Eastbury comprehensive School

Key stage 3- Design and Technology

Curriculum and learning outcomes

ough a

engaged
n which
y being

broad and
ormed

Mr A Glossop
7/15/2015

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

Year 7 Design & Technology				
Area	Taught in	STRANDS		
		Developing	**Secure**	**Extension**
Technical Knowledge	Graphics Engineer'	-To be able to, with support and guidance, discuss new technologies.	-To be able to, with support and guidance, investigate a new and emerging engineering technology.	-To be able to, with support and guidance, investigate some new and emerging engineering technologies.
	Graphics Engineer' Textiles	- To be able produce a simple flow chart with limited steps of production.	- To be able to use computing to develop a simple flowchart program.	- To be able to use computing and electronics to develop a simple flowchart program.
	Graphics Engineer' Textiles	To understand what material properties are.	-To understand what material properties are and be able to name some general properties of the material being used.	-To understand what material properties are and be able to explain this with the use of technical terminology.
	Engineer'	To understand a number a number of movement and forces that exists in mechanical systems.	-To understand a number of movements and forces that exists in mechanical systems and be able to name them.	-To understand the variety of movements and forces that exist in mechanical systems, being able to name them and explain how some can be altered with a mechanism.
	Engineer'	To be able to name some basic components used in electrical and electronic systems.	- To understand how simple electrical and electronic systems are constructed and know the names of some components.	-To understand how simple electrical and electronic systems are constructed and be able to explain the functions of some components.
Skills	Design	Graphics Textiles	-To be able to use basic research to identify a few user needs and communicate these verbally.	-To be able to use research provided to identify a few needs of the user.	-To be able to use research provided to identify clear user needs.

1

AGL2015

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

		Graphics Engineer' Textiles	-To be able to add limited points to give a basic specification from which a design of a product can be produced.	-To be able to add points to a given, basic, specification from which a design of a product can be produced.	-To be able to further develop a given, basic, specification from which a design of a product can be produced.
		Graphics Engineer' Textiles	-To be able to identify problems with their designs and with guidance verbally suggest a possible solution.	- To be able to identify problems with their designs and with guidance suggest a possible solution.	- To be able to identify problems with their designs and with guidance suggest possible solutions to them.
		Graphics Engineer' Textiles	-To be able to generate a few design ideas.	-To be able to generate a few design ideas with limited and basic annotations.	-To be able to generate a few original design ideas with basic annotations.
		Graphics Engineer' Textiles	-To be able to develop design ideas and communicate these through basic sketches and verbal explanations.	-To be able to develop and communicate design ideas using sketches.	-To be able to develop and communicate design ideas using annotated sketches, digital presentations and basic computer-based tools
	Manufacturing	Graphics Engineer' Textiles	-To be able to use a limited range of materials and components, with a limited understanding of some of their properties.	-To be able to use a limited range of materials and components, with an understanding of some of their properties.	-To be able to use a limited range of materials and components, with a basic understanding of most of their properties.
		Graphics Engineer' Textiles	- With help and guidance, to be able to use a limited range of specialist tools, techniques, processes, equipment and machinery.	- With help and guidance, to be able to use a limited range of specialist tools, techniques, processes, equipment and machinery.	- With help and guidance, to be able to select from and use specialist tools, techniques, processes, equipment and machinery.
Evaluation		Graphics Engineer' Textiles	-To be able to verbally evaluate their ideas and products against a specification.	-To be able to evaluate their ideas and products against a specification.	-To be able to test and evaluate their ideas and products against a specification.

AGL2015

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

	Graphics Engineer' Textiles	With support and guidance, be able to analyse work of past professionals and verbally explain their findings.	-With support and guidance, be able to analyse the work of past professionals and explain their findings.	-With support and guidance, be able to analyse the work of past and present professionals and use this information in their designs.
	Graphics Engineer' Textiles	To understand and verbally explain a few of the basic developments in Design and Technology.	-To understand a few of the developments in design and technology, and its impact on society and the environment.	-To understand a few of the developments in design and technology, its impact on individuals, society and the environment.

