Key Stage 3 Design and Technology handbook

Contents

Students access to the Technology block.

Outside lesson time.

For access outside of lesson time please see poster for the door of the block:

ACCESS TO TECHNOLOGY BLOCK.

You are welcome to enter the Technology block in a calm and sensible manner to use your locker at the following times:

8.20-8.40
11.00-11.20
1.20-1.30
1.50-1.55
3.00-

It is NOT a social area and you are not allowed to eat and drink inside.

Technology/ICT lessons

Students are expected to line up in the year 7 playground in an orderly manner behind the appropriate room number. Staff should collect them from there at or before the start of lesson bell and escort them into the block.

At the end of the lesson students should be escorted out of the block to ensure a calm exit from the building.

Students should not be left unattended in the block or (especially) in Technology rooms.

They should be supervised by a **member of teaching staff** at all times.

Courses

Allocation of lessons

Students have 2 hours a week allocated to Design and Technology throughout Key Stage 3.

Year 7: Students have 1 hour each week in the “Tc” area (Resistant Materials, Graphics and Systems and control) and 1 hour each week in the “He” area (Food Technology and Textiles Technology)

Year 8: Students have 2 hours each week (normally as double lessons) in either the “Tc” area or the “He” area for half the year, then swap to the other area for the second half of the year.

Year 9: Students have 2 hours each week (normally as double lessons) in a circus completing a number of modules across the Design and Technology areas, including both “Tc” and “He” modules. The exact nature and duration of these modules will depend on the band individual students are in and the availability of specialist staff.

Course overviews

Resistant/Graphics/Systems

Projects at key stage 3 in Design and Technology (Resistant Materials area)

Year group	Project title	Duration in hours
7	1. Induction	7
7	2. Memo pad holder	7
7	3. Hand held game	12
7	4. Systems and Control 1	6
7	5. Systems and Control 2	6

Note: projects 1&2 to be completed in the Christmas term, then either project 3 in the spring term and projects 4&5 in the summer term or the other way round.

Year group	Project title	Duration in hours
8	1. Chocolate bar model	12
8	2. Mobile 'phone holder	16
8	3. Systems and Control	10

EITHER (if class is on the 4 group rotation):

Year group	Project title	Duration in hours
9	1. Memphis style clock	36

OR (if class is on the 3 group rotation):

Year group	Project title	Duration in hours
9	1. Memphis style clock	24
9	2. Electronic or graphic product	24

The focus area for project 2 on the short rotation is dependent on the specialism of the timetabled teacher.

Food Technology

Year group	Project title	Duration in hours
7	Safety and hygiene	8
7	Healthy choices	12

Year group	Project title	Duration in hours
8	Healthy Eating	8
8	Family meals and vegetarian choices	10

Year group	Project title	Duration in hours
9	Multicultural bread and meal	12

If group is on 9 week circus, staff to cook a selection of family meals with them.

Textiles Technology

Projects at key stage 3 in Design and Technology (Textiles area)

Year group	Project title	Duration in hours
7	1. Puppet	20
8	2. Memory cushion	20
9	3. Character doorstop	12 or 18

Note: project 3 will run for 12 hours on the short rotation (W and Y bands) and 18 hours on the long rotation (X and Z bands)

Charging Policy

YEAR 7

Technology	Resistant Materials, Textiles & Food (Project Work and Ingredients) Covers Years 7, 8 &9	(2 payments - £9 due in Oct & £9 in Nov)	£18

YEAR 8

Technology	Res. Mats/Textiles/Food Project Work and Ingredients	Only payable if starting in Year 8	£12

YEAR 9

Technology	Res. Mats/Textiles/Food Project Work and Ingredients	Only payable if starting in Year 9	£6
Technology (P, G & T) Trip	Optional ^	Plumpton College June	£25

