Emerging Progress in DT

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Emerging Students can:

Knowledge and Understanding: Written Assessment.

- Recall some basic curriculum key terms
- Link some basic curriculum key terms to pictures or meanings
- State the meanings of some basic curriculum key terms
- Create topic related diagrams with some of the basic detail
- Add some basic labels to diagrams or drawings
- Use some basic subject knowledge to explain, justify or evaluate topic based concepts
- Overall demonstrate basic subject knowledge and understanding

Analysis and Design: Exercise Books and Sketch Books.

- Include some basic analysis to explain, justify or evaluate work with assistance
- Present some work clearly with assistance

Practical: Workshop Tasks.

- Identify and use simple equipment, processes and materials with assistance
- Demonstrate basic skills with assistance
- Make simple decisions and problem solve with assistance
- Produce a basic outcome with assistance
- Identify some general risks and work safely with assistance

	In Yea	Assessment 1: Workbooks Sustainability and Environment Writing a Context Sustainability and Environment Sustems & Context				
In Year 7, students Knowledge journey includes			Assessment 1: Workbooks Design Process Product Analysis (NETE)	Assessment 4: Workbooks Structures Forces	Modelling Development and Analysis Papers and Boards Paper Processing	Automation Motions Mechanism Development
	Assessment 1: Workbooks	Assessment 4: Workbooks	Idea Generation	Assessment 5: Practical	CAD/CAM	Perspective Drawing
	Introduction to DT	Pewter Casting Process	Specification	Practical: STEM challenges	Evaluating	Evaluating
	Product Analysis (5 W's)	Idea Generation	Isometric Drawing	Assessment 6: Written Tests	Assessment 2: Practical	Assessment 5: Practical
	Idea Generation	Assessment 5: Practical	Rendering	Structures	Workshop Tasks (Slot Toy &	Workshop Tasks: Nuclear Reactor
	Modelling & Development	Practical: Pewter Casting (Metals &	Evaluating	Forces	CAD/CAM)	Assessment 6: Written Tests
	Isometric Drawing	CAD/CAM)	Assessment 2: Practical	Triangulation	Assessment 3: Mock Exam	Energy Generation & Sources
	Rendering	Assessment 6: Written Tests	Workshop Tasks: Night Light (Timbers and PCB	Equilibrium	Workshop Tools and Equipment	Systems & Control
	Evaluating	Metal and Plastic Categories	Manufacture)	Technology Based Problem Solving	Material Categories	Electronic Components for Control
	Assessment 2: Practical	Metal and Plastics Sources and the	Assessment 3: Written Tests		Sustainability	Circuits
	Workshop Tasks: Moneybox (Timber)	Environment	NEJE Analysis	Also includes knowledge and skills	Product Life Cycle	Automation
	Assessment 3: Written Tests	Pewter Casting Process	Categories of Materials	from year 7	Environmental Impacts	Mechanisms
	Properties of Materials	CAD/CAM	Properties of Materials		Modelling	
	Timber Categories		Timber Sources and Processing Workshop Tools			Also includes knowledge and skills from
	Timber Sources and the Environment		CAD/CAM			year 7 & 8
	Workshop Tools		Electronic Components for Sensing's Circuits			
	Joining Timbers		Health and Safety			
	Health and Safety					

Developing Progress in DT

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Developing Students Can:

Knowledge and Understanding: Written Assessment.

- Recall most basic curriculum key terms
- Link most basic curriculum key terms to pictures or meanings
- State the meanings of most basic curriculum key terms
- Create topic related diagrams with most of the basic detail
- Add most basic labels to diagrams or drawings
- Use some required subject knowledge to explain, justify or evaluate topic based concepts
- Overall demonstrate fair subject knowledge and understanding

Analysis and Design: Exercise Books and Sketch Books.

- Include some basic analysis to explain, justify or evaluate work with guidance
- Present most work clearly with guidance

Practical: Workshop Tasks.

