

Christian Education Network

**'standing and working together'
'kei te tū, kei te mahi ngatahi mātou'**



Technology Curriculum Delivery

at

Middleton Grange School

Course selection information

for

2026



**MIDDLETON
GRANGE SCHOOL**

Character, Excellence, Service for the Glory of God

CEN Technology 2026

Dear Parents, Caregivers and Whānau

A very warm welcome to Middleton Grange School and our Technology Curriculum Area.

As part of the close and collegial relationship within the Christian Education Network, Middleton Grange School is delighted to be able to enter into a co-operative arrangement with Aidanfield Christian School, Emmanuel Christian School and Hillview Christian School to provide Year 9 and 10 Technology courses for students on the Middleton Grange School campus.

Each of our schools has its own distinctive character and history. However, our heart is the same. We all seek to serve Christian families and the Church in providing an education which is Bible-based and Christ-centred. It is our prayer that students come to discover their giftings and talents in Technology, but crucially, to understand how they can use these giftings to bring glory to God and benefit society.

We look forward with excitement to welcoming your sons and daughters into the Middle School and trust they will enjoy the benefits of a bigger school without losing the amazing qualities of the smaller setting the Network Schools provide.

While your sons and daughters remain the ultimate responsibility of their school of origin, please accept my reassurance that staff at Middleton will always be available to you to discuss any aspects of the programme operating at Middleton Grange School.

Please take the opportunity to attend the Middleton Grange School Year 9 Course Selection evening on **Tuesday 9th September from 6.15pm - 7.15pm** in the 'Old' Gym. There will be an opportunity to visit classrooms, see work from the Technology courses and speak with teachers to clarify your queries for any 2026 courses.

Yours in His name

Mr. Craig Utting
Acting Principal / Tumuaki

Who's Who in 2026

Principal

Mr Gregg Le Roux

Associate Principal

Mr Craig Utting

Deputy Principal - Staffing & Waiora

Mrs Jenny Addison

Deputy Principal - School Management

Mr Dean McKenzie

**Head of
Primary School**
Mrs Christine Buckley

**(Acting) Head of
Middle School**
Mrs Louise Arndt

**Head of
Senior College**
Mr Shane McConnell

**Director of
International College**
Mrs Colleen Steyn

Head of Middle School (Acting):

Mrs Louise Arndt

ext 557

l.arndt@middleton.school.nz

Assistant Head of Middle School:

Mr Geoff Steyn

ext 493

g.steyn@middleton.school.nz

Assistant Head of Middle School:

Miss Anne Mackechnie

ext 433

a.mackechnie@middleton.school.nz

CEN Schools Technology Liaison:

Mr Grant Bowater

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Head of Faculty - Technology

CEN Subject Co-ordinator:

Mr Patrick Baker

ext 580

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Middle School and Senior College

Office Administrator

Mrs Melissa Broughton

ext 677

m.broughton@middleton.school.nz

Student Services:

Mrs Carole Thomson

ext 203

c.thomson@middleton.school.nz

Mrs Vanessa Manning

ext 204

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Principal's Executive Assistant

Mrs Hillary Carley

ext 211

h.carley@middleton.school.nz

Business Manager:

Mr Paul Hartstonge

ext 585

p.hartstonge@middleton.school.nz

MGS Office Details

Receptionist:

Mrs Donna Wilson

03 348 9826 ext 201

d.wilson@middleton.school.nz

Hours of work:

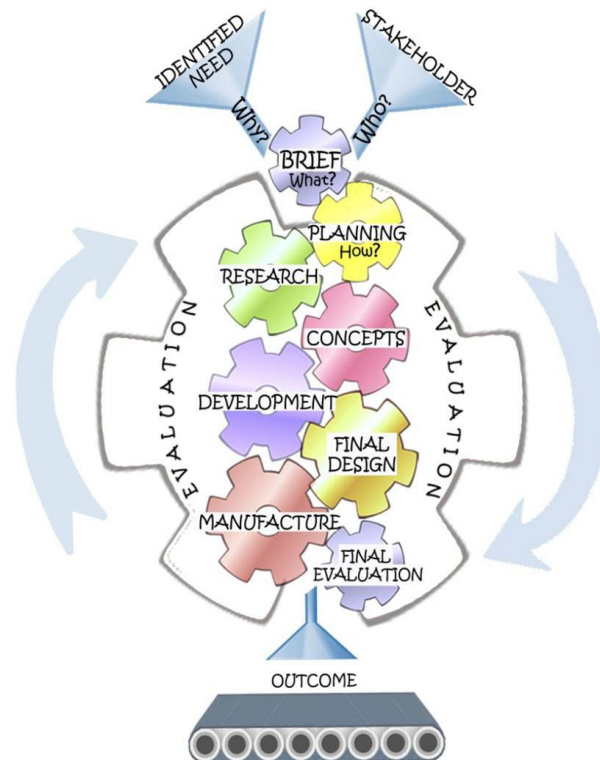
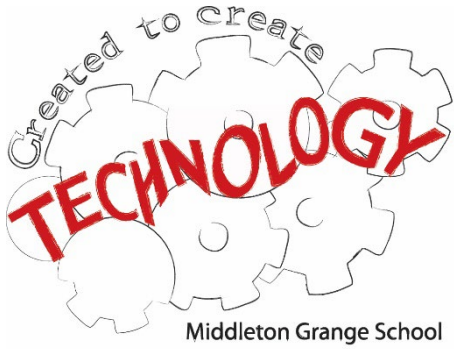
8:15am - 4:30pm during term time. The office is closed during the Christmas holidays and reopens one week before the start of Term 1.

