

STAGE 4 COURSE: TECHNOLOGY MANDATORY YEAR 8 2024

Please note: This course operates on a rotating cycle, where students complete three units of work throughout the year.

TERM 1

TIMING Weeks: 1 – 11	<p>Project One Fantastic Food Context Area: Agriculture and Food Technologies Students will be introduced to the basic food preparation skills needed to participate in the Food Technology classroom. Through a range of design procedures students are set the challenge of developing an online communication tool that will educate adolescents in understanding how to maintain good health. Students develop knowledge and understanding about WHS requirements on the school farm and kitchen. Students will also investigate the paddock to plate process with an in-depth study and practical application with eggs and chickens. Students will program a Microbit microcontroller to monitor and record the temperature of an incubator.</p> <p style="text-align: center;">OR</p> <p>Back to Bed Context Area: Material Technologies Students work with fibres, yarns and fabrics to develop manufacturing skills in the construction of a tote bag, learning of the importance of upcycling and sustainability. They design and develop a series of sketches, applying a variety of decorative techniques to complete a quality finished product. Students develop an understanding of the characteristics and properties that underpin the choice of fibres and fabrics used across the apparel industry. In addition, students will program a Microbit microcontroller to create a shaker alarm device.</p> <p style="text-align: center;">OR</p> <p>Toy Maker OR Character Design Context Area: Material Technologies and Engineered Systems Students explore how motion is used to design and produce a moving toy. They develop knowledge and understanding and investigate how motion is used in simple machines to make a toy move in a particular direction. Students will experiment with the 3D printer to design and produce a small character toy of choice OR students focus on the creation of character design with emphasis on scale, prototype modelling, drawing and 3D printing to design and produce a miniature character of choice. Students will experiment with mixed materials to develop a miniature house for the 3D printed character. Within the house, students will learn about engineered systems by incorporating reciprocating motion and electronics.</p>	
	<p>UNIT OVERVIEW</p> <p>All Context Areas:</p> <ul style="list-style-type: none"> • designs, communicates and evaluates innovative ideas and creative solutions to authentic problems or opportunities • plans and manages the production of designed solutions • explains how people in technology related professions contribute to society now and into the future <p>Agriculture and Food Technologies:</p> <ul style="list-style-type: none"> • selects and safely applies a broad range of tools, materials and processes in the production of quality projects • investigates how food and fibre are produced in managed environments • explains how the characteristics and properties of food determine preparation techniques for healthy eating <p>Material Technologies:</p> <ul style="list-style-type: none"> • selects and safely applies a broad range of tools, materials and processes in the production of quality projects • investigates how the characteristics and properties of tools, materials and processes affect their use in designed solutions <p>Engineered Systems:</p> <ul style="list-style-type: none"> • explains how force, motion and energy are used in engineered systems 	<p>ASSESSMENT</p>

TERM 2

<p>TIMING Weeks: 1 – 3</p>	<p>See above</p>	
	<p>UNIT OVERVIEW</p> <p>See above</p>	<p>ASSESSMENT</p> <p>Task Number: 1</p> <p>Nature of Task: Written Portfolio and Practical Product</p> <p>Percentage: 100%</p> <p>Week: Term 2, Week 3</p> <p>Reported: Semester 1</p>
<p>TIMING Weeks: 4 – 10</p>	<p>Project Two Fantastic Food Context Area: Agriculture and Food Technologies Students will be introduced to the basic food preparation skills needed to participate in the Food Technology classroom. Through a range of design procedures students are set the challenge of developing an online communication tool that will educate adolescents in understanding how to maintain good health. Students develop knowledge and understanding about WHS requirements on the school farm and kitchen. Students will also investigate the paddock to plate process with an in-depth study and practical application with eggs and chickens. Students will program a Microbit microcontroller to monitor and record the temperature of an incubator.</p> <p style="text-align: center;">OR</p> <p>Back to Bed Context Area: Material Technologies Students work with fibres, yarns and fabrics to develop manufacturing skills in the construction of a tote bag, learning of the importance of upcycling and sustainability. They design and develop a series of sketches, applying a variety of decorative techniques to complete a quality finished product. Students develop an understanding of the characteristics and properties that underpin the choice of fibres and fabrics used across the apparel industry. In addition, students will program a Microbit microcontroller to create a shaker alarm device.</p> <p style="text-align: center;">OR</p> <p>Toy Maker OR Character Design Context Area: Material Technologies and Engineered Systems Students explore how motion is used to design and produce a moving toy. They develop knowledge and understanding and investigate how motion is used in simple machines to make a toy move in a particular direction. Students will experiment with the 3D printer to design and produce a small character toy of choice OR students focus on the creation of character design with emphasis on scale, prototype modelling, drawing and 3D printing to design and produce a miniature character of choice. Students will experiment with mixed materials to develop a miniature house for the 3D printed character. Within the house, students will learn about engineered systems by incorporating reciprocating motion and electronics.</p>	
	<p>UNIT OVERVIEW</p>	<p>ASSESSMENT</p>

