SCIENCE/STEM IN SCHOOLS 2021

NEW ZEALAND CURRICULUM CONNECTIONS	
LEARNING AREAS	Science, Technology, Social Sciences, English, The Arts – Drama.
KEY COMPENTENCIES	In association with the Teacher Guidebook, *The Marine Team* contributes to: Thinking, Using language, symbols, and texts, Managing self, Relating to others, Participating and contributing.
THEMES	Marine Science, Innovative Technologies, Environmental Science, Sustainability.

In association with the Teacher Guidebook, *The Marine Team* contributes to:

LEARNING AREAS – ACHIEVEMENT OBJECTIVES

LEVEL 3

SCIENCE

SCIENCE: NATURE OF SCIENCE

Objective	Curriculum Content Descriptions
Understanding about science	Appreciate that science is a way of explaining the world and that science knowledge changes over time. Identify ways in which scientists work together and provide evidence to support their ideas.
Investigating in Science	Build on prior experiences, working together to share and examine their own and others' knowledge. Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.
Communicating in science	Engage with a range of science texts and begin to question the purposes for which these texts are constructed.
Participating and contributing	Use their growing science knowledge when considering issues of concern to them. Explore various aspects of an issue and make decisions about possible actions.

SCIENCE: LIVING WORLD

Objective	Curriculum Content Descriptions
Life processes	Recognise that there are life processes common to all living things and that these occur in different ways.
Ecology	Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.

SCIENCE: PLANET EARTH AND BEYOND

Objective	Curriculum Content Descriptions

Earth systems	Appreciate that water, air, rocks and soil, and life forms make up our planet and recognise that these are also Earth's resources.
Interacting Systems	Investigate the water cycle and its effect on climate, landforms, and life.

SCIENCE: PHYSICAL WORLD

Objective	Curriculum Content Descriptions
Physical inquiry and physics concepts	Explore, describe, and represent patterns and trends for everyday examples of physical phenomena, such as movement, forces, electricity and magnetism, light, sound, waves, and heat. For example, identify and describe the effect of forces (contact and non-contact) on the motion of objects; identify and describe everyday examples of sources of energy, forms of energy, and energy transformations.

TECHNOLOGY

TECHNOLOGY: NATURE OF TECHNOLOGY

Objective	Curriculum Content Descriptions
Characteristics of technology	Understand how society and environments impact on and are influenced by technology in historical and contemporary contexts and that technological knowledge is validated by successful function.

SOCIAL SCIENCES

Objective	Curriculum Content Descriptions
Social studies	Understand how people make decisions about access to and use of resources.

ENGLISH

ENGLISH: LISTENING, READING, AND VIEWING

Objective	Curriculum Content Descriptions
Processes and strategies	Integrate sources of information, processes, and strategies with developing confidence to identify, form, and express ideas.
Purposes and audiences	Show a developing understanding of how texts are shaped for different purposes and audiences.
Ideas	Show a developing understanding of ideas within, across, and beyond texts.
Language features	Show a developing understanding of how language features are used for effect within and across texts.

THE ARTS

THE ARTS: DRAMA

Objective	Curriculum Content Descriptions
Understanding drama in context	Investigate the functions and purposes of drama in cultural and historical contexts.
Communicating and interpreting	Present and respond to drama, identifying ways in which elements, techniques, conventions, and technologies combine to create meaning in their own and others' work.

LEVEL 4

SCIENCE

SCIENCE: NATURE OF SCIENCE

Objective	Curriculum Content Descriptions
Understanding about science	Appreciate that science is a way of explaining the world and that science knowledge changes over time. Identify ways in which scientists work together and provide evidence to support their ideas.
Investigating in Science	Build on prior experiences, working together to share and examine their own and others' knowledge. Ask questions, find evidence, explore simple models, and carry out appropriate investigations to develop simple explanations.
Communicating in science	Begin to use a range of scientific symbols, conventions, and vocabulary. Engage with a range of science texts and begin to question the purposes for which these texts are constructed.
Participating and contributing	Use their growing science knowledge when considering issues of concern to them. Explore various aspects of an issue and make decisions about possible actions.

SCIENCE: LIVING WORLD

Objective	Curriculum Content Descriptions
Life processes	Recognise that there are life processes common to all living things and that these occur in different ways.
Ecology	Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.

SCIENCE: PLANET EARTH AND BEYOND

Objective	Curriculum Content Descriptions
Earth systems	Appreciate that water, air, rocks and soil, and life forms make up our planet and recognise that these are also Earth's resources.
Interacting Systems	Investigate the water cycle and its effect on climate, landforms, and life.

