

Design and Technology Skills Development

Design, Make, Evaluate and Improve: Y1 – M1B, Y2 – M1A, Y3 – M2B, Y4 – M2A, Y5 – M3B, Y6 – M3A

Master Practical Skills: As identified below

Take inspiration from design throughout history: Y1 – M1B, Y2 – M1A, Y3 – M2B, Y4 – M2A, Y5 – M3B, Y6 – M3A

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y1	Puppets Materials M1B Textiles M1B - When supported by a teacher, designs to meet a purpose are created - With the support of a teacher, materials are cut safely - When supported by a teacher, maths skills are sometimes used to help measure and mark to the nearest centimetre - During structured activities, a range of cutting and shaping techniques are used - During structured activities, a range of joining techniques are used - With the support of a teacher, textiles are shaped using templates - With the support of a teacher, textiles are joined with basic running stitch - With the support of a teacher, a number of decoration techniques are experienced - With structured activities, designs of others are evaluated to identify likes and dislikes - When prompted, basic improvements to existing designs are suggested	Books with sliders and levers Materials M1B Mechanics M1B - When supported by a teacher, designs to meet a purpose are created - With the support of a teacher, materials are cut safely - When supported by a teacher, maths skills are sometimes used to help measure and mark to the nearest centimetre - During structured activities, a range of cutting and shaping techniques are used - During structured activities, a range of joining techniques are used - With the support of a teacher, products using levers and winding mechanisms are made - With structured activities, designs of others are evaluated to identify likes and dislikes - When prompted, basic improvements to existing designs are suggested		Fruit salad Food M1B - With the support of the teacher, ingredients are prepared safely and hygienically - With the support of the teacher, weighing and measuring is accurate		
Y2	Shelters Lynnfield: Shipwrecked Golden Flatts – Animals shelters Materials M1A, Construction M1A - With growing independence, designs that have a clear purpose and intended user are created - Generally, good – quality products are made by a process of refinement during the making process - There is a growing ability to cut materials safely - Maths skills are often used to help measure and mark to the nearest centimetre - There is a growing use of a range of cutting and shaping techniques - There is a growing use of a range of joining materials - With growing independence, materials are combined to make products - With growing independence and a growing understanding of design features, likes and dislikes of the designs of others are identified	Wacky Racers Materials M1A Mechanics M1A - With growing independence, designs that have a clear purpose and intended user are created - Generally, good – quality products are made by a process of refinement during the making process - There is a growing ability to cut materials safely - Maths skills are often used to help measure and mark to the nearest centimetre - There is a growing use of a range of cutting and shaping techniques - There is a growing use of a range of joining materials - With growing independence, and a developing understanding of mechanisms, products using levers and winding mechanisms are made - With growing independence and a growing understanding of design features, likes and dislikes of the designs of others are identified		Herbs and Salads Food M1A - There is a growing awareness of safety and hygiene procedures when preparing food - There is a growing ability to weigh and measure correctly		
Y3	Desk Tidies Materials M2B, Construction M2A - During structured activities, opportunities for design are realised. - When supported by the teacher, appropriate materials are selected. - When encouraged, techniques are refined throughout a project to improve the design. - When reminded, appropriate tools are chosen to cut out materials. - With support from a teacher, accurate measurement and marking, to the nearest millimetre, is experienced. - With support from a teacher, appropriate techniques are used to cut and shape materials. - When reminded, appropriate joining techniques are used. - Suitable techniques are generally used to construct or repair items. - With support from a teacher, some of the most notable designers' work is examined to provide inspiration for ideas.	Purses Materials M2B Textiles M2A - During structured activities, opportunities for design are realised. - When supported by the teacher, appropriate materials are selected. - When encouraged, techniques are refined throughout a project to improve the design. - When reminded, appropriate tools are chosen to cut out materials. - With support from a teacher, accurate measurement and marking, to the nearest millimetre, is experienced. - With support from a teacher, appropriate techniques are used to cut and shape materials. - When reminded, appropriate joining techniques are used. - Generally, appropriate allowances for joining fabrics are used. - Generally, stitching appropriate to the product and effective. - Generally, interesting and appropriate techniques are used to decorate textiles. - When demonstrated by a teacher and support provided, appropriate allowances are made when joining fabrics. - With support from a teacher, some of the most notable designers'		Pasta and grains Food M2B - When reminded, appropriate tools are chosen to safely cut materials - With support from the teacher, accurate measurement to the nearest gram, is experienced		