- Identify and use most equipment, processes and materials with guidance
- Demonstrate some independence and basic skills with guidance
- Make simple decisions and problem solve with guidance
- Produce a basic outcome with guidance
- Identify some general risks and work safely with guidance

	Assessment 1: Workbooks Assessment 4: Workbooks Sustainability and Environment Energy Generation & Sources Writing a Context Systems & Control				
In Year 7, students Knowl	ledge journey includes	Assessment 1: Workbooks Design Process Product Analysis (NEIE)	Assessment 4: Workbooks Structures Forces	Modelling Development and Analysis Papers and Boards Paper Processing	Automation Motions Mechanism Development
Assessment 1: Workbooks	Assessment 4: Workbooks	Idea Generation	Assessment 5: Practical	CAD/CAM	Perspective Drawing
Introduction to DT	Pewter Casting Process	Specification	Practical: STEM Challenges	Evaluating	Evaluating
Product Analysis (5 W's)	Idea Generation	Isometric Drawing	Assessment 6: Written Tests	Assessment 2: Practical	Assessment 5: Practical
Idea Generation	Assessment 5: Practical	Rendering	Structures	Workshop Tasks (Slot Toy &	Workshop Tasks: Nuclear Reactor
Modelling & Development	Practical: Pewter Casting (Metals &	Evaluating	Forces	CAD/CAM)	Assessment 6: Written Tests
Isometric Drawing	CAD/CAM)	Assessment 2: Practical	Triangulation	Assessment 3: Mock Exam	Energy Generation & Sources
Rendering	Assessment 6: Written Tests	Workshop Tasks: Night Light (Timbers and PCB	Equilibrium	Workshop Tools and Equipment	Systems & Control
Evaluating	Metal and Plastic Categories	Manufacture)	Technology Based Problem Solving	Material Categories	Electronic Components for Control
Assessment 2: Practical	Metal and Plastics Sources and the	Assessment 3: Written Tests		Sustainability	Circuits
Workshop Tasks: Moneybox (Timber)	Environment	NEJE Analysis	Also includes knowledge and skills	Product Life Cycle	Automation
Assessment 3: Written Tests	Pewter Casting Process	Categories of Materials	from year 7	Environmental Impacts	Mechanisms
Properties of Materials	CAD/CAM	Properties of Materials		Modelling	
Timber Categories		Timber Sources and Processing Workshop Tools			Also includes knowledge and skills from
Timber Sources and the Environment		CAD/CAM			year 7 & 8
Workshop Tools		Electronic Components for Sensing's Circuits			
Joining Timbers		Health and Safety			
Health and Safety					

Achieving Progress in DT

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Achieving Students Can:

Knowledge and Understanding: Written Assessment.

- Recall most required curriculum key terms
- Link most required curriculum key terms to pictures or meanings
- State the meanings of most required curriculum key terms
- Create topic related diagrams with most of the required detail
- Add most required labels to diagrams or drawings
- Use most required subject knowledge to explain, justify or evaluate topic based concepts
- Overall demonstrate good subject knowledge and understanding

Analysis and Design: Exercise Books and Sketch Books.

- Include most analysis points to explain, justify or evaluate work
- · Present all work clearly and methodically

Practical: Workshop Tasks.

- Identify and use most equipment, processes and materials independently
- Demonstrate independence and skill throughout most practical tasks
- Demonstrate independent decision making and problem solving in most tasks
- Produce a fair quality outcome with some guidance
- Identify most specific risks and work safely with guidance

		Assessment 1: Workbooks Sustainability and Environment Writing a Context	Assessment 4: Workbooks Energy Generation & Sources Systems & Control					
In Year 7, students Knowledge journey includes			Assessment 1: Workbooks Design Process Product Analysis (NEJE)	Assessment 4: Workbooks Structures Forces	Modelling Development and Analysis Papers and Boards Paper Processing	Automation Motions Mechanism Development		
	Assessment 1: Workbooks	Assessment 4: Workbooks	Idea Generation	Assessment 5: Practical	CAD/CAM	Perspective Drawing		
	Introduction to DT	Pewter Casting Process	Specification	Practical: STEM Challenges	Evaluating	Evaluating		
	Product Analysis (5 W's)	Idea Generation	Isometric Drawing	Assessment 6: Written Tests	Assessment 2: Practical	Assessment 5: Practical		
	Idea Generation	Assessment 5: Practical	Rendering	Structures	Workshop Tasks (Slot Toy &	Workshop Tasks: Nuclear Reactor		
	Modelling & Development	Practical: Pewter Casting (Metals &	Evaluating	Forces	CAD/CAM)	Assessment 6: Written Tests		
	Isometric Drawing	CAD/CAM)	Assessment 2: Practical	Triangulation	Assessment 3: Mock Exam	Energy Generation & Sources		
	Rendering	Assessment 6: Written Tests	Workshop Tasks: Night Light (Timbers and PCB	Equilibrium	Workshop Tools and Equipment	Systems & Control		
	Evaluating	Metal and Plastic Categories	Manufacture)	Technology Based Problem Solving	Material Categories	Electronic Components for Control		
	Assessment 2: Practical	Metal and Plastics Sources and the	Assessment 3: Written Tests		Sustainability	Circuits		
	Workshop Tasks: Moneybox (Timber)	Environment	NEJE Analysis	Also includes knowledge and skills	Product Life Cycle	Automation		
	Assessment 3: Written Tests	Pewter Casting Process	Categories of Materials	from year 7	Environmental Impacts	Mechanisms		
	Properties of Materials	CAD/CAM	Properties of Materials		Modelling			
	Timber Categories		Timber Sources and Processing Workshop Tools			Also includes knowledge and skills from		
	Timber Sources and the Environment		CAD/CAM			year 7 & 8		
	Workshop Tools		Electronic Components for Sensing's Circuits					
	Joining Timbers		Health and Safety					
	Health and Safety							

