

High Tunstall College of Science Curriculum Intent

Subject: Smart & modern materials Year: 9

Rotation



Topic: Smart & modern materials

	Design and Technology	Progress		
Topic	Key ideas	R	A	G
Smart & modern materials	I can investigate new and emerging technologies			
	I can explain developments in design and technology and its impact on industries			
	I can explain how developments have affected society			
	I can demonstrate what a design brief is			
	I can suggest solutions to a problem			
	I can explore, mark and print colour techniques and e knowledge of printing techniques			
	I can explain the difference between natural and synthetic materials			
	I can investigate different construction methods in the textile industry			

Lesson	Learning Focus	Assessment	Key Words
1 & 2	What is the difference between a smart and a modern material? What industries use these materials?	ILO: 4 tasks available to complete (one per week)	Modern, Smart, Kevlar, Goretex, Stimuli
3 & 4	Design task—can you design for the 2020 Olympics? Use of smart and modern materials within a design context.	Evaluation of design	Design, Iterative, Materials, Research, Annotate, Brief, Design considerations
5 & 6	How does a brief and a context differ? Can you create a product for a given consumer? Can you understand what the consumer wants?	Formative questioning and green pen	Product analysis, brief, context, materials, considerations, wants and needs
7 & 8	Can you list some printing techniques? Why do materials use printing techniques? Produce repeat patterns as preparation for printing techniques.	Completed repeat pattern in books	Repeat pattern, tessellation, rendering, accuracy, mirroring, manufacturing, tolerance, process
9 & 10	Can you expand the technique on to lino? Can you use accuracy with different tools?	Created lino print to use as a stamp	Lino, repeat pattern, health and safety, block printing, ink roller
11 & 12	Formal rotation assessment and feedback lessons	Formative questioning and green pen	Literacy, assessment