Holy Family Catholic School – Faculty of Mathematics

Subject – Design Technology Autumn Half-Term 1 Year 9

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Red Zone
Week 1 Presentation techniques in Technology	2D, 3D, Isometric grid, diagonal. Vertical, rendering	Realistic presentation drawing	Flat and realistic 3Dimensional grids, realism	• I can construct an Isometric drawing. • I can describe form using shading. • I can use colours to describe material texture.	Construct an Isometric drawing with appropriate shading and rendering to represent a specific material.
Week 2 Material properties - Plastics	Polymerisation thermoforming, thermoset, environmental impact, non biodegradable	Material properties	Polymerisation thermoforming, thermoset, environmental impact, non biodegradable	• I can recognise and define a polymer. • I can describe how polymers are produced. • I can discuss the environmental impact of polymers.	Complete the worksheet regarding polymerisation, oxidisation, thermoset and thermoforming plastics.
Week 3 Understanding design briefs and producing initial Ideas	Design brief, sketch, colour, annotation	Producing ideas	Sketching, Presenting ideas	• I understand how to interpret a design brief. • I can generate initial ideas.	Complete the worksheet to produce 2 initial ideas and complete the exam style question.
Week 4 Understanding the role of modelling and CAD/CAM in DT	CAD, CAM, Modelling, Automation	Computer controlled modelling	Computers	• I can describe why we use modelling in DT. • I can explain the uses of CAD/ CAM in technology.	Produce an appropriate CAD drawing demonstrating rendering and shading.

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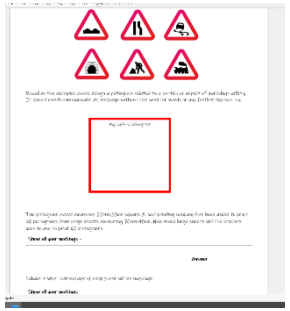
Week 5 Staying safe in the workshop	Health and Safety, PPE, Injury, workshop rules.	Health and Safety in the workshop	Safety, machinery, PPE, behaviour	• I can explain the importance of health and safety in the workshop. • I can describe the safest way to use tools and machinery. • I am aware of the effect of my behaviour on everyone's health and safety in the workshop.	 Design a pictogram related to health and safety in the workshop and complete the exam style question related to maths.
Week 6 Applying practical skills - marking and measuring	Rulers, tri - squares, mm, cm, waste	Marking and measuring in the workshop	Rulers, cm and mm, dimensions, accuracy	• I can apply health and safety rules in a practical lesson. • I can select and use rulers and tri-squares. • I can indicate the waste prior to cutting acrylic.	Proceed with your practical work and demonstrate that you know: • how to use rulers – using mm • how to use Tri squares • how to indicate "the waste"

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Week 7 How to apply practical skills – Cutting tools and techniques	Cutting, shaping, saws, emery cloth, filing	Using cutting tools to produce prototypes	Cutting, shaping, saws, emery cloth, filing		Proceed with your practical work and demonstrate • the correct way to use cutting and shaping tools such as saws, drills, and files. • how to cut acrylic, sawing in a straight line and where to place your hands.
Week 8 Applying practical skills – Cutting tools and techniques (continued)	Cutting, shaping, saws, emery cloth, draw filing	Using cutting tools to produce prototypes	Tools, safety, techniques, cutting, shaping, saws,	• I can apply health and safety rules in a practical lesson. • I can select and use appropriate cutting tools. • I am aware of common errors when using cutting tools.	Proceed with your practical work and demonstrate • the correct way to use cutting and shaping tools such as saws, drills, and files. • how to cut acrylic safely, sawing in a straight line and where to place your hands. • how to avoid common mistakes such as using the tool incorrectly or using the wrong tool for the job.