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# Level 3 Certificate

# MATHEMATICAL STUDIES

Paper 2A/2B/2C

June 2019

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## Preliminary Material

To be opened and issued to candidates on  
Friday 1 March 2019

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## PISA

The Programme for International Student Assessment (PISA), run by the Organisation for Economic Co-operation and Development (OECD), is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students.

In 2015 over half a million students, representing 28 million 15-year-olds in 72 countries and economies, took the internationally agreed 2-hour test. Students were assessed in science, mathematics, reading, collaborative problem solving and financial literacy.

On 6 December 2016, details on PISA performance in 2015 appeared in an article on *The Guardian* newspaper's website.

The information below is based on an extract from the article.

### UK schools fail to climb international league table

The government's ambition to make Britain's schools among the best in the world in teaching core subjects by 2020 appears to have been foiled, after international comparisons published today showed few signs of improvement.

PISA found a little-changed performance in reading, maths and science among 15-year-olds in England – but good enough to make it the best performing UK nation after a sharp decline in Scotland's performance.

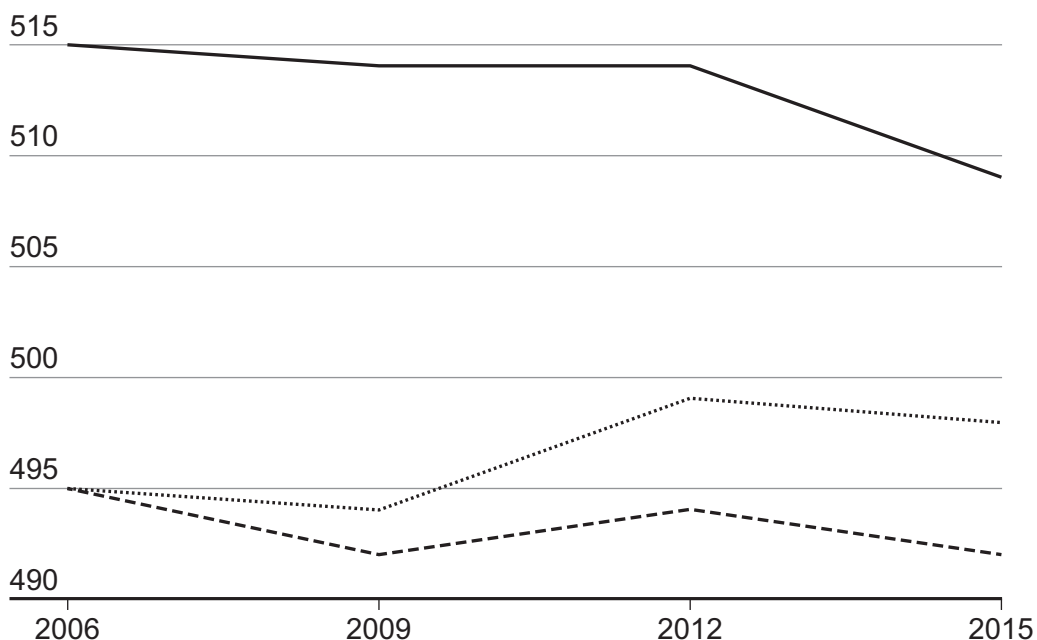
The UK's combined ranking in science rose six places to 15th despite a slight fall in pupil performances. The UK's maths ranking fell by one place to 27th but its reading position rose two places, although in both cases the actual scores were barely changed from 2012's test results.

#### In the UK, average performance in all three subjects has fallen between 2012 and 2015

UK average PISA ranking

#### Key

----- Maths      ..... Reading      ——— Science



The overall OECD average maths, reading and science scores are 490, 493 and 493 respectively.

In comparison, the UK average maths, reading and science scores are 492, 498 and 509 respectively.

England's performance was better compared with the three other home nations. Scotland in particular suffered a poor set of results, with substantial falls in reading and science compounded by a fall in maths.

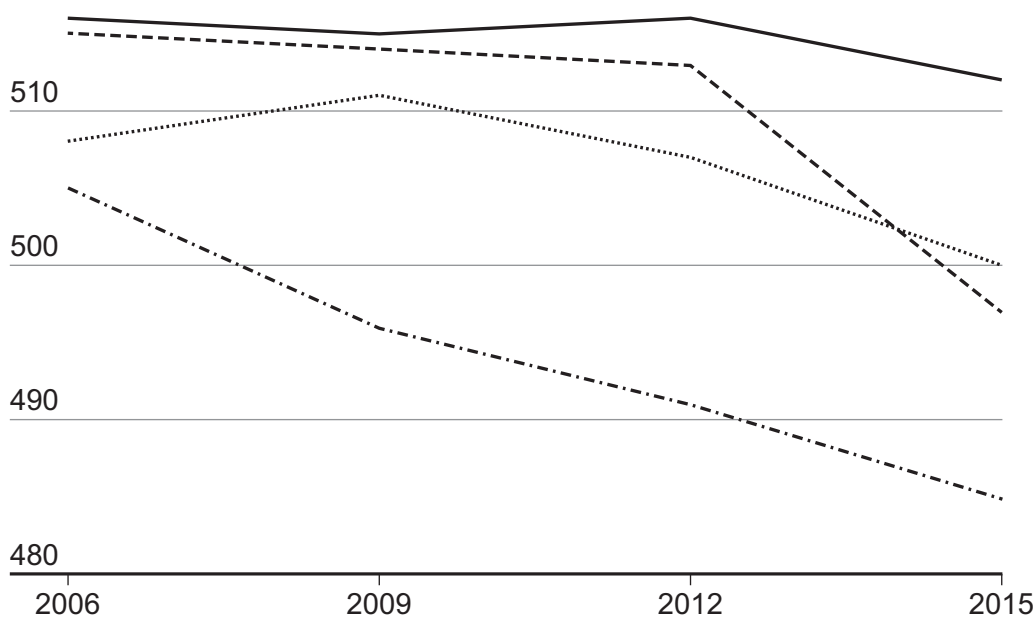
England scored 500 in reading and 493 in maths, while Scotland dipped to 493 in reading and 491 in maths, a fall of 13 and seven points respectively from 2012.