Helpful Links:

[School Website](#)

[Events Calendar](#)

[Facebook page](#)



“Technology is innovation by design; the use of practical and intellectual resources to develop products and systems that expand human possibilities by addressing needs and realising opportunities.”

New Zealand Curriculum Strands:

- Technological Knowledge - “the know what”
- Technological Practice - “the know how”
- Nature of Technology - “the know why”

Making Your Choices

In Year 9 and 10 students continue to develop their interests and their skills further in their Technology choices. Over two years, students will experience Technology in four different settings of their choice.

These are made up of two equal half year courses.

Students in Year 10 in 2026 are encouraged to select Technology subjects they have not previously done, to get a broad experience of the technologies being offered, and students choosing a subject for the first time will get priority over those wanting to repeat. All choices are good introductions to the options available at Middleton in Year 11:

Design and Visual Communication
Hard Materials Technology
Food and Nutrition

Students choosing these 3 options will be well equipped for the more advanced Middleton Grange courses in corresponding subjects.

Digital Technology
Electronics and Robotics
Film and Media Production

These 3 options prepare students for courses in: *Digital Media*, *Computer Science and Programming*, or *Digital Skills for Employment and Education*.

Your school will manage the subject selection process. They will let you know the allocated option subjects based on your choices later in Term 4.

CHRISTIAN EDUCATION NETWORK

DESIGN & VISUAL COMMUNICATION TECHNOLOGY

Composite Year 9 & 10

Option subject half-year course

Essential Learning Area: Technology

Design and Visual Communication aims to equip students with a foundational base in visual communication techniques, design terminology and the design process. This course encourages innovative design and problem solving to develop and present solutions for a range of design scenarios and stakeholders.

Course Content

Technological Design

Use the design process to research, conceptualise, develop, critique, and present a solution for a given situation using appropriate visual communication techniques. Technological Design activities and projects from a range of the following areas:

- Spatial Design
- Product Design

Design theory and design language

Use annotations and labels to explain the functional and aesthetic qualities of design outcomes.

Visual Communication Techniques:

Freehand Sketching

- Explore freehand sketching within solid geometry
- Develop freehand sketching and skills to communicate design ideas

Instrumental Drawing

- Develop foundational technical drawing techniques and formats
- Present final design outcomes using instrumental visual communication techniques
- Accurately lay-out and present technical drawings
- Develop computer aided drawing skills

Presentation

- Explore a range of media skills to illustrate design ideas
- Develop rendering skills for 2D and 3D design ideas to show shape, form, and materials
- Learn compositional skills for effective presentation

Assessment: Evidence is collected from a range of work to make judgments using Technology criteria. i.e. Design process, Freehand Sketching, Instrumental Drawing and Presentation.

Materials required; there are two options:

1. Pay \$5 consumable fee - MGS supplies but retains all equipment.
2. Purchase - Student supplies and retains all their own equipment: Drawing wallet (18N9); 45° & 60° large set squares; A3 paper block (no holes, no printed borders); 0.5 mechanical pencil with 0.5 grade HB leads; HB and 2B grade wooden pencils; Staedtler Mars plastic eraser (or equivalent - must not be PVC free).

CHRISTIAN EDUCATION NETWORK

DIGITAL MEDIA AND FILM PRODUCTION

Composite Year 9 & 10

Option subject half-year course

Essential Learning Area: Technology

The aim of Digital Media and Film Production is to introduce students to the processes of filmmaking - including industry terminology, planning and preparation, and the use of digital tools to capture and manipulate a story. Students are encouraged to utilise their creativity in storytelling, problem-solving, and navigating digital outcomes.