Rotations/staffing

Year 7

subject	resistant materials	food and textiles
timing	all year	all year
7W1	JBO TU2	JBO TH5
7W2	SPU TU2	CGO TH5
7W3	JTU TH5	DCH TU2
7W4	SPU TH5	CGO TU2
7X1	KFA M5	JBO TU5
7X2	RJE TU5	CGO M5
7X3	SPU TU1	CGO TU5
7Y1	SPU F5	JBO TU1
7Y2	JTU F5	DCH TU1
7Y3	KFA TU1	CGO F5
7Z1	KFA F1	DCH W5
7Z2	KFA W5	CGO F1
7Z3	KFA F2	CGO W5
7Z4	RJE W5	CGO F2

Year 8

subject		resistant materials (RM), food (F) or textiles (T)			
timing		wk1-wk10	wk11-wk20	wk21-wk30	wk31-wk40
8Y1	thur 3&4	ON SEPARATE ROTATION (SEE BELOW)			
8Y2		ON SEPARATE ROTATION (SEE BELOW)			
8Y3		ON SEPARATE ROTATION (SEE BELOW)			
8W1	wed 3&4	RJE (RM)		CGO (F&T)	
8W2		CGO (F&T)		RJE (RM)	
8W3		SPU (RM)		KFA (F&T)	
8W4		KFA (F&T)		SPU (RM)	
8X1	tues 3&4	KFA (F,T & RM)			
8X2		SPU (RM)		CGO (F&T)	
8X3		CGO (F&T)		SPU (RM)	
8Z1	mon 3&4	SPU (RM)		DCH (F&T)	
8Z2		DCH (F&T)		SPU (RM)	
8Z3		JTU (RM)		CGO (F&T)	
8Z4		CGO (F&T)		JTU (RM)	

timing		wk1-wk13	wk14-26	wk27-wk40
8Y1	thur 3&4	SPU (RM)	JTU (RM)	CGO (F&T)
8Y2		CGO (F&T)	SPU (RM)	JTU (RM)
8Y3		JTU (RM)	CGO (F&T)	SPU (RM)

Year 9

									S&T reports start	final level
WEDS	1.9.14	24.11.14		1.12.14	9.3.15		16.3.15	22.6.15	9.11.15	6.6.16.
1&2	wk 1A	wk12B		wk13A	wk24B		wk25A	wk36B	wk10B	wk34B
9X1	KFA (9X1)			CGO (9X2)			RJE (9X3)		KFA (9X1)	RJE (9X3)
	Memphis clock			textiles	food		Plant water monitor			
9X2	CGO (9X2)			RJE (9X3)			KFA (9X1)		CGO (9X2)	KFA (9X1)
	textiles	food		Plant water monitor			Memphis clock			
9X3	RJE (9X3)			KFA (9X1)			CGO (9X2)		RJE (9X3)	CGO (9X2)
	Plant water monitor			Memphis clock			textiles	food		
FRI	1.9.14	24.11.14		1.12.14	9.3.15		16.3.15	22.6.15		
3&4	wk 1A	wk12B		wk13A	wk24B		wk25A	wk36B		
9Y1	KFA (9Y1)			JTU (9Y2)			JBO (9Y3)		KFA (9Y1)	JBO (9Y3)
	Memphis clock			Plant water monitor			textiles	food		
9Y2	JTU (9Y2)			JBO (9Y3)			KFA (9Y1)		JTU (9Y2)	KFA (9Y1)
	Plant water monitor			textiles	food		Memphis clock			
9Y3	JBO (9Y3)			KFA (9Y1)			JTU (9Y2)		JBO (9Y3)	JTU (9Y2)
	textiles	food		Memphis clock			Plant water monitor			