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

Year 8 Design & Technology				
Area	Taught in	STRANDS		
		Developing	Secure	Extension
Technical Knowledge	Graphics Engineer'	-To be able to, with support and guidance, investigate a new and emerging engineering technology.	-To be able to, with support and guidance, investigate some new and emerging engineering technologies.	-To be able to, with support and guidance, investigate many of the new and emerging engineering technologies.
	Graphics Engineer' Textiles	- To be able to use computing to develop a simple flowchart program.	- To be able to use computing and electronics to develop a simple flowchart program.	- To be able to use computing and electronics to develop a simple program to control a picaxe board.
	Graphics Engineer' Textiles	-To understand what material properties are and be able to name some general properties of the material being used.	-To understand what material properties are and be able to explain this with the use of technical terminology.	-To understand and be able to explain what material properties are and how they can be used when designing products, with the use of correct technical terminology
	Engineer'	-To understand a number of movements and forces that exists in mechanical systems and be able to name them.	-To understand the variety of movements and forces that exist in mechanical systems, being able to name them and explain how some can be altered with a mechanism.	-To understand the variety of movements and forces that exist in mechanical systems, being able to name them and explain how they can be converted with a range of mechanisms.
	Engineer'	- To understand how simple electrical and electronic systems are constructed and know the names of some components.	-To understand how simple electrical and electronic systems are constructed and be able to explain the functions of some components.	- To understand how simple electrical and electronic systems are constructed and be able to explain how these can be used to within products.
Skills	Graphics Textiles	-To be able to use research provided to identify a few needs of the user.	-To be able to use research provided to identify clear user needs.	-To be able to use guided research to identify a clear range of user needs.
	Design — Graphics Engineer' Textiles	-To be able to add points to a given, basic, specification from which a design of a product can be produced.	-To be able to further develop a given, basic, specification from which a design of a product can be produced.	-To be able to develop a basic specification from which a design of a product can be produced. Using correct presentation and terminology.

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

		Graphics Engineer' Textiles	- To be able to identify problems with their designs and with guidance suggest a possible solution.	- To be able to identify problems with their designs and with guidance suggest possible solutions to them.	- To be able to identify problems with their designs and with guidance suggest a range of solutions.
		Graphics Engineer' Textiles	-To be able to generate a few design ideas with limited and basic annotations.	-To be able to generate a few original design ideas with basic annotations.	-To be able to generate a range of original design ideas with explanatory annotations.
		Graphics Engineer' Textiles	-To be able to develop and communicate design ideas using sketches.	-To be able to develop and communicate design ideas using annotated sketches, digital presentations and basic computer-based tools	-To be able to develop and communicate design ideas using annotated sketches, oral and detailed digital presentations and basic computer-based tools
	Manufacturing	Graphics Engineer' Textiles	-To be able to use a limited range of materials and components, with an understanding of some of their properties.	-To be able to use a limited range of materials and components, with a basic understanding of most of their properties.	-To be able select from and use a limited range of materials and components, with a basic understanding of most of their properties.
		Graphics Engineer' Textiles	- With help and guidance, to be able to use a limited range of specialist tools, techniques, processes, equipment and machinery.	- With help and guidance, to be able to select from and use specialist tools, techniques, processes equipment and machinery.	- With help and guidance, to be able to select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture.
Evaluation		Graphics Engineer' Textiles	-To be able to evaluate their ideas and products against a specification.	-To be able to test and evaluate their ideas and products against a specification.	-To be able to test, evaluate and refine their ideas and products against a specification.
		Graphics Engineer' Textiles	-With support and guidance, be able to analyse the work of past professionals and explain their findings.	-With support and guidance, be able to analyse the work of past and present professionals and use this information in their designs.	-With support and guidance, be able to analyse the work of past and present professionals, in order to show a broadening of their understanding through their designs and annotations.

AGL2015

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

	Graphics Textiles	-To understand a few of the developments in design and technology, and its impact on society and the environment.	-To understand a few of the developments in design and technology, its impact on individuals, society and the environment.	-To understand a few of the developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of engineers/ technologists.

