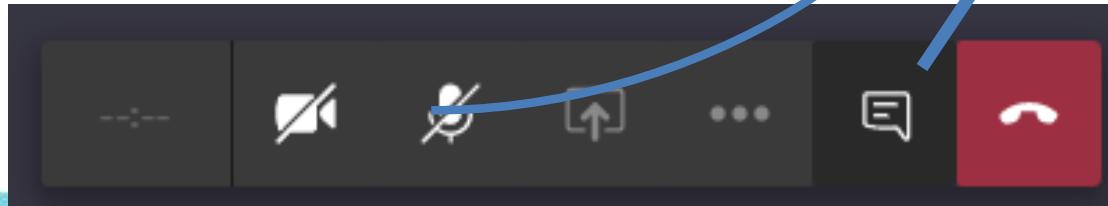


Welcome everyone!

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>



Username

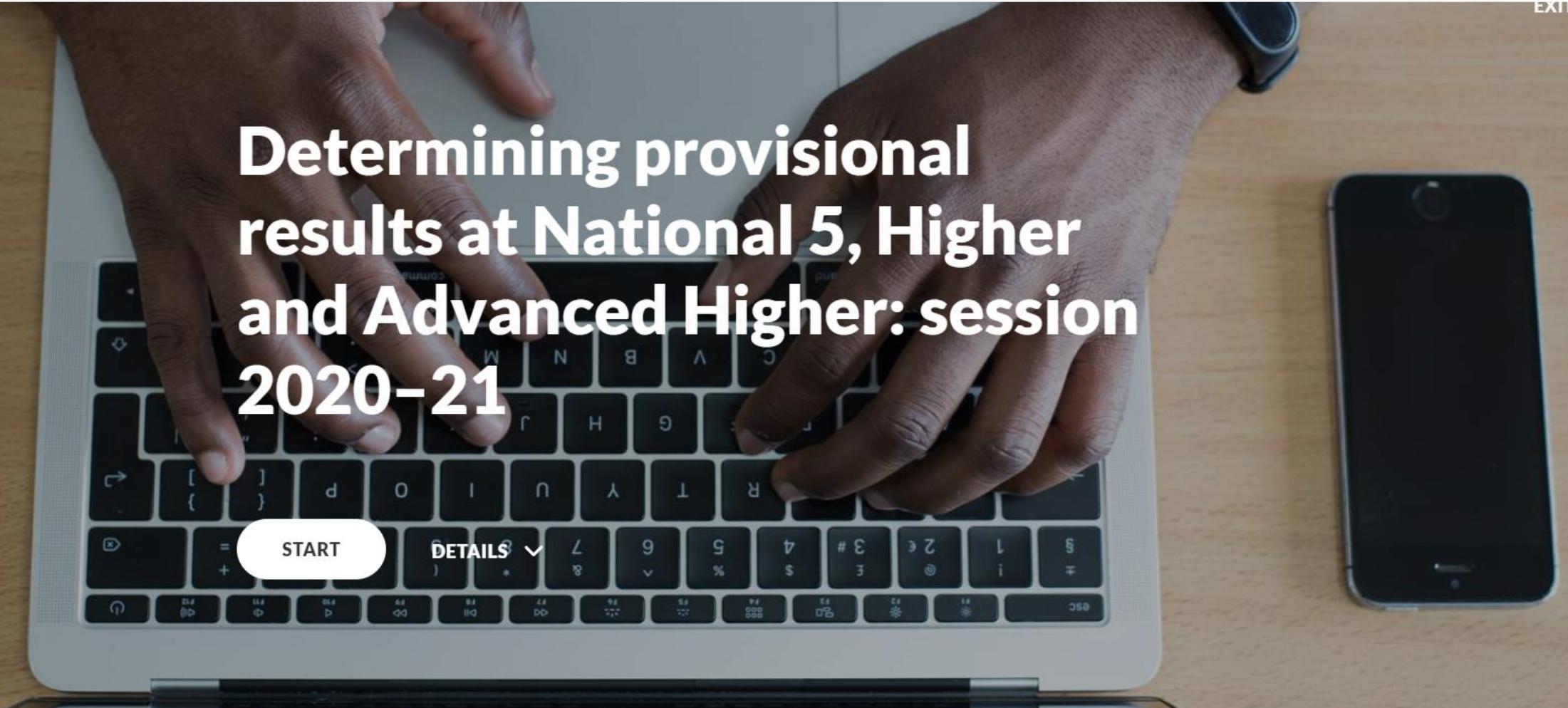


Password



[Forgotten your username or password?](#)

EXIT



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

The SQA logo, featuring a stylized 'X' icon followed by the letters 'SQA' in a serif font.

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.

SQA

Qualifications 2020/21

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[Home](#) > [National Qualifications](#) > [Subjects](#) > [Environmental Science](#) > [Higher](#) > Higher Environmental Science

Higher Environmental Science

National Qualifications

[Environmental Science](#) | [National 3](#) | [National 4](#) | [National 5](#) | **Higher**

Subject updates

National 5 to Advanced Higher Course information for 2020-21

[Receive updates](#)

Alternative certification model

Course Specification

Gathering evidence (Jan 2021)

A red oval highlights the 'Gathering evidence (Jan 2021)' section.

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



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.