						S&T reports start	final level
THUR	1.9.14	19.1.15		26.1.15	22.6.15	9.11.15	6.6.16.
1&2	wk 1A	wk18B		wk19A	wk36B	wk10B	wk34B
9W1	KFA (9W1)			RJE (9W3)		KFA (9W1)	RJE (9W3)
	Clock	Plant mate		Plant mate	Clock		
9W2	JBO (9W2)			CGO (9W4)		JBO (9W2)	CGO (9W4)
	food	textiles		textiles	food		
9W3	RJE (9W3)			KFA (9W1)		RJE (9W3)	KFA (9W1)
	Plant mate	Clock		Clock	Plant mate		
9W4	CGO (9W4)			JBO (9W2)		CGO (9W4)	JBO (9W2)
	textiles	food		food	textiles		
MON	1.9.14	19.1.15		26.1.15	22.6.15		
3&4	wk 1A	wk18B		wk19A	wk36B		
9Z1	KFA (9Z1)			SPU (9Z3)		KFA (9Z1)	SPU (9Z3)
	Clock	Plant mate		Plant mate	Clock		
9Z2	DCH (9Z2)			CGO (9Z4)		DCH (9Z2)	CGO (9Z4)
	textiles	food		food	textiles		
9Z3	SPU (9Z3)			KFA (9Z1)		SPU (9Z3)	KFA (9Z1)
	Plant mate	Clock		Clock	Plant mate		
9Z4	CGO (9Z4)			DCH (9Z2)		CGO (9Z4)	DCH (9Z2)
	food	textiles		textiles	food		

Assessment and recording of levels:

Suggest progression of levels

guideline progression through the levels at key stage 3.

end of Y9	end of Y8	end of Y7
(KS3 Target)		
7a	6a	5a
7b	6b	5b
7c	6c	5c
6a	6c	5c
6b	5a	4a
6c	5b	4b
5a	5c	4c
5b	4a	4c
5c	4b	3a
4a	4c	3b
4b	3a	3c
4c	3b	2a

End of project levels

At the end of each project students should be assessed and their level/sub level should be written on the front of the corresponding booklet, along with their target level.
The school assessment stamp should be ticked and some formative feedback written on the booklet cover sheet.

This project level should not be taken to be their current level. Their reported current level should be based on the work done over a number of projects, taking account of their existing current level and their target level.

All project levels should be recorded in SIMS on that class' marksheet/tracker. Additionally some projects that are longer or more involved should be reported in SIMS as a "designing level", a "making level" and an "overall level" for that project.

Assessment headings for the trackers in SIMS:

Year 7 Technology: Induction
Year 7 Technology: Memo Pad
Year 7 Technology: Maze Game Designs
Year 7 Technology: Maze Game Practical
Year 7 Technology: Systems

Year 7 Textiles Technology: Puppet Designs
Year 7 Textiles Technology: Puppet Practical
Year 7 Textiles Technology: Puppet Overall

Year 7 Food Technology: Safety And Hygiene - theory
Year 7 Food Technology: Healthy Choices- Theory and practical combined

Year 8 Technology: Fair-trade Chocolate
Year 8 Technology: Mobile 'Phone Holder
Year 8 Technology: Systems

Year 8 Textiles Technology: Cushion Designs
Year 8 Textiles Technology: Cushion Practical

Year 8 Food Technology: Healthy Eating- theory
Year 8 Food Technology: Family Meals- Theory and practical combined

*.Year 8: end of year 8 level

Year 9 Technology: Clock Designs
Year 9 Technology: Clock Practical
Year 9 Technology: Clock Overall
Year 9 Technology: Graphics

Year 9 Textiles Technology: Doorstop Designs
Year 9 Textiles Technology: Doorstop Practical

Year 9 Food Technology: Multicultural Bread and group meal- Theory and practical combined

***.Note:** an extra level is needed at the end of year 8 that is the equivalent of their current level at that time (i.e. a combination of their achievements across that period)

Student portfolios

To allow us to get a good overall picture of a student's ability and assess their progress in line with APP, every student is provided with a plastic display folder into which they transfer examples of their best work across the D&T areas.

Some pieces of work are specified for inclusion (see table below) but a student or teacher could include a limited number of extra pieces if they feel it shows off how well they've done.
Staff will need to encourage students to complete these pieces as well as they can and give them sufficient time to make a good job of completing them.

These files are stored in room 48 and should be kept in school at all times (by staff and students).