Exceeding Progress in DT

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Exceeding Students Can:

Knowledge and Understanding: Written Assessment.

- Recall all required curriculum key terms
- Link all required curriculum key terms to pictures or meanings and understand some application
- State the meanings of all required curriculum key terms
- Create topic related diagrams with all of the required detail
- Add all required labels to diagrams or drawings
- Use a sound level of subject knowledge to explain, justify or evaluate topic based concepts
- Overall demonstrate very good subject knowledge and understanding

Analysis and Design: Exercise Books and Sketch Books.

- Include all analysis points to explain, justify or evaluate work
- · Present all work clearly and methodically with excellent individuality

Practical: Workshop Tasks.

- Identify and use all equipment, processes and materials independently
- Demonstrate independence and skill throughout all practical tasks
- Demonstrate independent decision making and problem solving in all tasks
- Produce a good quality outcome independently
- Identify all specific risks and work safely with some guidance

		Assessment 1: Workbooks Sustainability and Environment Writing a Context	Assessment 4: Workbooks Energy Generation & Sources			
In Year 7, students Knowledge journey includes			Assessment 1: Workbooks Design Process Product Analysis (NEJE)	Assessment 4: Workbooks Structures Forces	Modelling Development and Analysis Papers and Boards Paper Processing	Automation Motions Mechanism Development
	Assessment 1: Workbooks	Assessment 4: Workbooks	Idea Generation	Assessment 5: Practical	CAD/CAM	Perspective Drawing
	Introduction to DT	Pewter Casting Process	Specification	Practical: STEM Challenges	Evaluating	Evaluating
	Product Analysis (5 W's)	Idea Generation	Isometric Drawing	Assessment 6: Written Tests	Assessment 2: Practical	Assessment 5: Practical
	Idea Generation	Assessment 5: Practical	Rendering	Structures	Workshop Tasks (Slot Toy &	Workshop Tasks: Nuclear Reactor
	Modelling & Development	Practical: Pewter Casting (Metals &	Evaluating	Forces	CAD/CAM)	Assessment 6: Written Tests
	Isometric Drawing	CAD/CAM)	Assessment 2: Practical	Triangulation	Assessment 3: Mock Exam	Energy Generation & Sources
	Rendering	Assessment 6: Written Tests	Workshop Tasks: Night Light (Timbers and PCB	Equilibrium	Workshop Tools and Equipment	Systems & Control
	Evaluating	Metal and Plastic Categories	Manufacture)	Technology Based Problem Solving	Material Categories	Electronic Components for Control
	Assessment 2: Practical	Metal and Plastics Sources and the	Assessment 3: Written Tests		Sustainability	Circuits
	Workshop Tasks: Moneybox (Timber)	Environment	NEJE Analysis	Also includes knowledge and skills	Product Life Cycle	Automation
	Assessment 3: Written Tests	Pewter Casting Process	Categories of Materials	from year 7	Environmental Impacts	Mechanisms
	Properties of Materials	CAD/CAM	Properties of Materials		Modelling	
	Timber Categories		Timber Sources and Processing Workshop Tools			Also includes knowledge and skills from
	Timber Sources and the Environment		CAD/CAM			year 7 & 8
	Workshop Tools		Electronic Components for Sensing's Circuits			
	Joining Timbers		Health and Safety			
	Health and Safety					

Excelling Progress in DT

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Excelling Students Can:

Knowledge and Understanding: Written Assessment.

