



Subject Knowledge Audit – D&T (Product Design)

Please decide on your ability to teach the content/skills listed below at KS3/KS4	
KEY:	
4	No knowledge – Currently a gap in my subject area
3	Limited knowledge – Would not feel confident to teach this content
2	Good knowledge – Confident in ability to teach with some guidance
1	Expert knowledge - Confident to teach
The completed subject audit will be used by your Mentor to create your Individual Training Plan. Your progress will be reviewed on a fortnightly basis.	
You should review and record your progress at each review window below (and share this with your Mentor)	

Subject Area: Product Design		Baseline (4 -1)	Dec. (3 -1)	May (3 -1)	Target for ECT year if applicable
Subject Knowledge					
CADCAM	Laser cutter - can set up machines to plot, cut on a range of materials				
	Cad skill- ability to create drawing using subject specific software				
RM	Structural Elements Understand shell & frame structures, types of forces & their effects				
	Materials- Detailed knowledge of a range of woods, metals, plastics & composites				
	Aesthetic quality- able to analyse common products & explain the effect of shape, proportion, texture & pattern on the appearance				
	Lathe- Can demonstrate safe use of machinery & equipment, as well as a range of correct process				
	Milling- Can demonstrate safe use of machinery & equipment, as well as a range of correct process				



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	Reciprocating saw- Can demonstrate safe use of machinery & equipment, as well as a range of correct process				
	Polishing- Can demonstrate safe use of machinery & equipment, as well as a range of correct process				
	Drilling- Can demonstrate safe use of machinery & equipment, as well as a range of correct process				
	Hand held tools Can demonstrate safe use of machinery & equipment, as well as a range of correct process				
	Joining methods- can demonstrate a wide knowledge of temporary & permanent joint in a range of common materials				
Systems & controls	Electronics- Able to identify a range of discrete components				
	Circuit assembly- able to read a circuit diagram, create a PCB & position the components correctly				
	Soldering & fault-finding- solder accurately components on to a circuit board, systematically finding any faults				
	Microprocessor- able to write a simple program to control a chip				
	Computer controls- use appropriate software to set up control systems				
	Subsystems- set up subsystems in the above to refine the operation				
	Feedback Controls- Use sensors & feedback to control simple systems				



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Textiles	Sewing machine- can demonstrate safe use of sewing & embroidery machine as well as a range of correct processes.				
	Hand Sewing- can demonstrate safe use and correct technique				
	Materials – Detailed knowledge of a arrange of fabrics & textiles				
Food	Nutrition Detailed knowledge of food & nutrition				
	Hygiene- Demonstrate safe working practices in the kitchen- hold a basic food hygiene certificate				
	Practical skills- can demonstrate safe use of a wide range of hand & machine technics. As well as a range of correct processes- mixing, folding, beating, weighing etc				
	Characteristics of food- demonstrate a sound understanding of the effect of combining ingredients				
Knowledge of Subject Specific Pedagogy					
	Detailed knowledge of the current National Curriculum				
	Good working knowledge of H&S in D&T. Hold DATA H&S certificate or equivalent				
	Able to analyse products in terms of the materials used, form, function, aesthetics, ergonomics, technical details, new technologies etc.				



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Knowledge of Subject Assessment & Development					
	Detailed knowledge and understanding of the National curriculum, POS & assessment				
	Understand the cyclical nature of design, the value of evaluating at key points				

Child & Adolescent Development within your Subject					
	Appreciate the social & cultural value of design & technology to society				
	Awareness of the positive processes involved in design and making that promote positive mental health				
	Awareness of the positive self-esteem & emotional rewards to be found in the creative processes of D&T				



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Evidence of subject knowledge development

Record below the things you have **read and researched** to improve your subject knowledge in the boxes below.

Term 1	September/ October	November/ December
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Term 2	January/ February	March/ April
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Term 3	May/ June	June/ July
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Please sign this sheet off at the end of the training year:

Signed: _____ (Trainee) Date: _____

Signed: _____ (Mentor) Date: _____