Recorded Video Lesson

Learning Intention

Success Criteria

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
- Replication of DNA
- Gene Expression
- Cellular Differentiation
- Genome and Mutations
- Evolution
- Genomic Sequencing

Metabolism for Survival

- Metabolic Pathways
- Cellular Respiration
- Metabolic Rate
- Metabolism in Conformers and Regulators
- Metabolism and Adverse Conditions
- Environmental Control of Metabolism
- Genetic Control of Metabolism

Sustainability and Interdependence

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

National e-Learning Offer

West OS

Higher Chemistry

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

Recorded Video Lesson

Learning Intention

Success Criteria

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
- Structure and Bonding
- Oxidising and Reducing Agents

Chemistry in Society

- Getting the Most From Reactants
- Controlling the Rate
- Chemical Energy
- Equilibria
- Chemical Analysis

Nature's Chemistry

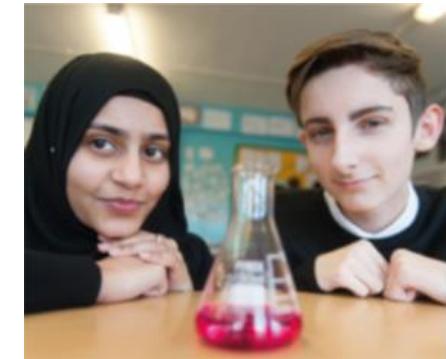
- Systematic Carbon Chemistry
- Oxidation of Food
- Esters, Fats and Oils
- Fragrances
- Proteins
- Skin Care
- Soaps, Detergents and Emulsions

National e-Learning Offer

West OS

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/>

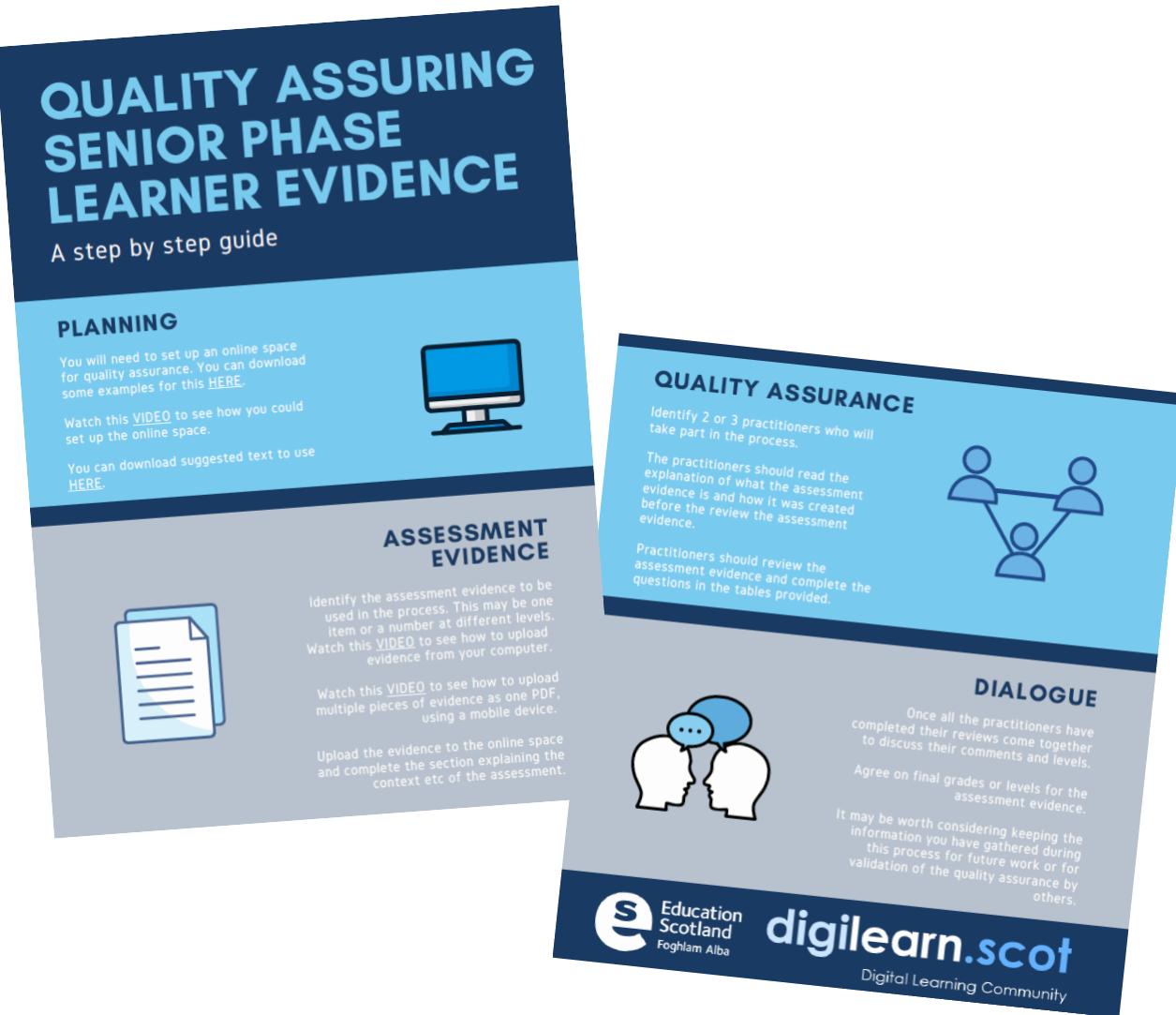
Break out rooms

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



- [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/2SeKntq>
 - If anyone requires support to be matched with another school please contact us on:
stem@educationscotland.gov.scot