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

			Year 9 Design & Technology		
Area		**Taught in**	**STRANDS**		
			Developing	**Secure**	**Extension**
Technical Knowledge		Graphics Engineer' Textiles	-To be able to, with support and guidance, investigate many of the new and emerging engineering technologies.	-To be able to investigate new and emerging engineering technologies and explain how these affect the manufacture of products.	-To be able to investigate new and emerging engineering technologies and explain how these affect the manufacture of products, the environment and the workforce.
		Textiles Engineer'	- To be able to use computing and electronics to develop a simple program to control a picaxe board.	- To be able to use computing and electronics to develop a program for a picaxe board that responds to multiple inputs and provides multiple outputs.	- To be able to use computing and electronics independently to develop a program for a picaxe board that responds to multiple inputs and provided multiple outputs.
		Graphics Engineer' Textiles	-To understand and be able to explain what material properties are and how they can be used when designing products, with the use of correct technical terminology	-To understand and be able to use the properties of materials to achieve functioning product.	-To understand and be able to use the properties of materials and the performance of structural elements to achieve functioning solutions.
		Engineer'	-To understand the variety of movements and forces that exist in mechanical systems, being able to name them and explain how they can be converted with a range of mechanisms.	-To understand how mechanical systems used in products enable changes in movement and force	-To understand how more advanced mechanical systems used in products enable changes in movement and force
		Engineer'	- To understand how simple electrical and electronic systems are constructed and be able to explain how these can be used to within products.	- To understand how electrical and electronic systems can be powered and used in their products	- To understand how more advanced electrical and electronic systems can be powered and used in their products.
Skills	Design	Graphics Engineer' Textiles	-To be able to use guided research to identify a clear range of user needs.	-To be able to use independent research to identify and understand user needs.	-To be able to use independent research to identify and understand user needs and use this information to.

AGL2015

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

		Graphics Engineer' Textiles	-To be able to develop a basic specification from which a design of a product can be produced. Using correct presentation and terminology.	-To be able to develop specifications to inform the design of innovative, functional and appealing products.	-To be able to develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations
		Graphics Engineer' Textiles	- To be able to identify problems with their designs and with guidance suggest a range of solutions.	-To be able to, with limited guidance, identify and solve their own design problems and understand how to reformulate problems given to them	-To be able to independently identify and solve their own design problems and understand how to reformulate problems given to them
		Graphics Engineer' Textiles	-To be able to generate a range of original design ideas with explanatory annotations.	-To be able to generate creative ideas and avoid stereotypical responses.	-To be able to generate unique and creative design ideas that avoid stereotypical responses but directly meet the needs of the customer.
		Graphics Engineer' Textiles	-To be able to develop and communicate design ideas using annotated sketches, oral and detailed digital presentations and basic computer-based tools	-To be able to develop and communicate design ideas using annotated sketches, detailed plans, oral and digital presentations and computer-based tools.	-To be able to develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools
	Manufacturing	Graphics Engineer' Textiles	-To be able select from and use a limited range of materials and components, with a basic understanding of most of their properties.	-To be able to select from and use a range of materials and components, taking into account their properties.	-To be able to select from and use a wider, more complex range of materials and components, taking into account their properties.
		Graphics Engineer' Textiles	- With help and guidance, to be able to select from and use specialist tools, techniques, processes equipment and machinery precisely, including computer-aided manufacture.	- With minimal help and guidance, to be able to select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture	- To be able to independently select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture

AGL2015

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

Evaluation	Graphics Engineer' Textiles	-To be able to test, evaluate and refine their ideas and products against a specification.	-To be able to test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups.	-To be able to test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups which they have independently identified.
	Graphics Engineer' Textiles	-With support and guidance, be able to analyse the work of past and present professionals, in order to show a broadening of their understanding through their designs and annotations.	-With limited support and guidance, be able to analyse the work of past and present professionals and others to develop and broaden their understanding	-Independently, be able to analyse the work of past and present professionals and others to develop and broaden their understanding.
	Graphics Engineer' Textiles	-To understand a few of the developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of engineers/ technologists.	-To understand some of the developments in design and technology, its impact on individuals, society and the environment, and the	-To understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