Recall all required curriculum key terms with links to wider vocab

- Link all required curriculum key terms to pictures or meanings and understand application
- State the meanings of all required curriculum key terms with detail
- Create topic related diagrams with all of the required detail completed to high degree
- Add all required labels to diagrams or drawings and consider further links
- Overall demonstrate excellent subject knowledge and understanding with depth.
- Use sound level of subject knowledge to explain, justify or evaluate topic based concepts with a high degree of detail

Analysis and Design: Exercise Books and Sketch Books.

- Include all analysis points to explain, justify or evaluate work with a high degree of detail
- Present all work clearly and methodically with high degree of creativity and individuality

Practical: Workshop Tasks.

- Identify and use all equipment, processes and materials independently including experimentation
- Demonstrate a very high level of independence and skill throughout all practical tasks
- Demonstrate independent decision making and problem solving in all tasks with quality control checks evident.
- Produce a very high quality outcome independently
- Identify all specific risks, work safely and independently

In Ye	Assessment 1: Workbooks Sustainability and Environment Writing a Context	Assessment 4: Workbooks Energy Generation & Sources Systems & Control			
In Voor 7, students Kno	wlodgo journov includos	Assessment 1: Workbooks	Assessment 4: Workbooks	Modelling Development and Analysis	Automation
in real 7, students kno	wieuge journey includes	Design Process	Structures	Papers and Boards	Motions
		Product Analysis (NEJE)	Forces	Paper Processing	Mechanism Development
Assessment 1: Workbooks	Assessment 4: Workbooks	Idea Generation	Assessment 5: Practical	CAD/CAM	Perspective Drawing
Introduction to DT	Pewter Casting Process	Specification	Practical: STEM Challenges	Evaluating	Evaluating
Product Analysis (5 W's)	Idea Generation	Isometric Drawing	Assessment 6: Written Tests	Assessment 2: Practical	Assessment 5: Practical
Idea Generation	Assessment 5: Practical	Rendering	Structures	Workshop Tasks (Slot Toy &	Workshop Tasks: Nuclear Reactor
Modelling & Development	Practical: Pewter Casting (Metals &	Evaluating	Forces	CAD/CAM)	Assessment 6: Written Tests
Isometric Drawing	CAD/CAM)	Assessment 2: Practical	Triangulation	Assessment 3: Mock Exam	Energy Generation & Sources
Rendering	Assessment 6: Written Tests	Workshop Tasks: Night Light (Timbers and PCB	Equilibrium	Workshop Tools and Equipment	Systems & Control
Evaluating	Metal and Plastic Categories	Manufacture)	Technology Based Problem Solving	Material Categories	Electronic Components for Control
Assessment 2: Practical	Metal and Plastics Sources and the	Assessment 3: Written Tests		Sustainability	Circuits
Workshop Tasks: Moneybox (Timber)	Environment	NEJE Analysis	Also includes knowledge and skills	Product Life Cycle	Automation
Assessment 3: Written Tests	Pewter Casting Process	Categories of Materials	from year 7	Environmental Impacts	Mechanisms
Properties of Materials	CAD/CAM	Properties of Materials		Modelling	
Timber Categories		Timber Sources and Processing Workshop Tools			Also includes knowledge and skills from
Timber Sources and the Environment		CAD/CAM			year 7 & 8
Workshop Tools		Electronic Components for Sensing's Circuits			
Joining Timbers		Health and Safety			
Health and Safety					