Student work to be included

Year group	Resistant	Textiles	Food
7	-Duck Deterrent -One maze idea sheet -Maze final design and evaluation sheet	-Final design idea -Production plan	-Safety poster -Exotic fruit research -Oat cookie evaluation
8	-phone holder product analysis -Best planning from mobile phone holder -Wrapper specification -Bar & wrapper final design and evaluation	-Design specification -Working drawing	-Healthy Eating leaflet -Quiche planning sheet
9	-Best piece of research -Best design sheet -Final design drawing -Plan for making	-Product analysis -Denim information -Design ideas	-Multicultural meal evaluation

Progress reviews

Also to be included in the portfolios are student progress review sheets to be completed every term allowing students to reflect on their successes, look at the levels they have achieved and set targets for what they need to do to get to the next level.

To help them do this, staff should ensure that the following sheets are in the folders at the start of the year:

1. Progress review for year…..
   (a new one of these will need to added each year)
2. Possible targets for consideration
3. D&T assessment guidelines levels 3 to 7

(Details of these sheets are contained in the following 3 pages)

This is good opportunity to open a dialogue with students about what they have done well and how they could improve their work in line with school policy about “learning conversations”.

Students should be encouraged to look back through their work and consider why they were awarded a given level for it by referring to the “assessment guidelines” sheets. At the same time, they should be asking themselves what they would have needed to have done to achieve the next level up.

Termly review sheet

Progress review for year…… Name:…….

Term 1 Date:		Current level:	Target level:
Project Title	**D&T area**	**Level**	**Comment**
To improve my work I need to:			

Term 2 Date:		Current level:	Target level:
Project Title	**D&T area**	**Level**	**Comment**
To improve my work I need to:			

Term 3 Date:		Current level:	Target level:
Project Title	**D&T area**	**Level**	**Comment**
To improve my work I need to:			

Possible targets for consideration

(You may wish to base your targets on some of this list or use your own, but your targets must be specific and achievable, not vague and hard to measure)

Researching:

- Use a range of sources to gather information
- Use my research to help generate ideas
- Analyse my research thoroughly
- Produce detailed criteria for my designs based on my research

Designing:

- Produce a range of different designs
- Draw and label my ideas clearly
- Consider the user when designing
- Annotate and evaluate all my design work
- Develop my proposals to improve them further

Planning:

- Produce step by step plans for my practical work
- Include tools and processes in my planning
- Describe all processes in detail when planning
- Assess risk and Quality control opportunities when planning
- Suggest alternative methods of proceeding when planning
- Say why I have chosen to do things in a specific way

Making:

- Think about the standard of finish for my product
- Use lesson time well by planning what to do thoroughly
- Work independently by referring to my plans throughout
- Check my work regularly to increase accuracy
- Justify any changes made to the product or the method of manufacture

Evaluating:

- Say how changes I made will improve the product
- Think about how and where the product is used when evaluating
- Say what is good and bad about each of my ideas
- Suggest ways my ideas could be improved
- Say how well I have used information throughout the project
- Test and modify my product in use

Communication:

- Check my work carefully
- Take time to present my work neatly so it is easier to understand
- Use colour to improve my presentation
- Use a variety of techniques to communicate my ideas (e.g. sketching, drawing, models, photos, ICT, etc.)

APP level descriptors sheet

D&T Assessment guidelines: Levels 3, 4 and 5 **Pupil name** .....

