



# **Bottom of the class**

**How STEM has  
stalled under the  
SNP**

STEM (Science, Technology, Engineering and Mathematics) subjects are Scotland's pathway to a high wage economy through high skilled jobs of the future.

Automation and technological change will fundamentally change our jobs market within a decade.

That's why we need to give our young people the skills they need today to compete for the jobs of tomorrow.

This report from Scottish Labour show that STEM subjects are not being given the support they deserve from the SNP government.

- STEM teachers have been cut at a rate of one every four days under the SNP
- Laboratory assistants are down by 43% since 2010. Almost 1 in 5 schools say they don't have any extra lab support.
- Access to Science Clubs is the lowest in the UK
- More than 20% of students never or hardly ever spend time in labs doing practical experiments.
- Scottish pupils have the least enthusiasm for STEM in the UK

It's time to take STEM subjects seriously. That's why Labour would stop the cuts to local services and start investing in education.

Failure to do this now will cost Scotland in the future.



**Kez Dugdale**  
**Scottish Labour leader**

## Teachers:

The SNP has imposed huge cuts to schools and local services, and one of the largest areas for cuts is in STEM teachers in secondary schools.

In Mathematics, there has been a drop in 429 teachers. In computing there has been a 25% drop

The one area of growth to this is Biology, with 17 extra teachers since 2007. A 1% increase.

In total, the equivalent of one STEM teacher has been cut every four days under the SNP government.

<b>Subject</b>	<b>2007</b>	<b>2016</b>	<b>Change</b>	<b>Change (%)</b>
Mathematics	2,760	2,331	-429	-16%
Biology	1,166	1,183	17	1%
Chemistry	1,037	942	-95	-9%
Physics	906	814	-92	-10%
Computing Studies	788	594	-194	-25%
General Science	164	131	-33	-20%
<b>Overall</b>	<b>6,821</b>	<b>5,995</b>	<b>-826</b>	<b>-12%</b>

**Source:** Scottish Government, Summary Statistics for Schools in Scotland

## Support staff:

SNP cuts have slashed the numbers of lab assistants and technicians working in schools.

Role	2010	2016	Change	Change (%)
Laboratory assistant	63	36	-27	-43%
Technician	1,213	1,015	-198	-16%
<b>Overall</b>	<b>1,276</b>	<b>1,051</b>	<b>-225</b>	<b>-18%</b>

Source: Scottish Government, Teacher census, supplementary data

This has direct results for remaining staff, with almost 80% in a UNISON Scotland survey of support staff reporting heavier workloads, and over 60% reporting low or very low morale.

### The Unison survey said:

*It is more about not replacing people who have gone. 2009 we had 4 technicians 110 hrs a week all year, we now have 3 technicians 95 hours a week, but during holidays 60hrs a week, not taking into account holidays. Central IT support has all been withdrawn*

*Courses like advanced higher cut. My science and CDT technician service reduced. IT support to teachers reduced. Library hours slightly reduced. Less minibuses available for trips. Fewer computers available for pupils. Breakfast club for pupils may be axed. Bus services that outlying pupils were using, out of catchment pupils, were axed as they were being subsidised heavily by the council.*

## What this means for our children:

The recent PISA results show the effects that these cuts are having

Scotland is the worst nation in the UK for laboratory staff to support school science teaching.

Nation	We have extra laboratory staff that help support school science teaching
England	91.4
Northern Ireland	88.0
Scotland	82.9
Wales	90.3

Source: Table B2.II.4, PISA

[http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries\\_9789264267510-table108-en](http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries_9789264267510-table108-en)

This means less time able to spent on practical experiments. More than 1 in 5 students say they never, or hardly ever, spend time in the laboratory doing practical experiments.

	Students never or hardly ever spend time in the laboratory doing practical experiments
England	18.6
Northern Ireland	17.5
Scotland	21.1
Wales	22.2

Source: Table B2.II.10, PISA [http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries\\_9789264267510-table108-en](http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries_9789264267510-table108-en)

## The impact of the cuts on other resources

Some of the survey responses from support staff show cuts affecting other areas:

*“Maths resources are woeful, every book has either no front cover, no back cover and pages missing, not because of damage to the resource but because the school has not been able to purchase new books. Also, classes are having to share this resource. It’s the same with everything else.”*

*we have less money every year to provide the basic material for teaching - chemicals, apparatus, glassware and text books*

Source: UNISON Scotland - <http://www.unison-scotland.org/2017/01/16/support-staff-struggling-maintain-standards-pupils-cuts-says-unison-report/>

Statistics that show that Scotland’s extra-curricular Science Club access is the lowest in the UK – with 3 in 10 pupils missing out

Nation	Science Club access
England	80.2
Northern Ireland	74.2
Scotland	71.3
Wales	80.4

Source: Table B2.II.6, PISA [http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries\\_9789264267510-table108-en](http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries_9789264267510-table108-en)

## Inspiring the next generation

Pupils in Scotland are the least likely in the UK to say they expect to work in STEM occupations in the future, at just 23%.

	% of students expecting to work in science-related occupations at age 30
England	29.7
Northern Ireland	32.9
Scotland	22.8
Wales	27.9

Source: Table B2.II.2, PISA – Percentage of students expecting to work in science-related occupations at age 30

[http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries\\_9789264267510-table108-en](http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries_9789264267510-table108-en)

This is the lowest in the UK, and also compares unfavourably with other regions around the world. Indeed, Scotland ranks 46<sup>th</sup> out of 50 in the sub-state regions and nations that participated in the survey.

## Sources:

Scottish Government, Summary Statistics for Schools in Scotland

PISA 2015 results: [http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries\\_9789264267510-table108-en](http://www.oecd-ilibrary.org/education/pisa-2015-results-volume-ii/results-tables-results-for-regions-within-countries_9789264267510-table108-en)

Unison Staff survey: <http://www.unison-scotland.org/2017/01/16/support-staff-struggling-maintain-standards-pupils-cuts-says-unison-report/>