Content

Jesmond Park Academy

Timber sources and the Environment

My KS3 DT Learning Journey

-		Knowledge & Understanding	Analysis & Design	Realisation: Practical
	Emerging	Recall some basic curriculum key terms Link some basic curriculum key terms to pictures or meanings State the meanings of some basic curriculum key terms Add some basic labels to diagrams or drawings Use some basic subject knowledge to explain, justify or evaluate topic based concepts Overall demonstrate basic subject knowledge and understanding	Include some basic analysis to explain, justify or evaluate work with assistance Create topic related diagrams with some of the basic detail Present some work clearly with assistance	Identify and use simple equipment, processes and materials with assistance Demonstrate basic skills with assistance Make simple decisions and problem solve with assistance Produce a basic outcome with assistance Identify some general risks and work safely with assistance
S	Developing	Recall most basic curriculum key terms Link most basic curriculum key terms to pictures or meanings State the meanings of most basic curriculum key terms Add most basic labels to diagrams or drawings Use some required subject knowledge to explain, justify or evaluate topic based concepts Overall demonstrate fair subject knowledge and understanding	Include some basic analysis to explain, justify or evaluate work with guidance Create topic related diagrams with most of the basic detail Present most work clearly with guidance	Identify and use most equipment, processes and materials with guidance Demonstrate some independence and basic skills with guidance Make simple decisions and problem solve with guidance Produce a basic outcome with guidance Identify some general risks and work safely with guidance
	Achieving	Recall most required curriculum key terms Link most required curriculum key terms to pictures or meanings State the meanings of most required curriculum key terms Add most required labels to diagrams or drawings Use most required subject knowledge to explain, justify or evaluate topic based concepts Overall demonstrate good subject knowledge and understanding	Include most analysis points to explain, justify or evaluate work Create topic related diagrams with most of the required detail Present all work clearly and methodically	Identify and use most equipment, processes and materials independently Demonstrate independence and skill throughout most practical tasks Demonstrate independent decision making and problem solving in most tasks Produce a fair quality outcome with some guidance Identify most specific risks and work safely with guidance
(\mathbf{S})	Exceeding	Recall all required curriculum key terms Link all required curriculum key terms to pictures or meanings and understand some application State the meanings of all required curriculum key terms Add all required labels to diagrams or drawings Use a sound level of subject knowledge to explain, justify or evaluate topic based concepts Overall demonstrate very good subject knowledge and understanding	Include all analysis points to explain, justify or evaluate work Create topic related diagrams with all of the required detail Present all work clearly and methodically with excellent individuality	Identify and use all equipment, processes and materials independently Demonstrate independence and skill throughout all practical tasks Demonstrate independent decision making and problem solving in all tasks Produce a good quality outcome independently Identify all specific risks and work safely with some guidance
	Excelling	Recall all required curriculum key terms with links to wider vocab Link all required curriculum key terms to pictures or meanings and understand application State the meanings of all required curriculum key terms with detail Add all required labels to diagrams or drawings and consider further links Overall demonstrate excellent subject knowledge and understanding with depth. Use sound level of subject knowledge to explain, justify or evaluate topic based concepts with a high degree of detail	Include all analysis points to explain, justify or evaluate work with a high degree of detail Create topic related diagrams with all of the required detail completed to a high degree Present all work clearly and methodically with high degree of creativity and individuality	Identify and use all equipment, processes and materials independently including experimentation Demonstrate a very high level of independence and skill throughout all practical tasks Demonstrate independent decision making and problem solving in all tasks with quality control checks evident. Produce a very high quality outcome independently Identify all specific risks, work safely and independently

In Year 8, students Knowledge journey increases in Challenge to include Assessment 1: Workbooks Sustainability and Environment Energy Generation 8			Assessment 4: Workbooks Energy Generation & Sources		
In Year 7, students Knowledge journey includes		Assessment 1: Workbooks Design Process	CAD/CAM Electronic Components for Sensing's Circuits	Writing a Context Modelling Development and Analysis Paners and Boards	Systems & Control Automation Motions
Assessment 1: Workbooks Introduction to DT Product Analysis (5 W's) Idea Generation Modelling & Development Isometric Drawing Rendering Evaluating Assessment 2: Practical Workshop Tasks: Moneybox (Timber) Assessment 3: Written Tests Properties of Materials	Workshop Tools Joining Timbers Health and Safety Assessment 4: Workbooks Pewter Casting Process Idea Generation Assessment 5: Practical Practical: Pewter Casting (Metals & CAD/CAM) Assessment 6: Written Tests Metal and Plastic Categories Metal and Plastic Sources and the Environment Pewter Casting Process CAD/CAM	Product Analysis (NEJE) Idea Generation Specification Isometric Drawing Rendering Evaluating <u>Assessment 2: Practical</u> Workshop Tasks: Night Light (Timbers and PCB Manufacture) <u>Assessment 3: Written tests</u> NEJE Analysis Categories of Materials Properties of Materials Timber Sources and Processing Workshop Tools	Health and Safety Assessment 4: Workbooks Structures Forces Assessment 5: Practical Practical: STEM Challenges Assessment 6: Written Tests Structures Forces Triangulation Equilibrium Technology Based Problem Solving Also includes knowledge and skills from year 7	Paper Processing CAD/CAM Evaluating Assessment 2: Practical Workshop Tasks (Slot Toy & CAD/CAM) Assessment 3: Mock Exam Workshop Tools and Equipment Material Categories Sustainability Product Life Cycle Environmental Impacts Modelling	Mechanism Development Perspective Drawing Evaluating Assessment 5: Practical Workshop Tasks: Nuclear Reactor Assessment 6: Written Tests Energy Generation & Sources Systems & Control Electronic Components for Control Circuits Automation Mechanisms Also includes knowledge and skills from year 7 & 8