### Performance in science fell across the UK in 2015

Science average PISA ranking

#### Key

— England    ..... NI    - - - - - Scotland    - · - · - · Wales



Scotland's weak results left England as the highest scoring UK nation in both science and reading, and tied with Northern Ireland for the best result in maths.

Wales also lost ground in science and reading but showed a substantial improvement in maths scores, where the score increased to 478. However, Wales alone of the UK nations fell below the overall OECD average in all three subjects.

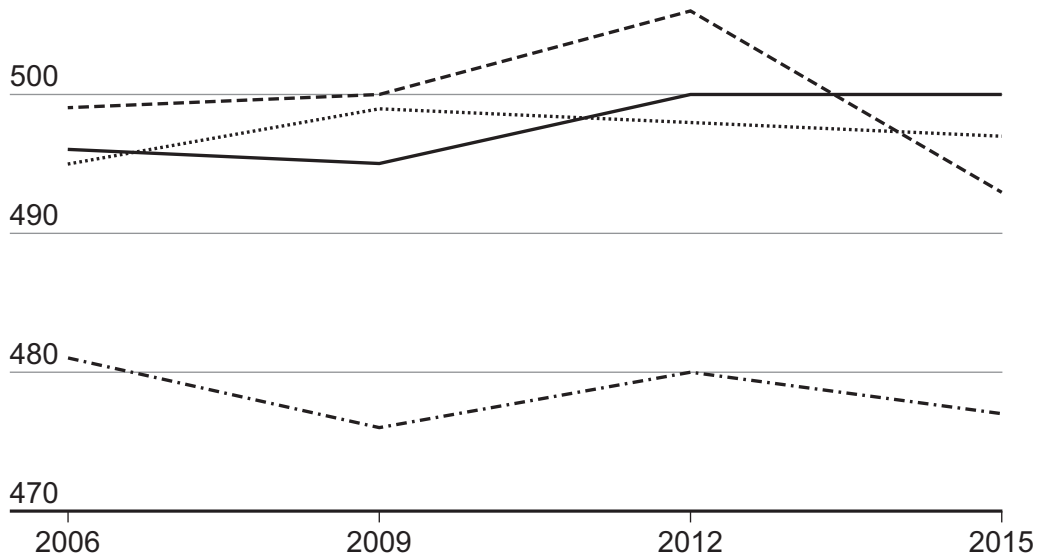
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### In Scotland, performance in reading had its largest fall, from a high in 2012

Reading average PISA ranking

**Key**

— England    ..... NI    - - - - - Scotland    - · - · - · Wales

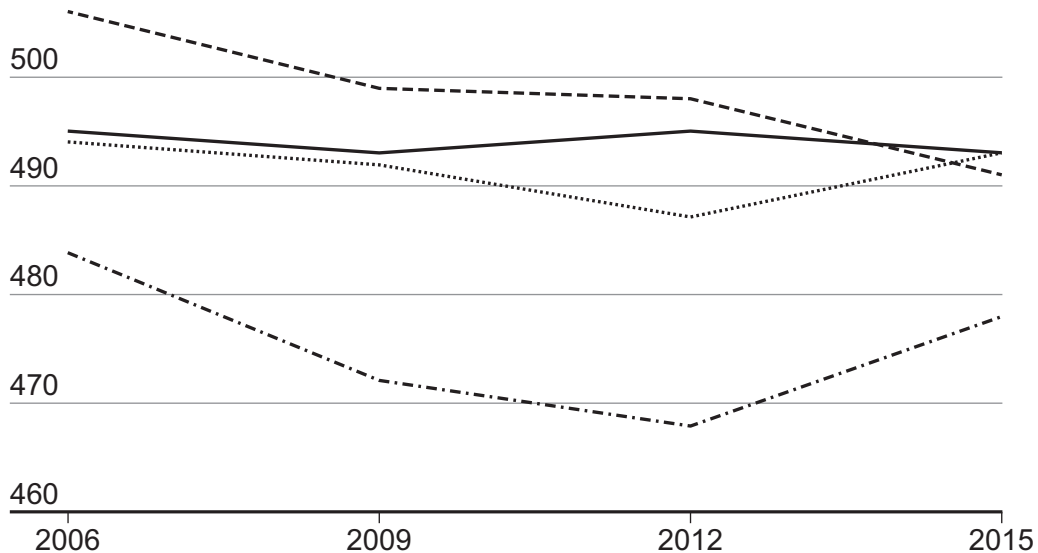


### Wales still underperforms in maths compared with the rest of the UK despite improvements in 2015

Maths average PISA ranking

**Key**

— England    ..... NI    - - - - - Scotland    - · - · - · Wales



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