
Current levels of literacy and numeracy: the story so far

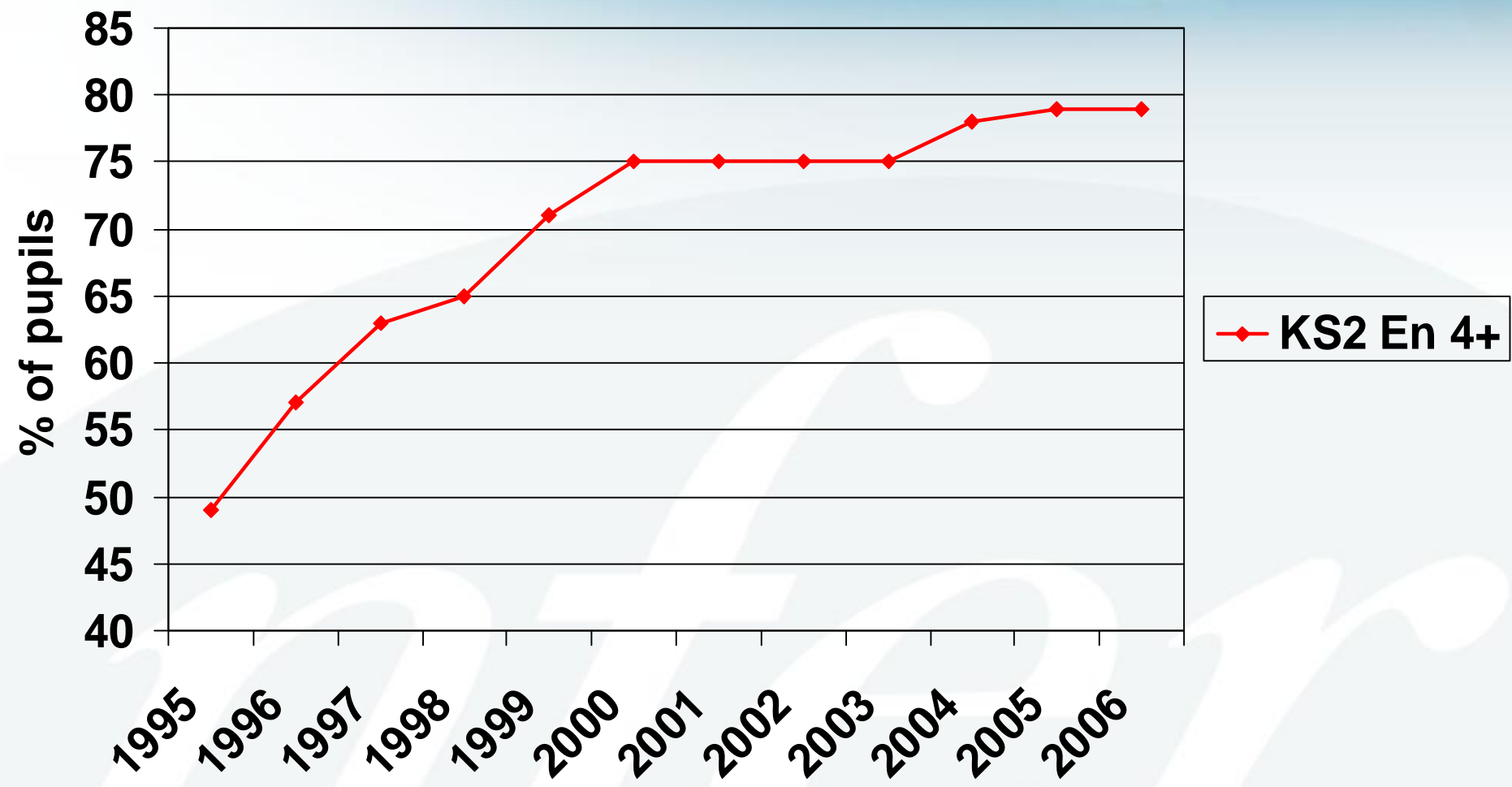
How well are UK primary and secondary pupils doing compared with their European counterparts?