Student Learning Journey: Progress in DT

		Knowledge & Understa	anding		Analysis & Design	R	ealisation: Practical
Emerging Recall some basic curriculum key terms Link some basic curriculum key terms to pictures or meanings State the meanings of some basic curriculum key terms Add some basic labels to diagrams or drawings Use some basic subject knowledge to explain, justify or evaluate topic based concept: Overall demonstrate basic subject knowledge and understanding State the concept state of the source of the sou		oncepts	Include some b assistance Create topic re Present some v	basic analysis to explain, justify or evaluate work with lated diagrams with some of the basic detail work clearly with assistance	Identify and use simple equipment, pro Demonstrate basic skills with assistance Make simple decisions and problem sol Produce a basic outcome with assistanc Identify some general risks and work sa	cesses and materials with assistance e ve with assistance .e ıfely with assistance	
Developing Recall most basic curriculum key terms Link most basic curriculum key terms to pictures or meanings State the meanings of most basic curriculum key terms Add most basic labels to diagrams or drawings Use some required subject knowledge to explain, justify or evaluate topic based concepts Overall demonstrate fair subject knowledge and understanding Includi guidan Create Preser Achieving Recall most required curriculum key terms Link most required curriculum key terms State the meanings of most required curriculum key terms Add most required labels to diagrams or drawings Use most required labels to diagrams or drawings Use most required labels to diagrams or drawings Overall demonstrate good subject knowledge and understanding Includi			Include some b guidance Create topic re Present most v	asic analysis to explain, justify or evaluate work with lated diagrams with most of the basic detail work clearly with guidance	Identify and use most equipment, processes and materials with guidance Demonstrate some independence and basic skills with guidance Make simple decisions and problem solve with guidance Produce a basic outcome with guidance Identify some general risks and work safely with guidance Identify and use most equipment, processes and materials independently Demonstrate independence and skill throughout most practical tasks Demonstrate independent decision making and problem solving in most tasks Produce a fair quality outcome with some guidance Identify and use all equipment, processes and materials independently Demonstrate independence and skill throughout most practical tasks Produce a fair quality outcome with some guidance Identify most specific risks and work safely with guidance Identify and use all equipment, processes and materials independently Demonstrate independence and skill throughout all practical tasks Demonstrate independence and skill throughout all practical tasks Demonstrate independent decision making and problem solving in all tasks Produce a good quality outcome independently Identify all specific risks and work safely with some guidance		
			Include most a Create topic re Present all wor	nalysis points to explain, justify or evaluate work lated diagrams with most of the required detail k clearly and methodically			
Exceeding Recall all required curriculum key terms Link all required curriculum key terms to pictures or meanings and understand some application State the meanings of all required curriculum key terms Add all required labels to diagrams or drawings Use a sound level of subject knowledge to explain, justify or evaluate topic based concepts Overall demonstrate very good subject knowledge and understanding Excelling Recall all required curriculum key terms with links to wider vocab Link all required curriculum key terms to pictures or meanings and understand application State the meanings of all required curriculum key terms with links to wider vocab Link all required labels to diagrams or drawings and consider further links Overall demonstrate excellent subject knowledge and understanding with depth. Use sound level of subject knowledge to explain, justify or evaluate topic based concepts a high degree of detail		l some application sed concepts	Include all analysis points to explain, justify or evaluate work Ider Create topic related diagrams with all of the required detail Der Present all work clearly and methodically with excellent individuality Pr Ide				
		vocab ngs and understand application th detail er further links erstanding with depth. evaluate topic based concepts with	Include all a evaluate w Create topi detail comp Present all degree of c	analysis points to explain, justify or ork with a high degree of detail c related diagrams with all of the required bleted to a high degree work clearly and methodically with high reativity and individuality	Identify and use all equipment, processes and materials independentl experimentation Demonstrate a very high level of independence and skill throughout a tasks Demonstrate independent decision making and problem solving in all quality control checks evident. Produce a very high quality outcome independently Identify all specific risks, work safely and independently		
In Year 9, the students Knowled					ncreases in Challenge further to include		
In Year 8, students Knowledge journey increases in Challenge to in In Year 7, students Knowledge journey includes Assessment 1: Workbooks Design Process Assessment 1: Workbooks Workshop Tools Joining Timbers Design Process Introduction to DT Joining Timbers Health and Safety Specification Product Analysis (5 W's) Health and Safety Biometric Drawing Modelling & Development Pewter Casting Process Rendering Isometric Drawing Idea Generation Specification			CAD/CAM Electronic components for Sensing's Circuits	Assessment 1: Workbooks Sustainability and Environment Writing a Context Modelling Development and Analysis Papers and Boards	Assessment 4: Workbooks Energy Generation & Sources Systems & Control Automation Motions		
		Product Analysis (NEJE) Idea Generation Specification Isometric Drawing Rendering Evaluating Assessment 2: Practical		Health and Safety Assessment 4: Workbooks Structures Forces Assessment 5: Practical Practical: STEM Challenges Assessment 6: Written Tests	Paper Processing CAD/CAM Evaluating Assessment 2: Practical Workshop Tasks (Slot Toy & CAD/CAM) Assessment 3: Mock Exam	Mechanism Development Perspective Drawing Evaluating Assessment 5:Practical Workshop Tasks: Nuclear Reactor Assessment 6: Written Tests	

