Design & Technology Disciplinary Literacy Framework

Problem Solve like a Designer.

Reading	***Writing***	***Speaking and Listening***
Research and study skills including the effective use of the D&T revision guide: skimming, use of index and glossary. To summarise key information as clear, organised notes (cheat sheets) which can be used to support memory recall.	Writing a design brief and specification criteria. Keeping a working diary demonstrating logic and the ability to summarise key stages in practical processes. Written responses demonstrating understanding of concepts and use effective sentence structure. Evaluate and compare different approaches and technologies eg Renewable vs. Non-renewable energy sources. Plan and draft a formal presentation. Secure the correct spellings of keywords and define and deploy these with precision. Summarise research findings demonstrating effective interpretation of data and other findings to draw conclusions. Write to persuade, argue and advise.	Use talk as a tool for clarifying ideas. Identify and report the main points arising from a discussion. Recognise and build on other contributions. Collaborative Problem solving when generating a design proposal. Ask questions to clarify and refine ideas. Use talk to question, hypothesise, speculate, and evaluate. Make a formal presentation in standard English.
Strategies/pedagogy to support…		
Dual Coding. Comprehension questions to check for understanding. Bedrock mapper sequenced to pre-teach vocabulary. Guided Reading and teacher modelling.	Expert modelling from the teacher. Sentence starters and making lists using mini white boards to relieve cognitive load. Warm up the words (pre teaching key vocabulary).	Planned Questioning from the teacher. Teacher modelling how to build on a response and targeting questioning to develop response from all students. Talk for writing.

	Bedrock mapper sequenced to pre-teach vocabulary. Teacher led writing frames and examples (I do, you do, we do). Memory recall practice and self-assessment (flipped learning homework and lesson activities) Talk for writing.	Group discussions to help develop and refine ideas.

Curriculum opportunities (Year 9)					
HT1	**HT2**	**HT3**	**HT4**	**HT5**	**HT6**
Write a design brief and specification criteria for their amp design. Extended written responses demonstrating understanding of quality control in manufacture. Make cheat sheets for flipped learning tests (weekly) to summarise key information and practice memory recall. Bedrock lesson 1 booked into computer room (to be arranged)	Research the art deco design movement and summarise key findings and draw conclusions which demonstrate sound understanding of key ideas. Secure understanding of high frequency specialist vocabulary, specifically CAD, CAM, datum points and CNC and explore their context in D&T. Evaluate and compare the advantages of CAD/CAM and traditional manufacturing methods and the impact these have on sustainability and wider social issues.	Evaluate and compare the use of renewable and non-renewable technologies, summarise key concepts and present these as an extended written response with effective sentence structure. Use talk to question, hypothesise, speculate, and evaluate their turbine blade design ideas and aid iterations during design development and modelling. Write a letter to a local MP - using scaffolding and modelling - to advise and persuade that Crawley adopts more renewable energy sources and the benefits this would have	Draw conclusion from primary and secondary research sources which can be used to formulate a design brief and specification. Keeping a working diary demonstrating logic and the ability to summarise key stages in practical processes. Secure the correct spellings of keywords and define and deploy these with precision. Bedrock lesson 2 booked into computer room (to be arranged)	Plan and draft a formal presentation about inclusive design and how they have incorporated to good design principles to develop their street furniture design proposal. Make the presentation in formal English. Group discussion around inclusive design principles, identifying and examples of good practice and developing proposals for improvement.	Extended written responses demonstrating understanding of inclusive design and user needs. Secure understanding of high frequency specialist vocabulary, specifically Ergonomics and Anthropometrics. Bedrock lesson 3 booked into computer room (to be arranged)

		on the local community and wider environment.			