Food Technology

Year 7 Food Technology			
	STRANDS		
	Developing	**Secure**	**Extension**
Technical knowledge	- To be able produce a simple flow chart with limited steps of production.	- To be able to use computing to develop a simple flowchart with detail of material and equipment.	- To be able to use computing and electronics to develop a flowchart with all steps of production.
	To understand what ingredient characteristics are.	-To understand what ingredient characteristics are and be able to name some general characteristics of the ingredient being used.	-To understand what ingredient characteristics are and be able to explain this with the use of technical terminology.
Skills — Design	-To be able to use basic research to identify a few users' needs and communicate these verbally.	-To be able to use research provided to identify a few needs of the user.	-To be able to use research provided to identify clear user needs.
	-To be able to add limited points to produce a basic recipe from which a design of a product/ dish can be produced.	-To be able to add points to produce a basic, recipe from which a design of a product/ dish can be produced.	-To be able to further develop and produce a recipe from which a design of a product can be produced.
	-To be able to identify problems with their dish/ menu designs and with guidance verbally suggest a possible solution. To be able to verbally participate in the costing process with use of a costing formula	- To be able to identify problems with their dish/ menu designs and with guidance suggest a possible solution. To be able to verbally participate in the costing process with use of a costing formulae and to be able to offer a limited written explanation.	- To be able to identify problems with their dish/ menu designs and with guidance suggest possible solutions to them. To be able to identify problems with their designs and with guidance suggest a possible solution. To be able to verbally participate in the costing process with use of a costing formulae and to be able to offer a clear written explanation.
Skills — Manufacturing	-To be able to use a limited range of ingredients, with a limited understanding of some of their	-To be able to use a limited range of ingredients with an understanding of some of their characteristics .	-To be able to use a limited range of ingredients with a basic understanding of most of their characteristics .

AGL2015

Strands Curriculum and learning outcomes

		- With help and guidance, to be able to use a limited range of specialist tools, cooking techniques, processes equipment and machinery.	- With help and guidance, to be able to use a limited range of specialist tools, cooking techniques, processes equipment and machinery.	- With help and guidance, to be able to select from and use specialist tools, cooking techniques, processes equipment and machinery.
Evaluation		-To be able to verbally evaluate their ideas and dishes against a specification.	-To be able to evaluate their ideas and dishes against a specification.	-To be able to test and evaluate their ideas and dishes against a specification.
		With support and guidance, be able to analyse work of past professionals and verbally explain their findings.	-With support and guidance, be able to analyse the work of past professionals and explain their findings.	-With support and guidance, be able to analyse the work of past and present professionals and use this information in their designs.
		To understand and verbally explain a few of the basic developments in Food Design and Technology.	-To understand a few of the developments in Food design and technology, and its impact on society and the environment.	-To understand a few of the developments in Food design and technology, its impact on individuals, society and the environment.

Year 8 Food Technology			
	STRANDS		
	Developing	**Secure**	**Extension**
Area	- To be able to use simple recipe flowchart with detail of ingredients and equipment.	- To be able to use a recipe flowchart with all steps of production.	- To be able to use a recipe flow chart using the correct symbols for production.

