NCEA Earth and Space Science Remote Learning and Assessment

Subject matrices are a guide to assessment where remote teaching, learning and assessment have to take place due to a significant event leading to closure of schools over an extended period of time. For example, lockdown, natural disaster, etc.

General Guidance

Where teaching, learning and assessment is done remotely, students will need access to digital devices and the internet.

For some standards, students may also need access to specific chemicals and equipment to collect primary data.

These requirements may pose issues around health and safety, and also access and equity for some students, which you will need to consider in your programme planning.

Earth and Space Science Matrix

COLOUR KEY: A colour-coding system to categorise standards according to the advice in this document.

Green:	These standards are suitable for remote teaching, learning and assessment.
Blue:	Teachers can facilitate assessment against these standards by remote learning with guidance (refer to General Guidance above).
Orange:	These standards are suitable for remote teaching and learning provided the candidate has access to appropriate equipment and/or technology. They are not suitable for remote assessment in their current delivery method and/or requirements. Guidance will be provided at the time as required.
Red:	These standards require a collaborative process or interaction with others, and are not suitable for remote teaching, learning and assessment.

Level 2	Level 3
AS 91187 **2.1** Internal (4 credits) **Carry out a practical Earth and Space Science investigation** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use a different investigation for their assessment. Where students are using the same investigation, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates.	**AS 91410** **3.1** Internal (4 credits) **Carry out an independent practical Earth and Space Science investigation** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use a different independent investigation for their assessment. Where students are using the same independent investigation, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates.

AS 91188 2.2	AS 91411 3.2
Internal (4 credits) **Examine an Earth and Space Science issue and the validity of the information communicated to the public** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use a different issue for their assessment. Where students are using the same issue, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates.	Internal (4 credits) **Investigate a socio-scientific issue in an Earth and Space Science context** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use a different socio-scientific issue for their assessment. Where students are using the same socio-scientific issue, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates. Further guidance can also be accessed through Pūtake modules and courses, and the Assessor Practice Tool (as it becomes available).

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AS 91189 **2.3** Internal (4 credits) **Investigate geological processes in a New Zealand locality** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use different localities for their assessment. Where students are using the same locality, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates. Further guidance can also be accessed through Pūtake modules and courses.	**AS 91412** **3.3** Internal (4 credits) **Investigate the evidence related to dating geological event(s)** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use different events to be geologically dated for their assessment. Where students are using the same event for geologic dating, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates. Further guidance can also be accessed through Pūtake modules and courses.

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AS 91190 **2.4** Internal (4 credits) **Investigate how organisms survive in an extreme environment** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use a different organism for their assessment. Where students are using the same organism, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates. Further guidance can also be accessed through Pūtake modules and courses.	**AS 91415** **3.6** Internal (4 credits) **Investigate an aspect of astronomy** Suitable for distance learning and assessment using digital platforms for video conferencing, word processing or file-sharing. The evidence can be presented using a variety of modes to clearly demonstrate the student's understanding. For authenticity purposes, each student could be required to use a different aspect of astronomy for their assessment. Where students are using the same aspect of astronomy, teachers could also have regular check points or verbal conferences with students during the assessment period. For specific advice on how to manage authenticity when assessing during uncertain times, please see the Pūtake module: Tāku Reo, Tāku Mahi - My Voice, My Work. Guidance and support are also provided on the NZQA Earth and Space Science page. This includes the exemplars and the Alternative Evidence Gathering Templates. Further guidance can also be accessed through Pūtake modules and courses, and the Assessor Practice Tool.

Level 2	Level 3
AS 91191 **2.5** External (4 credits) **Demonstrate understanding of the causes of extreme Earth events in New Zealand** Teaching and learning towards assessment of this standard is suitable remotely. Assessment is not suitable remotely. The current Assessment Specifications will continue to apply.	**AS 91413** **3.4** External (4 credits) **Demonstrate understanding of processes in the ocean system** Teaching and learning towards assessment of this standard is suitable remotely. Assessment is not suitable remotely. The current Assessment Specifications will continue to apply.
AS 91192 **2.6** External (4 credits) **Demonstrate understanding of stars and planetary systems** Teaching and learning towards assessment of this standard is suitable remotely. Assessment is not suitable remotely. The current Assessment Specifications will continue to apply.	**AS 91414** **3.5** External (4 credits) **Demonstrate understanding of processes in the atmosphere system** Teaching and learning towards assessment of this standard is suitable remotely. Assessment is not suitable remotely. The current Assessment Specifications will continue to apply.
AS 91193 **2.7** External (4 credits) **Demonstrate understanding of the physical principles related to the Earth System** Teaching and learning towards assessment of this standard is suitable remotely. Assessment is not suitable remotely. The current Assessment Specifications will continue to apply.	