	AF1: DESIGN	AF2: MAKE	AF3: EVALUATE
L3 c ☐ ☐ a ☐ met	○ Present more than one idea in response to a given design brief. ○ Ideas presented as simple sketches with labels to help explain their designs.	○ Work with a limited range of tools and equipment. ○ Some control shown. ○ Standard of finish considered. ○ Experience working with a number of materials, recognising they have different properties.	○ Use labels and/or notes to say what is good about their designs and what some of the problems might be.
L4 c ☐ ☐ a ☐ met	○ Collect research and use it to help generate a number of different ideas. ○ Consider some of the design criteria and apply these to their ideas. ○ Sketches show some detail and are supported by labels and simple notes to explain their ideas.	○ Work with a range of tools and equipment. ○ Show some accuracy. ○ Attention paid to standard of finish. ○ Experience working with a range of materials, recognising they have different properties and changing their approach to suit these.	○ Use labels and/or notes to say what is good about their designs and what some of the problems might be. ○ Suggest a way their ideas might be improved. ○ Consider how their designs might have an impact on the environment.
L5 c ☐ ☐ a ☐ met	○ Develop specifications that outline the main requirements of their designs. ○ Research existing products and/or design styles and use this to help generate a range of ideas. ○ Different approaches to design problems used so that ideas show more creativity. ○ Sketches are clearly presented and supported by labels and notes to help clarify their ideas. ○ Simple modelling and/or CAD used in their design work.	○ Work with a range of tools and equipment, naming them and saying why they are being used. ○ Largely accurate in their use. ○ Good standard of finish to most parts. ○ Explain why the materials they are using are appropriate and how they have approached working with them.	○ Evaluate their ideas using their specification. ○ Say what does and does not work well in their designs giving reasons for their comments. ○ Suggest improvements to their ideas and refine them as a result of these suggestions. ○ Consider the intended user in their evaluation. ○ Understand that their designs have an impact on individuals, society and the environment.

D&T Assessment guidelines: Levels 6 & 7 **Pupil name** .....

	AF1: DESIGN	AF2: MAKE	AF3: EVALUATE
L6 c ☐ ☐ a ☐ met	○ Use their research to identify design criteria, including user needs. ○ Develop detailed specifications that explain the requirements of their designs, including user needs. ○ Use their specifications to inform the design of their products. ○ Use a variety of approaches to generate a range of creative ideas. ○ Sketches and annotations communicate their design intentions clearly. ○ Modelling and/or CAD used in the development of their ideas.	○ Work with some independence using a range of tools. ○ Select some of the tools needed to complete a task and justify their selection. ○ Good accuracy in all parts of manufacture ○ High standard of finish throughout. ○ Select some of the materials they will use in their products and/or justify their inclusion.	○ Analyse existing products and/or design styles and use the results to support their designing. ○ Use their specification to test and evaluate their ideas as they develop justifying their comments in relation to the product/design context. ○ Understand that designers have a responsibility to consider the wider impact of their products.
L7 c ☐ ☐ a ☐ met	○ Identify a need and present solutions to the problem they have defined. ○ Designs display an element of risk taking to generate a wide range of non-stereotypical responses. ○ Use wider research material to support their designing.	○ Quality (accurate and well finished) products completed largely independently. ○ Select from and use a wide range of tools justifying their selection. ○ Select from and use a wide range of materials and/or justify their inclusion.	○ Investigate new and emerging technologies and consider how these might benefit individuals, society and the environment. ○ Consider how future developments in Design and Technology might influence products and the wider world.

Ref: MBR/TH

September 2014

Dear Parent(s)/Carer(s)

Ref: KS3 Courses in Design and Technology.

During years 7, 8 and 9 (Key Stage 3) your son/daughter will be designing and making products in Design and Technology.

In order to simplify the purchase of materials and other necessary resources and to take advantage of the discounts when buying in bulk, we are asking for a one – off payment of £18.00. This will cover the practical element for the entire Key Stage 3 in all four Design and Technology disciplines. We are able to ask for contributions towards the cost of materials with the understanding that you will then own the items once completed.

You are therefore invited to make a voluntary contribution of **£18.00** to cover these costs. I must, however, inform you that the school would be unable to cover all the costs involved unless all the parents who are able to contribute do so. Limited financial assistance is available in certain cases. If you are unable to contribute you are invited to contact me directly.

Please note that we are now only accepting payment via Parent Pay. If this creates difficulties for you please contact our Bursar, Mrs Julie Cooper directly, either by email at jcooper@imberhorne.co.uk or by telephone via the main switchboard. Payment must be received by Friday 24th October 2014**.**

Yours faithfully

Mr Mark Bradford
Head of Design and Technology