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

		-To understand what ingredient characteristics are and be able to name some general characteristics of the ingredients being used.	-To understand what ingredient characteristics are and be able to explain this with the use of technical terminology.	-To understand and be able to explain what ingredient characteristics are and how they can be used when designing dishes, with the use of correct technical terminology
Skills	Design	-To be able to use research provided to identify a few needs of the user.	-To be able to use research provided to identify clear user needs.	-To be able to use guided research to identify a clear range of user needs.
		-To be able to add points to a given, basic, recipe from which a design of a product/dish can be produced.	-To be able to further develop a given, basic, recipe from which a design of a product/dish can be produced.	-To be able to develop a basic recipe from which a design of a product/ dish can be produced. Using correct presentation and terminology.
		- To be able to identify problems with their dish/ menu designs and with guidance suggest a possible solution.	- To be able to identify problems with their dish/ menu designs and with guidance suggest possible solutions to them.	- To be able to identify problems with their dish/ menu designs and with guidance suggest a range of solutions.
	Manufacturing	-To be able to use a limited range of ingredients and components, with an understanding of some of their characteristics.	-To be able to use a limited range of ingredients and components, with a basic understanding of most of their characteristics.	-To be able select from and use a limited range of ingredients and components, with a basic understanding of most of their characteristics.
		- With help and guidance, to be able to use a limited range of specialist tools, cooking techniques, processes equipment and machinery.	- With help and guidance, to be able to select from and use specialist tools, cooking techniques, processes equipment and machinery.	- With help and guidance, to be able to select from and use specialist tools, cooking techniques, processes equipment and machinery precisely, including computer-aided manufacture.
Evaluation		-To be able to evaluate their ideas and dishes against a specification.	-To be able to test and evaluate their ideas and dishes against a specification.	-To be able to test, evaluate and refine their ideas and dishes against a specification.

AGL2015

Strands Curriculum and learning outcomes

-To understand a few of the developments in Food design and technology, and its impact on society and the environment.	-To understand a few of the developments in Food design and technology, its impact on individuals, society and the environment.	-To understand a few of the developments in Food design and technology, its impact on individuals, society and the environment, and the responsibilities of technologists.

Year 9 Food Technology			
Area	**STRANDS**		
	Developing	**Secure**	**Extension**
Technical Knowledge	-To be able to, with support and guidance, investigate many of the traditional and new and emerging Food and Catering technologies.	-To be able to investigate new, emerging and traditional technologies and explain how these affect the manufacture of dishes.	-To be able to investigate traditional, new and emerging Food and Catering technologies and explain how these affect the manufacture of dishes, the environment and the workforce
Skills	-To be able to use guided research to identify a clear range of dietary requirements and specialist diets.	-To be able to use independent research to identify and understand user needs.	-To be able to use independent research to identify and understand user needs and use this information to.
	-To be able to develop a basic recipe from which a design of a product/ dish can be produced. Using correct presentation and terminology. To be able to with support and guidance use a costing formulae for purchasing ingredients	-To be able to develop a recipe to inform the design of innovative, functional and appealing dishes. To be able to use with minimal support, a costing formulae for purchasing ingredients	-To be able to develop a recipe to inform the design of innovative, functional, appealing dishes that respond to needs in a variety of situations. To be able to use independently a costing formulae for purchasing ingredients
Design	- To be able to identify problems with their dish/ menu designs and with guidance suggest a range of solutions.	-To be able to, with limited guidance, identify and solve their own dish/ menu design problems and understand how to reformulate problems given to them	-To be able to independently identify and solve their own dish/ menu design problems and understand how to reformulate problems given to them

Faculty: Design and Technology   Subject: KS3 Design and Technology

Strands Curriculum and learning outcomes

<table>
<tr>
<td colspan="2"></td>
<td>-To be able to generate a range of original recipe ideas with explanatory annotations.</td>
<td>-To be able to generate creative recipe ideas and avoid stereotypical responses.</td>
<td>-To be able to generate unique and creative recipe ideas that avoids stereotypical responses but directly meet the needs of the customer.</td>
</tr>
<tr>
<td></td>
<td>Manufact uring</td>
<td>- With help and guidance, to be able to select from and use specialist tools and cooking techniques.</td>
<td>- With minimal help and guidance, to be able to select from and use specialist tools and cooking techniques,</td>
<td>- To be able to independently select from and use specialist tools and cooking techniques,</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td>-To be able to test, evaluate and refine their ideas and dishes against a specification.</td>
<td>-To be able to test, evaluate and refine their ideas and dishes against a specification, taking into account the views of intended users and other interested groups.</td>
<td>-To be able to test, evaluate and refine their ideas and dishes against a specification, taking into account the views of intended users and other interested groups which they have independently identified.</td>
</tr>
</table>

AGL2015