

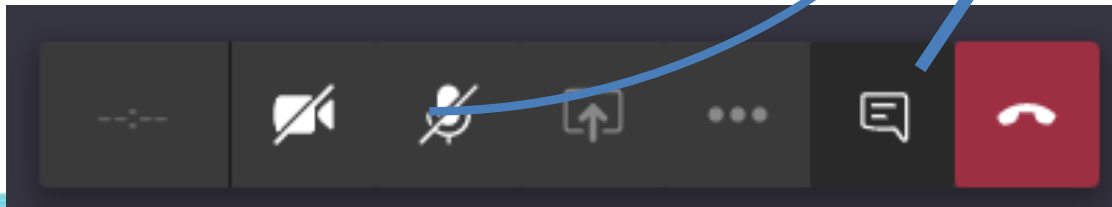
Welcome everyone!

Please take a moment to introduce yourself in the chat box – name, school and local authority

Housekeeping

- Turn off your camera
- Mute your microphone
- Post comments, questions and thoughts into the chat window

Twitter: @STEMedscot #STEMnation



SQA Alternative Certification Model



National Qualifications

Alternative certification model

Five stages

Understanding Standards resources

New SQA Academy Course on 19 April

QA from April to May

Final QA from end of May to June

QAd results submitted by 25 June




<https://www.sqa.org.uk/sqa/96760.html>



Determining provisional results at National 5, Higher and Advanced Higher: session 2020–21

START

DETAILS 

www.sqaacademy.org.uk

SQA Alternative Certification Model



Higher Environmental Science

Subject-specific guidance on gathering key evidence in session 2020–21



Please read this guidance alongside [National Courses: guidance on gathering evidence and producing estimates](#) and the SQA Academy resource [Quality assurance of estimates for National Courses](#).

Gathering key evidence for Higher Environmental Science

This document and *National Courses: guidance on gathering evidence and producing estimates* will give you additional support and guidance to support your decision making for session 2020–21. Evidence should be gathered later in the course, as a realistic reflection of a candidate's attainment. It is important to note that it is not the **quantity** of evidence, but the **quality** of evidence, in relation to its predictive value, that will support you during this process.

The following types of key evidence are likely to provide a good predictive value and may be helpful to you, although there may be other types of key evidence you would like to use.

The screenshot shows the SQA website interface for Higher Environmental Science. The top navigation bar includes the SQA logo, a search bar, and links for 'Qualifications 2020/21', 'I am a...', 'Choose Country', and 'Sign in'. The main navigation bar has dropdown menus for 'Qualifications', 'Services', 'Past Papers', 'About SQA', and 'Support'. The breadcrumb trail reads: Home > National Qualifications > Subjects > Environmental Science > Higher > Higher Environmental Science. The page title is 'Higher Environmental Science'. On the left, there is a 'Select subject' dropdown menu and a 'National Qualifications' sidebar with links to 'NQ home', 'Subjects', 'National Qualifications in 2020-21', 'Baccalaureates', 'Skills for Work', 'Unit search', 'Awarding and results', and 'About National Qualifications'. The main content area features a table with tabs for 'Environmental Science', 'National 3', 'National 4', 'National 5', and 'Higher' (which is selected). Below the tabs, there are several expandable sections: 'Subject updates', 'National 5 to Advanced Higher Course information for 2020-21', 'Alternative certification model', 'Course Specification' (circled in red), and 'Gathering evidence (Jan 2021)'. A 'Receive updates' button is also visible.

Environmental Science - SQA

↓ In this section

Select a subject ▼

Additional resources for Session 2020-21

- ▶ Additional resources
- ▶ **Gathering Evidence and Providing Estimates**
 - ▶ Contents
 - ▶ Aims
 - ▶ What is an estimate?
 - ▶ Fairness
 - ▶ Predictive values
 - ▶ Scaling
 - ▶ Course content
 - ▶ Skills
 - ▶ Structure
 - ▶ A/C-type marks
 - ▶ Prelims
 - ▶ Questions
 - ▶ Marking
 - ▶ Cut-off scores
 - ▶ Producing estimates
 - ▶ **FAQ**
 - ▶ Case studies

National 5

Higher

Advanced Higher

Presentations

Frequently asked questions

How can I look more closely at prelim and test performance to be sure of making an appropriate estimate for each candidate?