SCIENCE: PHYSICAL WORLD

Objective	Curriculum Content Descriptions
Physical inquiry and physics concepts	Explore, describe, and represent patterns and trends for everyday examples of physical phenomena, such as movement, forces, electricity and magnetism, light, sound, waves, and heat. For example, identify and describe the effect of forces (contact and non-contact) on the motion of objects; identify and describe everyday examples of sources of energy, forms of energy, and energy transformations.

TECHNOLOGY

TECHNOLOGY: NATURE OF TECHNOLOGY

Objective	Curriculum Content Descriptions
Characteristics of technology	Understand how technological development expands human possibilities and how technology draws on knowledge from a wide range of disciplines.

SOCIAL SCIENCES

Objective	Curriculum Content Descriptions
Social studies	Understand how exploration and innovation create opportunities and challenges for people, places, and environments. Understand how producers and consumers exercise their rights and meet their responsibilities. Understand how formal and informal groups make decisions that impact on communities. Understand how people participate individually and collectively in response to community challenges.

ENGLISH

ENGLISH: LISTENING, READING, AND VIEWING

Objective	Curriculum Content Descriptions
Processes and strategies	Integrate sources of information, processes, and strategies with developing confidence to identify, form, and express ideas.
Purposes and audiences	Show an increasing understanding of how texts are shaped for different purposes and audiences.
Ideas	Show an increasing understanding of ideas within, across, and beyond texts.
Language features	Show an increasing understanding of how language features are used for effect within and across texts.
Structure	Show an increasing understanding of text structures.

THE ARTS

THE ARTS: DRAMA

Objective	Curriculum Content Descriptions
Understanding drama in context	Investigate the functions and purposes of drama in cultural and historical contexts.
Communicating and interpreting	Present and respond to drama, identifying ways in which elements, techniques, conventions, and technologies combine to create meaning in their own and others' work.

LEVEL 5

SCIENCE

SCIENCE: NATURE OF SCIENCE	
Objective	**Curriculum Content Descriptions**
Understanding about science	Understand that scientists' investigations are informed by current scientific theories and aim to collect evidence that will be interpreted through processes of logical argument.
Communicating in science	Use a wider range of science vocabulary, symbols, and conventions. Apply their understandings of science to evaluate both popular and scientific texts (including visual and numerical literacy).
Participating and contributing	Develop an understanding of socio-scientific issues by gathering relevant scientific information in order to draw evidence-based conclusions and to take action where appropriate.
SCIENCE: LIVING WORLD	
Objective	**Curriculum Content Descriptions**
Ecology	Investigate the interdependence of living things (including humans) in an ecosystem.
SCIENCE: PLANET EARTH AND BEYOND	
Objective	**Curriculum Content Descriptions**
Earth systems	Investigate the composition, structure, and features of the geosphere, hydrosphere, and atmosphere.
Interacting Systems	Investigate how heat from the Sun, the Earth, and human activities is distributed around Earth by the geosphere, hydrosphere, and atmosphere.
SCIENCE: PHYSICAL WORLD	
Objective	**Curriculum Content Descriptions**
Physical inquiry and physics concepts	Identify and describe the patterns associated with physical phenomena found in simple everyday situations involving movement, forces, electricity and magnetism, light, sound, waves, and heat. For example, identify and describe energy changes and conservation of energy, simple electrical circuits, and the effect of contact and non-contact on the motion of objects.
Using physics	Explore a technological or biological application of physics.
TECHNOLOGY	
TECHNOLOGY: NATURE OF TECHNOLOGY	
Objective	**Curriculum Content Descriptions**
Characteristics of technology	Understand how people's perceptions and acceptance of technology impact on technological developments and how and why technological knowledge becomes codified.
SOCIAL SCIENCES	
Objective	**Curriculum Content Descriptions**
Social studies	Understand how economic decisions impact on people, communities, and nations.

	Understand how people's management of resources impacts on environmental and social sustainability. Understand how the ideas and actions of people in the past have had a significant impact on people's lives.

ENGLISH

ENGLISH: LISTENING, READING, AND VIEWING

Objective	Curriculum Content Descriptions
Processes and strategies	Integrate sources of information, processes, and strategies purposefully and confidently to identify, form, and express increasingly sophisticated ideas.
Purposes and audiences	Show an understanding of how texts are shaped for different purposes and audiences.
Ideas	Show an understanding of ideas within, across, and beyond texts.
Language features	Show an understanding of how language features are used for effect within and across texts.
Structure	Show an understanding of a range of structures.

THE ARTS

THE ARTS: DRAMA

Objective	Curriculum Content Descriptions
Understanding drama in context	Investigate the characteristics, purposes, and functions of drama in a range of contexts.
Communicating and interpreting	Present and respond to drama, and describe how drama combines elements, techniques, conventions, and technologies to create structure in their own and others' work.