



Overview:

Students will undertake three projects in Design Technology over the course of Year 7. All three projects will develop students' knowledge and skills in four key areas: Investigate, Design, Make and Evaluate. Students will develop their knowledge of a variety of material areas and will be encouraged to be creative and innovative to produce written, design and practical work. The three projects are an acrylic ID Tag, a wooden vehicle sharpener and a group siege machine challenge.

Careers in the Curriculum:

The topics covered will highlight links to careers in Health and Safety, chemical engineering, product design, architecture, automotive engineering and mechanical engineering.

Term	Topic	Assessment
Aut1	ID Tag <ul style="list-style-type: none"> • Health and Safety in the Workshop • Investigating plastics: how they are manufactured, their properties and uses • Designing the ID Tag 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Aut2	ID Tag <ul style="list-style-type: none"> • Training on tools, processes and machines • Making the ID Tag • Update work diary with stages of making • Evaluation of practical work • End of project assessment 	<ul style="list-style-type: none"> • Aiming High 1: Written assessment on Health and Safety • End of project assessment
Spr1	Wooden Vehicle Sharpener <ul style="list-style-type: none"> • Isometric drawing • Investigate woods: where they come from, their properties and uses • Designing the wooden vehicle sharpener 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Spr2	Wooden Vehicle Sharpener <ul style="list-style-type: none"> • Making the wooden vehicle sharpener • Update work diary with stages of making 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Sum1	Wooden Vehicle Sharpener <ul style="list-style-type: none"> • Making the wooden vehicle sharpener • Update work diary with stages of making • Evaluation of practical work • End of project assessment 	<ul style="list-style-type: none"> • End of project assessment
Sum2	Siege Machine <ul style="list-style-type: none"> • Investigate and analyse historical siege machine structures • Work in groups to design a siege machine • Make the siege machine • Test and evaluate the efficiency of the siege machine 	<ul style="list-style-type: none"> • Knowledge and skills assessed throughout the project



Overview:

Students will undertake three projects in Design Technology over the course of Year 8. All three projects will develop students' knowledge and skills in four key areas: Investigate, Design, Make and Evaluate. Students will develop their knowledge of a variety of material areas and will be encouraged to be creative and innovative to produce written, design and practical work. The three projects are an LED lightbox, an aluminium tealight holder and a group civil engineering challenge. The LED lightbox is a carousel of topics which could be covered in a different order.

Careers in the Curriculum:

The topics covered will highlight links to careers in CAD, CNC, carpentry and joinery, electronics engineering, metalworking and civil engineering.

Term	Topic	Assessment
Aut1	LED Lightbox <ul style="list-style-type: none"> • Health and Safety in the workshop • Introduction to CAD/CAM and 2D design • Series of small 2D design skill building tasks • Designing the acrylic screen for the LED lightbox • Production of the acrylic screen for the LED lightbox 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Aut2	LED Lightbox <ul style="list-style-type: none"> • Introduction to electronics and specific Health and Safety • Investigation into electronic components • Soldering of circuit 	<ul style="list-style-type: none"> • Aiming High 1: Written assessment on Health and Safety • End of project assessment
Spr1	LED Lightbox <ul style="list-style-type: none"> • Working drawing of the MDF box • Making the MDF box • Updating work diary with stages of making • Evaluation of practical work • End of project assessment 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Spr2	Aluminium Tealight Holder <ul style="list-style-type: none"> • Introduction to perspective drawing • Designing the aluminium tealight holder • Making the aluminium tealight holder • Update work diary with stages of making 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Sum1	Aluminium Tealight Holder <ul style="list-style-type: none"> • Making the aluminium tealight holder • Update work diary with stages of making • Evaluation of practical work • End of project assessment 	<ul style="list-style-type: none"> • End of project assessment
Sum2	Civil Engineering Project <ul style="list-style-type: none"> • Investigate and analyse of frame and shell structures • Work in groups to design a bridge • Make the bridge • Test and evaluate the efficiency of the bridge 	<ul style="list-style-type: none"> • Knowledge and skills assessed throughout the project



Overview:

Students will undertake three projects in Design Technology over the course of Year 9. All three projects will develop students' knowledge and skills in four key areas: Investigate, Design, Make and Evaluate. Students will develop their knowledge of a variety of material areas and will be encouraged to be creative and innovative to produce written, design and practical work. The three projects are jewellery, a wooden die and a group aerospace engineering challenge.

Careers in the Curriculum:

The topics covered will highlight links to careers in jewellery design, maintenance engineering, furniture design, cabinet making, aviation and aerospace engineering.

Term	Topic	Assessment
Aut1	Jewellery <ul style="list-style-type: none"> • Health and Safety in the workshop • Investigating copper and brass: how they are manufactured, their properties and uses • Investigating Art Deco and Art Nouveau • Designing the jewellery 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Aut2	Jewellery <ul style="list-style-type: none"> • Training on tools, processes and machines • Making the jewellery • Update work diary with stages of making • Evaluation of practical work • End of project assessment 	<ul style="list-style-type: none"> • Aiming High 1: Written assessment on Health and Safety • End of project assessment
Spr1	Wooden Die <ul style="list-style-type: none"> • Orthographic drawing and dimensioning • Investigate woods: where they come from, their properties and uses • Manufacturing the die 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Spr2	Wooden Die <ul style="list-style-type: none"> • Designing the die product • Modifying the die into the product • Update work diary with stages of making 	<ul style="list-style-type: none"> • Formative assessment • Knowledge and skills assessed throughout the project
Sum1	Wooden Die <ul style="list-style-type: none"> • Making the wooden die product • Update work diary with stages of making • Evaluation of practical work • End of project assessment 	<ul style="list-style-type: none"> • End of project assessment
Sum2	Aerospace Engineering <ul style="list-style-type: none"> • Initial rocket manufacture and testing • Calculations relating to velocity and analysis of rockets • Design of improved rocket • Make the improved rocket • Test and evaluate the improved rocket 	<ul style="list-style-type: none"> • Knowledge and skills assessed throughout the project