All Context Areas:

- designs, communicates and evaluates innovative ideas and creative solutions to authentic problems or opportunities
- plans and manages the production of designed solutions
- explains how people in technology related professions contribute to society now and into the future

Agriculture and Food Technologies:

- selects and safely applies a broad range of tools, materials and processes in the production of quality projects
- investigates how food and fibre are produced in managed environments
- explains how the characteristics and properties of food determine preparation techniques for healthy eating

Material Technologies:

- selects and safely applies a broad range of tools, materials and processes in the production of quality projects
- investigates how the characteristics and properties of tools, materials and processes affect their use in designed solutions

Engineered Systems:

- explains how force, motion and energy are used in engineered systems

TERM 3

TIMING Weeks: 1 – 7	See above	
	UNIT OVERVIEW	ASSESSMENT
	See above	Task Number: 2 Nature of Task: Written Portfolio and Practical Product Percentage: 100% Week: Term 3, Week 7 Reported: Semester 2

TIMING Weeks: 8 – 10	<p>Project Three Fantastic Food Context Area: Agriculture and Food Technologies Students will be introduced to the basic food preparation skills needed to participate in the Food Technology classroom. Through a range of design procedures students are set the challenge of developing an online communication tool that will educate adolescents in understanding how to maintain good health. Students develop knowledge and understanding about WHS requirements on the school farm and kitchen. Students will also investigate the paddock to plate process with an in-depth study and practical application with eggs and chickens. Students will program a Microbit microcontroller to monitor and record the temperature of an incubator.</p> <p align="center">OR</p> <p>Back to Bed Context Area: Material Technologies Students work with fibres, yarns and fabrics to develop manufacturing skills in the construction of a tote bag, learning of the importance of upcycling and sustainability. They design and develop a series of sketches, applying a variety of decorative techniques to complete a quality finished product. Students develop an understanding of the characteristics and properties that underpin the choice of fibres and fabrics used across the apparel industry. In addition, students will program a Microbit microcontroller to create a shaker alarm device.</p> <p align="center">OR</p> <p>Toy Maker OR Character Design Context Area: Material Technologies and Engineered Systems Students explore how motion is used to design and produce a moving toy. They develop knowledge and understanding and investigate how motion is used in simple machines to make a toy move in a particular direction. Students will experiment with the 3D printer to design and produce a small character toy of choice OR students focus on the creation of character design with emphasis on scale, prototype modelling, drawing and 3D printing to design and produce a miniature character of choice. Students will experiment with mixed materials to develop a miniature house for the 3D printed character. Within the house, students will learn about engineered systems by incorporating reciprocating motion and electronics.</p>	
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All Context Areas:

- designs, communicates and evaluates innovative ideas and creative solutions to authentic problems or opportunities
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Agriculture and Food Technologies:

- selects and safely applies a broad range of tools, materials and processes in the production of quality projects
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- explains how the characteristics and properties of food determine preparation techniques for healthy eating

Material Technologies:

- selects and safely applies a broad range of tools, materials and processes in the production of quality projects
- investigates how the characteristics and properties of tools, materials and processes affect their use in designed solutions

Engineered Systems:

explains how force, motion and energy are used in engineered systems

TERM 4

TIMING Weeks: 1 – 10	See above	
	UNIT OVERVIEW	ASSESSMENT
	See above	