		work is examine to provide inspiration for ideas.	
Y4	Greeting cards with an electronic component Materials M2A Electricals and Electronics M1A, M2A <ul style="list-style-type: none"> - Generally, there is a good understanding of opportunities for design. - Planning of work flows and careful selection of materials mean work is generally carried out efficiently. - Generally, designs are evaluated and refined throughout a project. - Appropriate tools are generally chosen to safely cut out materials. - There is generally accurate measurement and marking to the nearest millimetre. - Appropriate techniques re generally chosen to cut and shape materials. - Appropriate joining techniques are generally selected and used well. - A growing range of faults (electrical) are correctly identified. - Generally, science knowledge is applied well to create series and parallel circuits in products. - A growing knowledge of a range of notable designers is used to provide inspiration for designs. 	Squashed Tomato Challenge Materials M2A Mechanics M2A <ul style="list-style-type: none"> - Generally, there is a good understanding of opportunities for design. - Planning of work flows and careful selection of materials mean work is generally carried out efficiently. - Generally, designs are evaluated and refined throughout a project. - Appropriate tools are generally chosen to safely cut out materials. - There is generally accurate measurement and marking to the nearest millimetre. - Appropriate techniques re generally chosen to cut and shape materials. - Appropriate joining techniques are generally selected and used well. - With growing independence, and a developing understanding of mechanisms, products using levers and winding mechanisms are made. - A growing knowledge of a range of notable designers is used to provide inspiration for designs. 	Cheese Food M2A <ul style="list-style-type: none"> - Appropriate utensils are generally chosen to safely and hygienically prepare food - There is generally accurate measurement to the nearest gram
Y5	Bridges Materials M3B Construction M3A <ul style="list-style-type: none"> - With guidance, products are designed with some reference to the user experience. - With support, prototypes are made and later developed. - When reminded, a high-quality finish is achieved by applying art skills. - There are some good examples of precision cutting. - When reminded, the qualities of materials are considered when selecting tools. - With support, a range of practical skills are used effectively to make or repair products. - with support, elements of design from notable designers are incorporated into designs. - There are some good examples of designs that improve upon exiting products. - When reminded, evaluations are carried out throughout and at the end of the design process. 	Cam mechanisms Materials M3B Mechanics M3A <ul style="list-style-type: none"> - With guidance, products are designed with some reference to the user experience. - With support, prototypes are made and later developed. - When reminded, a high-quality finish is achieved by applying art skills. - There are some good examples of precision cutting. - A range of differently shaped cams are created. - with support, elements of design from notable designers are incorporated into designs. - There are some good examples of designs that improve upon exiting products. - When reminded, evaluations are carried out throughout and at the end of the design process. 	Vegetables Food M3B <ul style="list-style-type: none"> - There is some awareness of the basic principles and practices of safe food storage and handing - When reminded, mathematical knowledge is applied accurately to calculate ratios of ingredients
Y6	Recycling to sell Materials M3A Construction M3A <ul style="list-style-type: none"> - Generally, user experience is used as a rationale for design choice. - Generally, improvement are continual throughout the making process, with initial prototypes often changed radically through a number of refinements. - Art skills are applied and, along with attention to detail, create a high-quality finish. - There are many examples of precision cutting using a growing range of cutting implements. - The properties of materials are generally considered in choosing tools. 	Alarming vehicles Materials M3A Electronics And Electricals M3A <ul style="list-style-type: none"> - Generally, user experience is used as a rationale for design choice. - Generally, improvement are continual throughout the making process, with initial prototypes often changed radically through a number of refinements. - Art skills are applied and, along with attention to detail, create a high-quality finish. - There are many examples of precision cutting using a growing range of cutting implements. - The properties of materials are generally considered in choosing tools. 	Bread Food M3A <ul style="list-style-type: none"> - Science knowledge is applied to the safe storage and handling of ingredients - Mathematical knowledge is generally applied to calculate the ratios of ingredients

	<ul style="list-style-type: none">- A growing range of practical skills are used effectively to make or repair products.- Generally there are some well-reasoned choices for combining elements from a range of designers.- There is a growing range of examples of designs that improve upon existing products.- Evaluations are generally ongoing and thorough. They relate to the user experience.	<ul style="list-style-type: none">- Science knowledge is generally applied to the design process to create products that employ a range of electronic components. Generally there are some well-reasoned choices for combining elements from a range of designers.- There is a growing range of examples of designs that improve upon existing products.- Evaluations are generally ongoing and thorough. They relate to the user experience.	
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