

## Science Matrix

	Investigation	Research	Living World	Material World	Planet Earth & Beyond		Physical World
<b>Level 1</b>	AS90186 <b>1.1</b> Carry out a practical science investigation with direction	AS90187 <b>1.2</b> Process information to describe a use of science knowledge with direction	AS90188* <b>1.3*</b> Describe aspects of biology.	AS90189 <b>1.4</b> Describe aspects of chemistry.	AS90190 <b>1.5</b> Describe aspects of geology.	AS90192 <b>1.7</b> Describe aspects of astronomy.	AS90191 <b>1.6</b> Describe aspects of physics.
	4 credits Internal	2 credits Internal	5 credits External	5 credits External	3 credits External	2 credits External	5 credits External
<b>Level 2</b>	AS90312 <b>2.1</b> Carry out a practical scientific investigation with supervision	AS90771 <b>2.2</b> Research information to present a scientific report	AS90772 <b>2.3</b> Describe the factors and processes involved in the evolution of New Zealand's plants and animals	AS90766 <b>2.8</b> Describe the chemical properties and effects of fertilisers	AS90767 <b>2.5</b> Describe New Zealand's geological history	AS90764 <b>2.7</b> Describe the nature and life cycle of stars	AS90768 <b>2.9</b> Use physics concepts and principles to describe the behaviour of light
	4 credits Internal	3 credits Internal	4 credits External	4 credits External	3 credits External	2 credits External	4 credits External
<b>Level 3</b>	AS90727 <b>3.1</b> Carry out a practical scientific investigation with guidance	AS90728 <b>3.2</b> Research a current scientific controversy	AS90729 <b>3.3</b> Describe genetic processes	AS90730 <b>3.4</b> Describe selected organic compounds and their uses	AS90731 <b>3.5</b> Describe geological processes affecting New Zealand	AS90733 <b>3.7</b> Report on a recent astronomical event or discovery	AS90732 <b>3.6</b> Describe selected properties and applications of EMR, radioactive decay, sound and ultrasound
	4 credits Internal	4 credits Internal	4 credits External	4 credits External	2 credits External	2 credits Internal	4 credits External

\*A student cannot be credited with this standard **and either** of Biology 1.3 or Biology 1.8, because of significant overlap of assessed outcomes.