Liz Twist and Linda Sturman, NFER

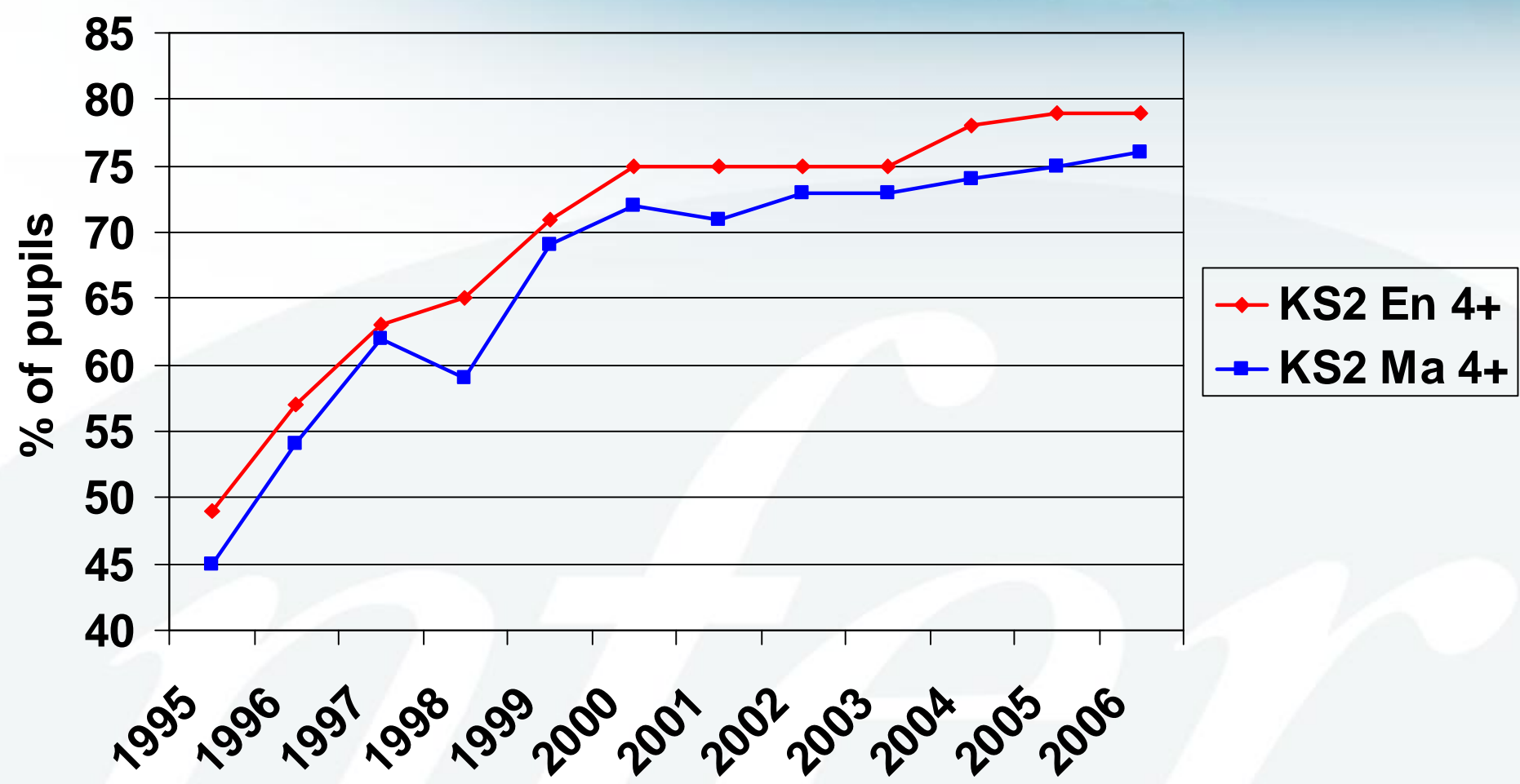
Literacy and numeracy in the UK

The national picture...

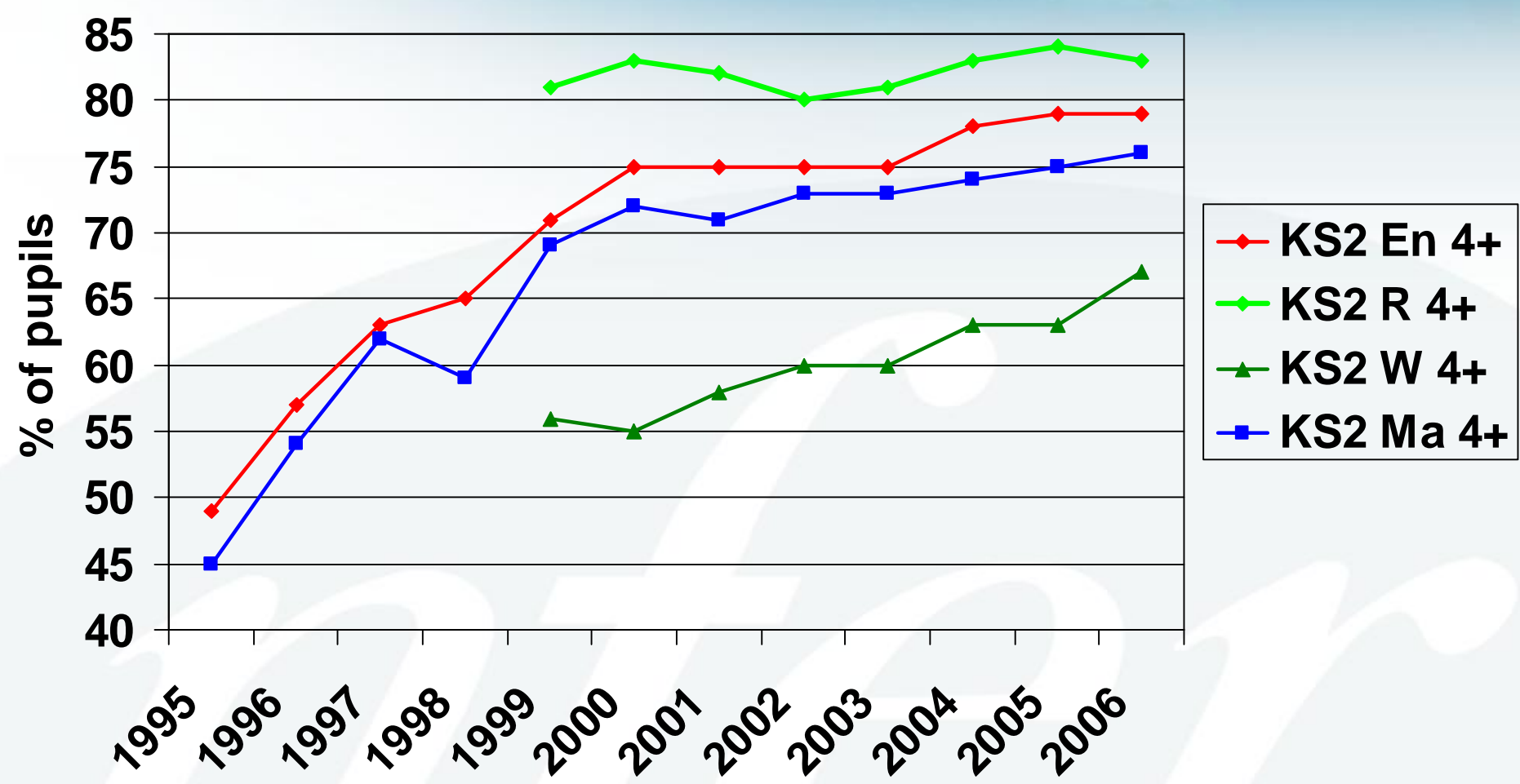
KS2 English national results 1995-2006 LEVEL 4+



