

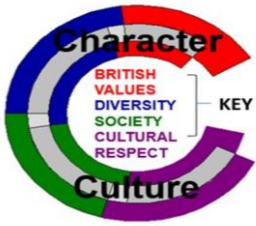
year 8 - Bilton School Planning for Progress over Time - Design and Technology Programme of Study

INTENT: To play a part in developing knowledge and understanding of the Design and Technology National Curriculum. Students are to apply their Resistant Materials Skills and knowledge over time by designing a book end.

The bigger picture: This scheme plays an important role within the technology curriculum as it is essentially teaching skills from the National Curriculum and preparing students for the challenges of key stage 4. The Next Step: This unit is preparation for the Engineering Design Course at Key stage 4. In particular, it focusses on Unit R107: Which is focussed on designing and developing design ideas using CAD.

Key Stage 3	Carousel - Topic 2 (Engineering Design - RM)										
	1	2	3	4	5	6	7	8	9	10	
Lesson Objective:	Lesson 1: Health & safety, Introduction to the project, Design brief and analysis of the brief. Lesson 2: Marking out the comb joint.	Lesson 3: Specification. Lesson 4: Cutting out the Comb joint.	Lesson 5: FAR Assessment 1 - Designing the tablet stand. Lesson 6: FAR 1 Review and Cutting out the comb joint.	Lesson 7: Finishing and gluing of the comb joint. Lesson 8: Design development and final design.	Lesson 9: Finishing of the comb joint (filling and sanding the surfaces of the wood). Lesson 10: Personalisation of the comb joint. MDF pieces marked out and cut out. Alternatively CAD and the laser cutter used to design and make MDF pieces.	Lesson 11: Personalisation of the comb joint finished by sanding/filling and painting MDF pieces. Lesson 12: Finishing of the Comb joint (sanding and wax finish applied to the wood).	Lesson 13: Finishing the Acrylic piece (cross filling & draw filling and using wet and dry paper to finish the edges). Lesson 14: Shaping the Acrylic (strip heater used to form the shape of the stand).	Lesson 15: Assembly of the tablet stand (MDF pieces and acrylic stand attached). Lesson 16: FAR Assessment 2 - Evaluation of practical work.	Extension tasks: Mood board of existing products, survey collection and results analysis, wood theory and development prototype.		
Progress and assessment	Each teacher will FAR assess 2 aspects throughout the rotation and will assess using the criteria NYA, PASS, MERIT, DISTINCTION. All assessment feedback will be put onto a <u>departmental tracker</u> sheet that will rotate throughout the carousel. 1. FAR: Designing task – week 3 2. FAR: Practical – week 8 – this allows time for departmental moderation.										
Homework	Overview: There will be 2 homework quizzes on Microsoft Forms online, this will be done via TEAMS. The assessments are out of 12 and in the format of a multiple choice question and answer. The focus of the questions is to increase students understanding of resistant Materials, the national curriculum 6 key principles and careers linked to design. (The homeworks have been mapped across the department) *Students absent from lessons or in refocus or boost will use the legacy homework sheets.										
Key Vocabulary /Literacy opportunities	Design brief, specification, development, marking out, cutting out/wasting, shaping, finishing, sanding, wax, pine, MDF, acrylic, screws, try square, steel rule, marking guage, tenon saw, coping saw, file, sandpaper, disc sander, fret saw, laser cutter, strip heater.										
Connected Knowledge	Reference to learning map: the big picture. This rotation introduces students to the RM workshop, focusing on H & S, woodwork processes using hand tools and machinery. The design process is also introduced.										
IMPACT: Students will be able to measure progress using department F.A.R tracking sheets and on SIMS through the PLC. This will show progress over time and prepare students for key stage 4 learning at Bilton School.											

IMPLEMENTATION

		Character and Culture
		Character and Culture is embedded within the curriculum map and coded as shown.
		Cross curricular links - Art, Maths, Science, Business, English - Literacy
		END POINTS:At the end of the RM Unit students will be able to: (REFERENCE TO TOPICS, SOL, NC) 1) interpret a brief 2) realise a 3D timber model 3) use CAM for quality finish Buzz words/phrases: Interpret, Analyse, Evaluate They will be able to do this by: 1) Use the design brief to direct ideas 2) Mark out timber, cut using tenon saw and coping saw 3) Develop a final design using 3D drawing techniques.