

Cyflwynwyd yr ymateb hwn i ymchwiliad y [Pwyllgor Plant, Pobl Ifanc ac Addysg i weithredu diwygiadau addysg](#)

This response was submitted to the [Children, Young People and Education Committee inquiry into Implementation of education reforms](#)

IER 59

Ymateb gan: y Sefydliad Ffiseg

Response from: Institute of Physics (IOP)

Nodwch eich barn mewn perthynas â chylch gorchwyl yr ymchwiliad. | Record your views against the inquiry's terms of reference.

I am writing on behalf of the Institute of Physics (IOP) to share our policy position on curriculum reform and support for a single route through the sciences at GCSE ahead of the Senedd term. Please contact us if you would like to discuss this further.

Physics in Wales

Physics benefits us all. It provides essential skills and knowledge that we will depend upon ever more in years to come. Physics-based skills are crucial if Wales is to deliver on its potential to become a powerhouse for the green economy. It's crucial that the Curriculum for Wales is used to nurture the next generation of physics professionals and scientifically literate citizens. Wales faces a growing physics skills shortage, whilst many young people are excluded from physics as they feel it is not for them. This issue is compounded by the significant shortage of specialist physics teachers to inspire the next generation. Physics faces the largest specialist teacher gap of all priority subjects, which restricts educational opportunities and denies many young people post-16 educational, training and employment opportunities.

The Challenge

Too many young people have their future study and career options limited early in their school journey. This needs to change for the benefit of learners and society. Curriculum reform should open opportunities for all learners, not limit them or close them down. The Welsh Government and Qualifications Wales had the opportunity to do this when they proposed a single route through the sciences for all learners, with The Sciences (Double Award) GCSE but at the last minute they opted for three routes instead. Two of these routes offer no progression to post-16 education in a scientific discipline and none of the routes are mandatory in the new curriculum. This will limit a learners' options later on. The evidence shows that when there is more than one route through the sciences at this level, decisions about which route a learner follows are often taken by the school. These decisions don't always reflect what is best for the learner and denies many the opportunity to progress their science education beyond GCSE.

Current science route proposals from Qualifications Wales and Welsh Government

Is post-16 progression possible?

The Sciences (Double award) Yes

Combined Science (Foundation double award) No

The Sciences (Single award) No

The Way Forward

We have a once in a generation chance to introduce equity to the sciences, plug the skills gap and open up apprenticeship, A level and higher education pathways in physics for all, but this opportunity is being thrown away. In June, Qualifications Wales announced its decision to delay the implementation of the GCSE The Sciences (Double Award) until 2026. There is time to reset and for Qualifications Wales and Welsh Government to return to their initial decision of a single route through the sciences for the benefit of all learners.

The IOP advocates for a single route for all students in Wales through GCSE The Sciences (Double Award). Students would still study biology, chemistry, and physics separately and receive individual grades for each discipline by tier of paper completed. This approach would support students into post-16 science pathways and provide equal opportunities for all whilst aligning the sciences with other secondary school subjects by not categorising students at such an early age.

We would like to extend an offer of a meeting to discuss the education reforms and our points raised above. Please contact George.baldwin@iop.org to arrange this.