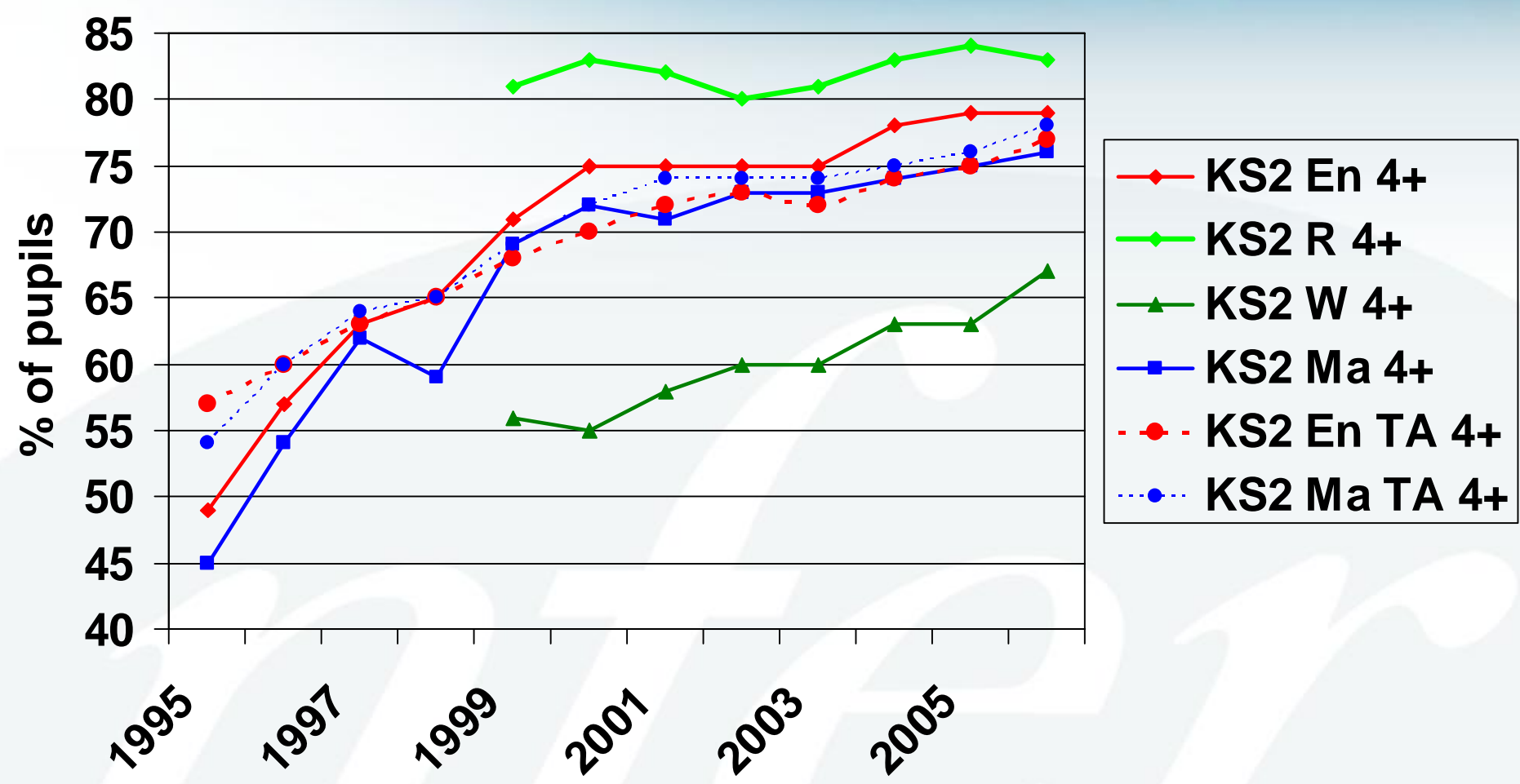
KS2 English national results 1995-2006 LEVEL 4+