Course Content

Developing Ideas and Practical Knowledge

Students will develop the foundational skills required to capture, edit and produce a short film. They will observe and study existing works, before creatively developing and refining their story and visual ideas. Students will become familiar with the use of practical and digital resources, image composition, and the importance of sound and lighting.

Planning for Practice, Communicating, and Interpreting

Students are required to manage time, resources, and personnel for the production of their film, including the use of scripts and storyboards. They will then evaluate the outcome of their work and that of their peers, exploring and describing how different media has influenced the communication and interpretation of ideas.

Designing and Developing Digital Outcomes

The key features of selected software (iMovie, Garageband) will be identified and the most appropriate software and file types will be chosen to develop and combine digital content. During the filmmaking process students will capture, store, test, evaluate, and manipulate digital content.

Assessment: Students will be assessed on their ability to plan, produce and evaluate a short film.

Materials required: A4(1B5) Exercise Book or Binder, Pens, Pencil, Eraser, 64GB USB 3.0 (or higher) Flash Drive.

CHRISTIAN EDUCATION NETWORK

DIGITAL TECHNOLOGY

Composite Year 9 & 10

Option subject half-year course

Essential Learning Area: Technology

Digital technologies impact on every aspect of our lives and are vitally important to New Zealand's growth in the 21st century. Students at Middleton Grange School need opportunities to develop knowledge and skills with digital technologies so they are equipped to respond to rapid changes in our society. This course teaches students various aspects of digital technologies which include computer science and digital media.

Course Content

- Develop skills in MS Office (Word, Excel and PowerPoint)
- Develop creativity and understanding of the design process; learning skills in Adobe Illustrator and Photoshop.
- Program computer games in Scratch

Assessment

- Observation, Peer assessment, E-portfolio

Materials

- Basic headphone set - specified in stationery list

Specified Costs

None

CHRISTIAN EDUCATION NETWORK ELECTRONICS AND ROBOTICS TECHNOLOGY

Composite Year 9 & 10

Option subject half-year course

Essential Learning Area: Technology

Students will learn what common electronic components do and how to assemble them into working circuits. They also learn how to read circuit diagrams, modify existing circuits to suit their needs and how to fix things that don't work. They will connect electronic components to micro-controllers and program the components to work as desired.

Students will develop computational thinking as they write and modify code to control robots that interact with the real world. They will apply problem solving skills to solve practical problems.

Course Content

Electronic Circuits

- Understanding different components
- Making electrical measurements
- Testing and Fault Finding
- Micro-controller interfacing and coding

Robotics

- Building and operating simple robots.
- Designing and programming robots to carry out tasks, and complete challenges.
- Interact with the environment through sensors.

Assessment: Evidence collected from a range of work during the course including quizzes, practical work, and problem-solving challenges.

Materials required: A4 Clear file (20 pockets), writing materials

CHRISTIAN EDUCATION NETWORK

FOOD & NUTRITION TECHNOLOGY

Composite Year 9 & 10

Option subject half-year course

Essential Learning Area: Technology, Health & Physical Education

“Technology is innovation by design: the use of practical and intellectual resources to develop products and systems that expand human possibilities by addressing needs and realising opportunities.”

Students will develop, refine and extend food skills and knowledge by doing practical food preparation and cooking each week. Adapting and modifying recipes is encouraged, as well as cooking at home.

Course Content:

- Food Safety Practices
- Measuring and Knife Skills
- Nutrients
- Food and Nutrition Guidelines
- Technology Project:
 - Write a brief
 - Develop a recipe for a healthy lunch
 - Evaluate
- Design and create a 3D Gingerbread Sculpture

Assessment: Evidence collected from a range of work to make a judgement using Technology criteria. i.e. Bookwork, Design work, photos, written tests, conversations and practical work.

Materials Required: All materials supplied

CHRISTIAN EDUCATION NETWORK

HARD MATERIALS TECHNOLOGY

Composite Year 9 & 10

Option subject half-year course

Essential Learning Area: Technology

“Technology is innovation by design: the use of practical and intellectual resources to develop products and systems that expand human possibilities by addressing needs and realising opportunities.”

This subject involves both rudimentary design and practical work. It is open to students of all ability levels.

Course Content:

- Codes of practice for all Technology processes and equipment used
- Emphasis on technical & practical skills
- Following a rudimentary design process to produce a practical outcome that is fit for purpose
- Application of the Technological processes including developing/following a brief, and planning for practise
- Option for an introduction to digital fabrication

Technical Skills Developed:

- Construction of basic joints
- Using various materials

Outcomes:

Students will learn technical and practical skills which can then be applied in the design and manufacture of projects that are fit for purpose.

Assessment: Work is internally assessed, with evidence collected from project work to make a judgement against Technology criteria.

Materials Required: All materials supplied, however students must bring their own pencil to each class.