Hope Valley College Curriculum

Design & Technology – Key Stage 3 (Years 7, 8 and 9)

Hope Valley College

Chorus Education Trust

Students rotate around the technology areas throughout the year

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D&T - WOODY				D&T - ELECTRONIC NIGHT LIGHT				FOOD - NUTRITION & FOOD: BASIC SKILLS, H&S and Diet				TEXTILES - HANDSTITCHED FELT MONSTER				SUSTAINABLE DESIGN - RECYCLED ITEM			
RESEARCH	DESIGN	MAKE	ANALYSE / EVALUATE	RESEARCH	DESIGN	MAKE	ANALYSE / EVALUATE	RESEARCH		MAKE	ANALYSE	RESEARCH	DESIGN	MAKE	EVALUATE	RESEARCH	EXPERIMENT / DESIGN	MAKE	EVALUATE
	Design strategies, 2D and 3D sketching rendering	A toy woody: Wood joints, cutting, finishing, drilling	Product evaluation	Create specification and look into why we are designing product. What resistors are and where to use them	Specification creates and 3-4-5 Design ideas, CAD/CAM, Isosketch	Night light; Soldering, laser cutting, assembly	Circuit testing, product evaluation	Basic Knife Skills & Basic Cooking skills	Use of Equipment	Health, Hygiene & Safety	Eatwell Guide and Introduction to nutrition	Create; moodboard for inspiration of monsters, spider diagram saying what makes a monster a monster, Play Bingo to learn key stitches and components	3 Design ideas created, coloured using rendering and labelled with technical information; stitches, components, fabric and stuffing	Felt Monster; Hand stitching, components, templates, cutting	Analyse design brief by highlighting keywords and discussing what it is asking for. Evaluate final monster using +/-'s	Create; moodboard for inspiration of recycled items (ideas and designers), spider diagram showing what they have available to them to recycle, Learn about the 6 R's	3 Design ideas created, coloured using rendering and labelled with technical information. Begin experiments to determine if designs are possible.	Recycled item. Find out who / what can support them in making their item (teachers, technicians, family, youtube etc…)	Analyse design brief by highlighting keywords and discussing what it is asking for. Evaluate final product using eco-web

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D&T – WOODEN ROBOTIC TOY				ENGINEERING - METAL INSECT				FOOD: EXPLORING NUTRITION & FOOD: ONE POT DISHES				TEXTILES - KANDINSKY CUSHIONS				SUSTAINABLE DESIGN – BOARD GAME			
RESEARCH	DESIGN	MAKE	ANALYSE	RESEARCH	DESIGN	MAKE	ANALYSE / EVALUATE	MAKE	RESEARCH		ANALYSE	RESEARCH	DESIGN	MAKE	ANALYSE / EVALUATE	RESEARCH	DESIGN	MAKE	ANALYSE / EVALUATE
Product Analysis: ACCESSFM	Iso-sketch, and tinker card	Laser cutting, wooden permanent and temporary joints, veneers, CAD/CAM	Product evaluation	Product Analysis: ACCESSFM	Foam modelling, Design ideas, 2 elevations	**Insect:** Metal processes, brazing,	Product evaluation	Use of commodities in practical dishes	Factors affecting food choice	Energy & Micro & Micro Nutrients	Allergies & intolerances	Find out about Artist Kandinsky, his medical condition SYNAESTHESIA	Create a range of initial ideas responding to music. Peer asses and then create final cushion design.	**Cushion:** Learn how to use a sewing machine and surface decoration to create a Kandinsky inspired cushion	Analyse design brief by highlighting keywords and discussing what it is asking for. Create step by step and evaluate final product in sentences thinking about improvements.	Different types of plastics, focusing on those that are sustainable and environmentally friendly	A sustainable board game that can be used by families. Considering materials and environmental impact.	Travel board game used by families in as sustainable way as possible.	Analyse design brief by highlighting keywords and discussing what it is asking for. Evaluate final product.

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FOOD				TEXTILES			ENGINEERING			ENGINEERING			SUSTAINABILITY			
EXPLORING NUTRITION & FOOD: COMPLEX MAINS & SIDES, FOOD CHOICE AND SPECIAL DIETARY NEEDS				AFRICAN HANDWARMERS - PROTOTYPE FOR MASS MARKET			Engineering: Survival Tool			D&T: Lighting			Sustainability: Food Technology			
Principles of home baking; pastries, breads and cakes. Complex main meals & side accompaniments	Factors affecting food choice	Allergies & Intolerances	Energy & Macro and Micro Nutrients	Research: Mood board on African patterns. Mass market customer profiling. Production methods. Fabric Tests / selections. (AO1)	**AFRICAN HAND WARMER**. Design & Make: Design African handwarmers, create templates. Sample decorative techniques: batik, free hand machine embroidery, Thermochromic paints then make.	Step by step and Evaluate (AO3&AO4)	ACCESS FM, Design ideas for alternative functions, Autodesk Inventor or Fusion 360	**Survival Tool:** Metal processes, machine tools including lathe and milling machine, CAD CAM, CNC lathe	Final product evaluation, test of functionality and use.	Product design, including application of CAD	Practical: make a LED light	Final product evaluation, test of functionality and use.	Research the environmental factors that affect food; availability, transportation, food miles, organic foods & water.	Propose a range of dishes and choose 2 to produce for life stages. Produce a shopping & equipment list and timeplan for each dish.	Make two dishes. Nutritionally suitable for life stages set out in brief given to students.	Analyse brief and explain what will need to be undertake to meet the brief. Evaluate the decision making and final dishes.