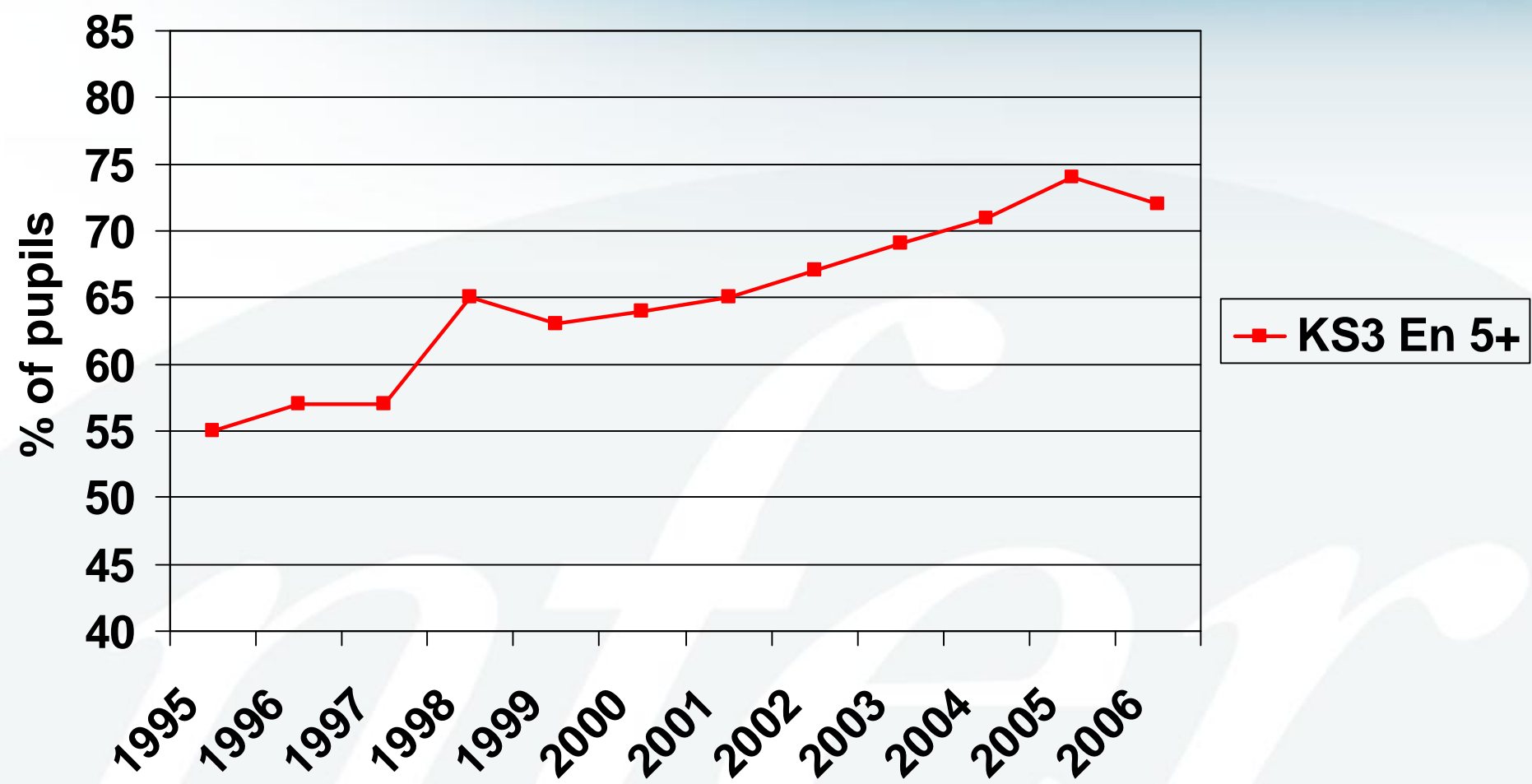
KS2 English national results 1995-2006 LEVEL 4+