Whilst the overall percentage score for each candidate is often used by centres as a basis for estimating grades, it is important to look at the level of demand of the assessment too. Across the various assessment components, SQA aims for approximately 30% of the marks to address the A-grade criteria and therefore be more discriminating.

A candidate who scores highly in evidence that contains an appropriate proportion of A-type marks is likely to also score highly in the SQA assessment. However, if the assessments contain no or few discriminating questions or tasks, then a candidate who scores highly is probably only demonstrating that they are a strong C-grade candidate rather than an A-grade candidate.

Looking at how candidates performed in the more demanding questions or parts of a task will often give a fair idea of whether the candidate is likely to attain a grade A or not

The cut-off scores I used for the prelim were higher than the notional cut-offs of 50% for a C and 70% for an A, to reflect the fact that the prelim wasn't as demanding as an SQA-produced question paper and only covered two-thirds of the course. Should I be changing to use notional cut-off scores?

Adjusting cut-off scores to reflect the level of demand of the evidence is good practice and centres are encouraged to continue to follow this good practice.

In this case, using notional cut-off scores of 50% for a C and 70% for an A, or arbitrarily adding a set percentage to every candidate's prelim score is likely to inflate estimates unrealistically and lead to unreliable information.

Should I be including homework and classwork in my evidence for estimates?

It is important to consider the **quality** of the evidence rather than the **quantity** of the evidence when considering estimates. Centres should be cautious about such evidence. Performance in homework may be an indicator of candidate performance but equally, candidates may have support from a sibling, parent, carer or tutor, and many teachers and lecturers encourage candidates to seek help from them if there are aspects of the homework with which the candidate is struggling. Homework is usually open-book in nature and that may also mean it is not a true reflection of a candidate's ability. Consequently, homework marks may not be reliable evidence of a candidate's understanding or ability, although teachers or lecturers may be aware of how much support was required.

SQA - Understanding Standards: FAQ

Plus further ACM FAQ section:

<https://www.sqa.org.uk/sqa/72074.html>

Session aims

Education Scotland is supporting the [SQA Alternative Certificate Model](#) by:

- ***Supporting local and national curriculum networks to share practice and quality assurance approaches.***
- ***Provide signposting for practitioners to support them to network with practitioners for quality assurance purposes.***



Sessions for Sciences

- 5-6pm, Wed 31st March – informal discussion and matching
- 5-6pm, Wed 28th April – Biology/Human Biology
- 5-6pm, Tuesday 4th May – Chemistry
- 5-6pm, Wednesday 5th May – Physics
- 5-6pm, Monday 10th May – Environmental Science.



National e-learning offer

Supported resources

- 23,000 resource links across 28 subject spreadsheets
- 5000+ resource links for sciences NQs
- BBC, West OS, e-Sgoil & Scholar resources
- 18,000 users and 45k+ pageviews
- 45 practical science videos published, 150 projected, 266 in total including online videos
- Online database in development

<https://blogs.glowscotland.org.uk/glowblogs/nationalelearning/resources-2/>

National e-Learning Offer




National e-Learning Offer




West OS have created learner revision resources for Higher Biology:
<https://www.westpartnership.co.uk/download/2946/>

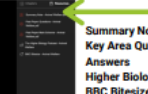

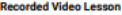
And Higher Chemistry:
<https://www.westpartnership.co.uk/download/2967/>



Higher Biology



Revision resources are now available, alongside recorded video lessons, for each key area of the Higher Biology course.



Summary Note
Key Area Questions and Answers
Higher Biology Podcast
BBC Bitesize Link

Click on the key areas below to access revision resources!