		Assessment 1: Workbooks Sustainability and Environment	Assessment 4: Workbooks Energy Generation & Sources		
In Year 7, students Knowl Assessment 1: Workbooks Introduction to DT Product Analysis (5 W's) Idea Generation Modelling & Development Isometric Drawing Idea	vledge journey includes orkshop Tools ining Timbers alath and Safety <u>sessment 4: Workbooks</u> wter Casting Process as Generation	Assessment 1: Workbooks Design Process Product Analysis (NEJE) Idea Generation Specification Isometric Drawing Rendering Evaluating	CAD/CAM Electronic components for Sensing's Circuits Health and Safety <u>Assessment 4: Workbooks</u> Structures Forces <u>Assessment 5: Practical</u> Practical: STEM Challenges	Sustainability and Environment Writing a Context Modelling Development and Analysis Papers and Boards Paper Processing CAD/CAM Evaluating Assessment 2: Practical Workshop Tasks (Slot Toy & CAD/CAM) Assessment 3: Mock Exam	Energy Generation & Sources Systems & Control Automation Motions Mechanism Development Perspective Drawing Evaluating Assessment 5:Practical Workshop Tasks: Nuclear Reactor Assessment 6: Written Tests
Rendering Asset Evaluating Practical Assessment 2: Practical Asset Workshop Tasks: Moneybox Metrix (Timber) Metrix Assessment 3: Written Tests Pew Properties of Materials CAE Timber Categories Timber Sources and the Environment	sessment 5: Practical actical: Pewter Casting (Metals & CAD/CAM) sessment 6: Written Tests etal and Plastic Categories etal and Plastics Sources and the Environment wter Casting Process ID/CAM	Assessment 2: Practical Workshop Tasks: Night Light (Timbers and PCB Manufacture) Assessment 3: Written Tests NEJE Analysis Categories of Materials Properties of Materials Timber Sources and Processing Workshop Tools	ussessment 6: Written Tests Assession tructures Worksi orces Materi riangulation Produc quilibrium Produc echnology Based Problem Solving Enviror <i>Modell Modell</i>	Workshop Tools and Equipment Material Categories Sustainability Product Life Cycle Environmental Impacts Modelling	Energy Generation & Sources Systems & Control Electronic Components for Control Circuits Automation Mechanisms Also includes knowledge and skills from year 7 & 8