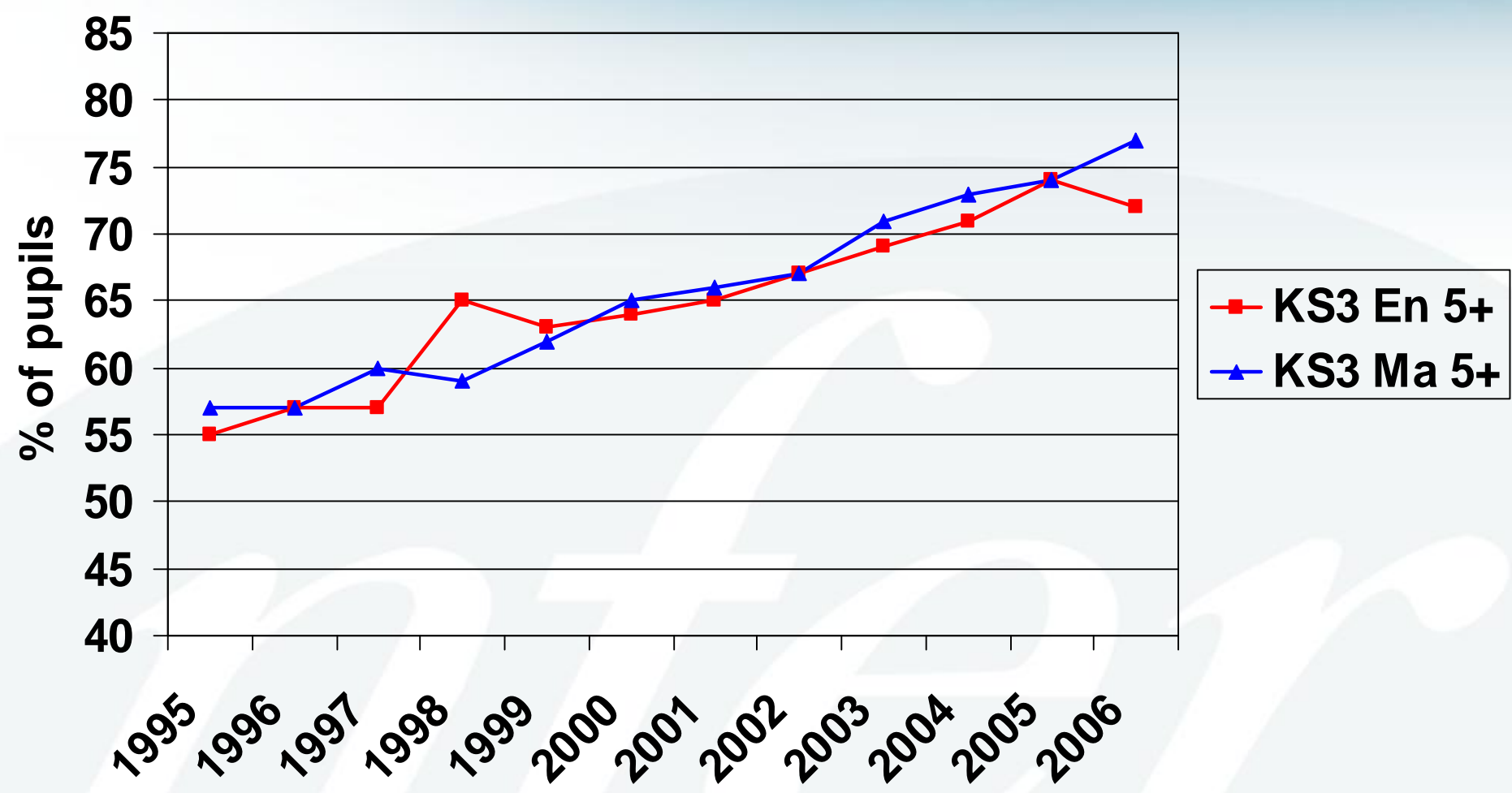
KS2 English national results 1995-2006 LEVEL 4+



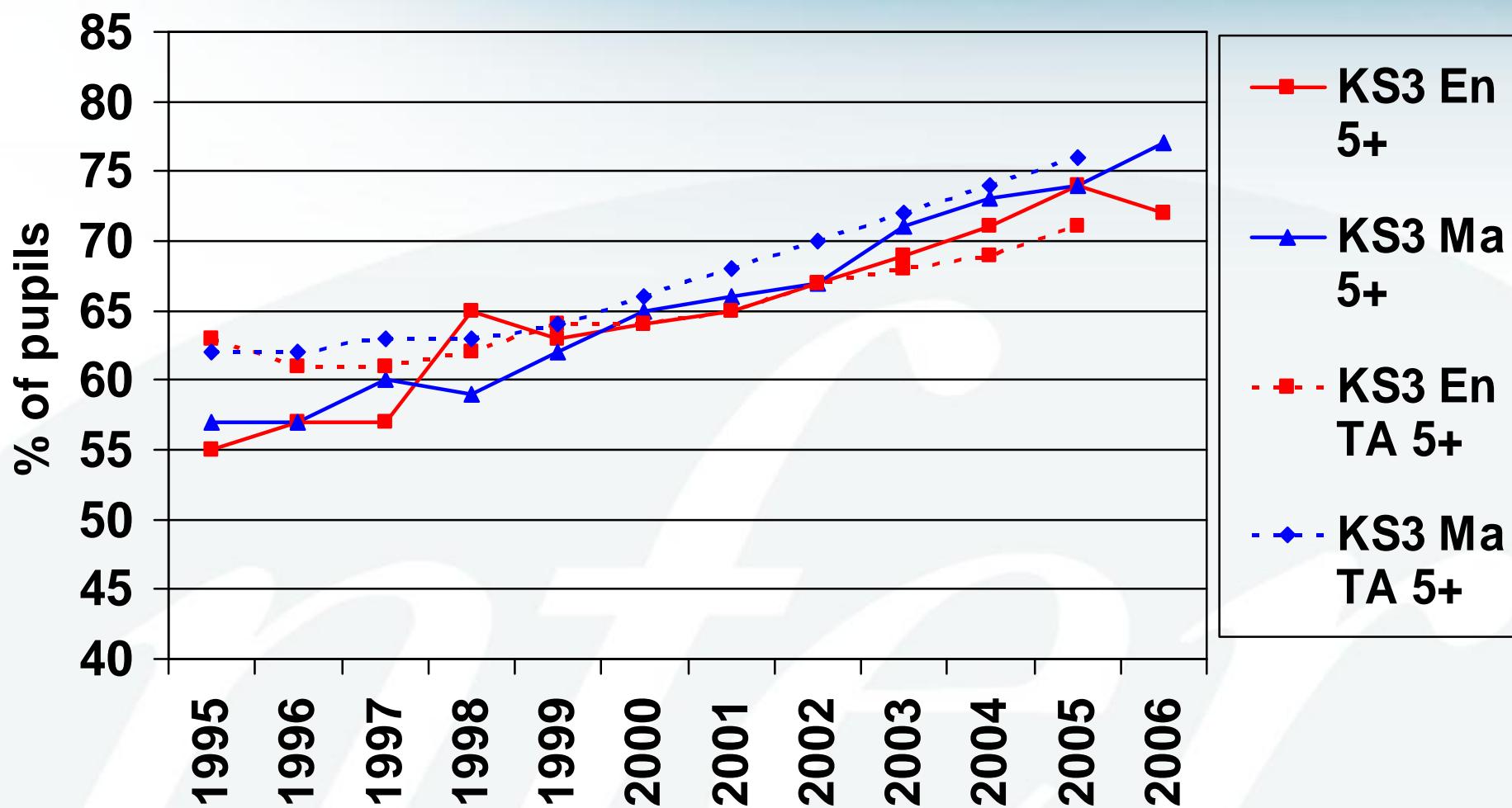
KS3 English national results 1995-2006 LEVEL 5+



