pointing down C) Carry it horizontally at chest height	Complete the practical task safely to a high standard