DNA and the Genome

Structure of DNA 28th April	Replication of DNA 28th April	Gene Expression 28th April	Cellular Differentiation	Genome and Mutations 5th May	Evolution 5th May	Genomic Sequencing 5th May
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Metabolism for Survival


Metabolic Pathways 12th May	Cellular Respiration 12th May	Metabolic Rate 12th May	Metabolism in Conformers and Regulators	Metabolism and Adverse Conditions	Environmental Control of Metabolism	Genetic Control of Metabolism
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Sustainability and Interdependence


Food Supply, Plant Growth and Productivity	Plant and Animal Breeding	Crop Protection	Animal Welfare	Symbiosis	Social Behaviour	Biodiversity
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National e-Learning Offer

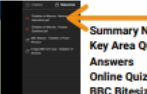






Higher Chemistry



Revision resources are now available, alongside recorded video lessons, for each key area of the Higher Chemistry course.



Summary Note
Key Area Questions and Answers
Online Quiz
BBC Bitesize Link

Click on the key areas below to access revision resources!

Chemical Changes & Structure

Periodicity 3rd June	Structure and Bonding	Oxidising and Reducing Agents 3rd June
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Chemistry in Society

Getting the Most From Reactants	Controlling the Rate	Chemical Energy 20th May	Equilibria 20th May	Chemical Analysis 27th May
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Nature's Chemistry

Systematic Carbon Chemistry 6th May	Oxidation of Food	Esters, Fats and Oils	Fragrances	Proteins 29th April	Skin Care 29th April	Soaps, Detergents and Emulsions 13th May
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National e-Learning Offer



STEM Grants Programme

- Focus on professional learning
- £400,000 funding available
- £200k ring-fenced for bids with Numeracy & Mathematics focus
- Two funding streams:
 - Leadership and Collegiate Professional Learning (£3k max bid)
 - Regional and National Partner Fund (£10k max bid)
- Closing date 11.59pm on Monday 24th May
- Potential funding over two years

<https://blogs.glowscotland.org.uk/glowblogs/stemnation/stem-grants-2021/>



Break out rooms

Could one person in each break out room facilitate discussion – thank you.

1. What QA approaches are you using?
2. What solutions have you identified to help with quality assurance process?
3. What approaches are you taking to setting of grade boundaries?



Digital Quality Assurance of National Qualifications

QUALITY ASSURING SENIOR PHASE LEARNER EVIDENCE

A step by step guide

PLANNING

You will need to set up an online space for quality assurance. You can download some examples for this [HERE](#).

Watch this [VIDEO](#) to see how you could set up the online space.

You can download suggested text to use [HERE](#).



ASSESSMENT EVIDENCE

Identify the assessment evidence to be used in the process. This may be one item or a number at different levels. Watch this [VIDEO](#) to see how to upload evidence from your computer.

Watch this [VIDEO](#) to see how to upload multiple pieces of evidence as one PDF, using a mobile device.

Upload the evidence to the online space and complete the section explaining the context etc of the assessment.



QUALITY ASSURANCE

Identify 2 or 3 practitioners who will take part in the process.

The practitioners should read the explanation of what the assessment evidence is and how it was created before the review the assessment evidence.

Practitioners should review the assessment evidence and complete the questions in the tables provided.



DIALOGUE

Once all the practitioners have completed their reviews come together to discuss their comments and levels.

Agree on final grades or levels for the assessment evidence.

It may be worth considering keeping the information you have gathered during this process for future work or for validation of the quality assurance by others.



Education
Scotland
Foghlam Alba

digilearn.scot

Digital Learning Community

- [Digilearn.scot blog](https://digilearn.scot/blog) outlines one possible digital solution for a quality assurance process when reviewing learner evidence
- Interactive summary
- Suggested stages with supporting videos:

Step 1- Identify Staff Groups

Step 2 – Set up a PLC Team in Microsoft Teams

Step 3 – Invite/share the team code with the group of teachers. Adding learner content

Step 4 – Carrying out Quality Assurance activities. Examples of use cases*

<https://bit.ly/3cA2SjA>

Discussion & next steps

- **Secondary Sciences Network (MS Teams)**
 - We have set up a channel to network/share approaches/discuss QA within the MS Teams Glow Secondary Sciences Network:
<https://bit.ly/2SeKntg>
 - If anyone requires support to be matched with another school please contact us on:
stem@educationscotland.gov.scot