KS3 English national results 1995-2006 LEVEL 5+



KS3 English national results 1995-2006 LEVEL 5+



What are PIRLS and TIMSS?

- **PIRLS: Progress in International Reading Literacy Study**
- **9-10 year olds**
- **Five-year cycle, since 2001**

- **TIMSS: Trends in International Mathematics and Science Study**
- **9-10 and 13-14 year olds**
- **Four-year cycle, since 1995**

Outcomes and quality

- **Attainment data; strengths and weaknesses**
- **Background information; attitudes**
- **International comparability**
- **Sampling criteria**
- **Sampling targets**

PIRLS 2001 – participating countries

Argentina

Germany

Latvia

Russian Fed.

Belize

Greece

Lithuania

Scotland

Bulgaria

Hong Kong

Macedonia

Singapore

**Canada
(Ontario/Quebec)**

Hungary

Moldova

**Slovak
Republic**

Colombia

Iceland

Morocco

Slovenia

Cyprus

Iran

Netherlands

Sweden

**Czech
Republic**

Israel

New Zealand

Turkey

England

Italy

Norway

United States

France

Kuwait

Romania

PIRLS 2001 – summary results

Sweden

Netherlands / England
Bulgaria

Latvia / Canada (O,Q) / Lithuania
Hungary / United States / Italy /
Germany

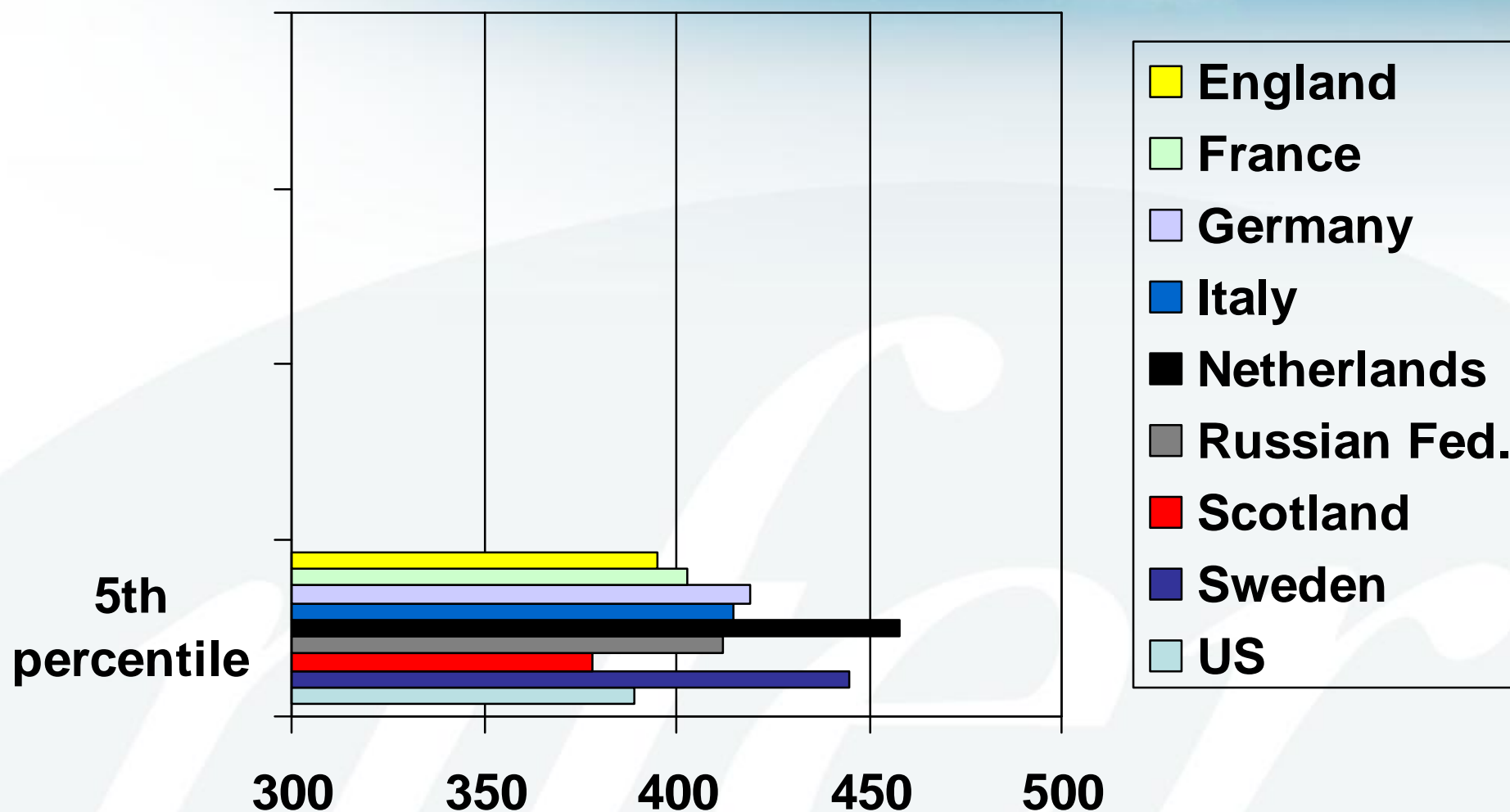
Czech Republic / New Zealand / Scotland
Singapore / Russian Federation / Hong Kong
France / Greece / Slovak Republic

PIRLS 2001

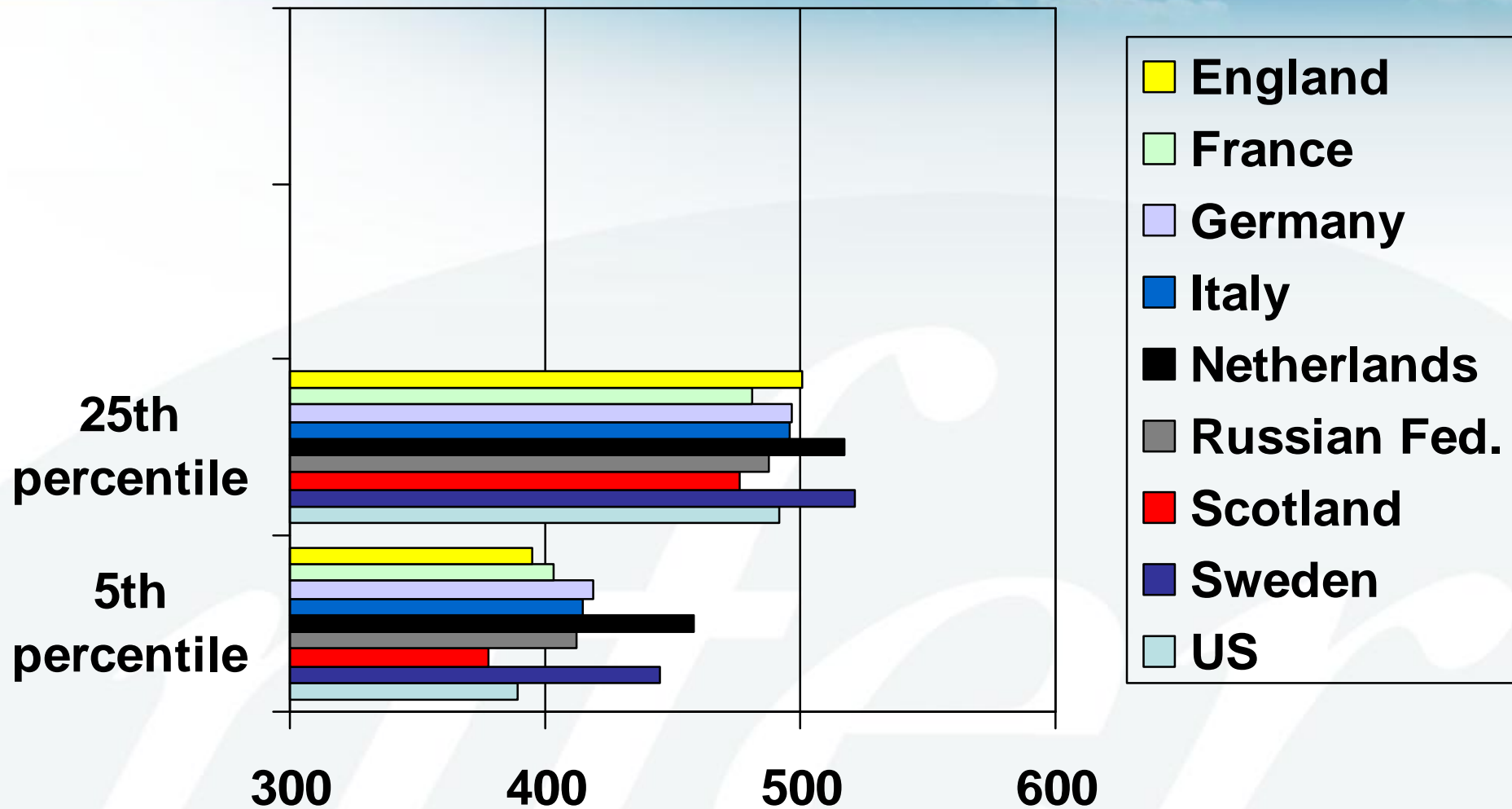
Notable findings

- **girls performed better than boys in every country**
- **range in achievement wide in England (and Scotland to a lesser extent)**
- **England better at reading for literary purposes**
- **attitudes to reading in England & Scotland poorer than international average**
- **confidence in reading lower than int. average in England & Scotland**

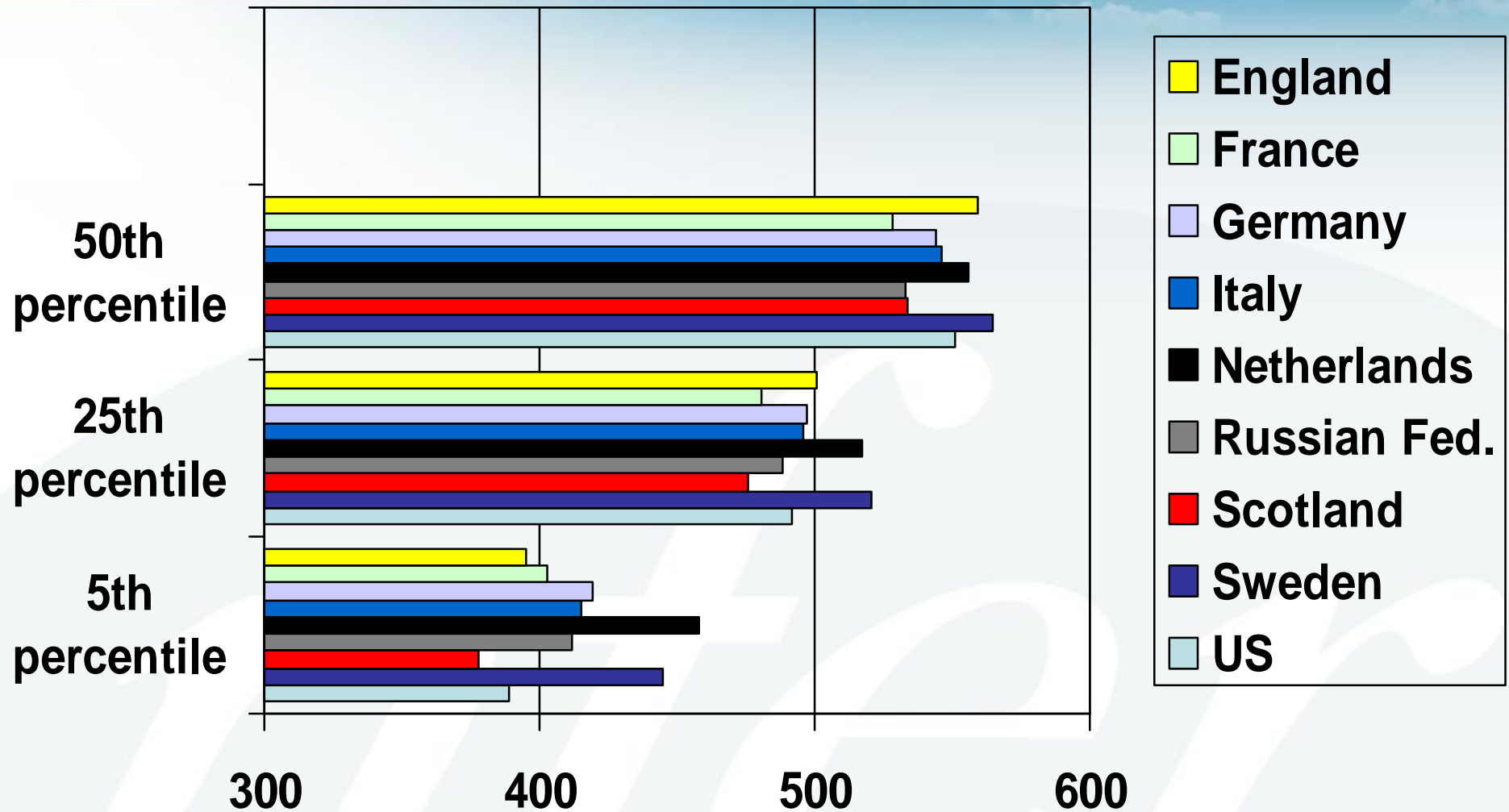
PIRLS 2001 – range of achievement



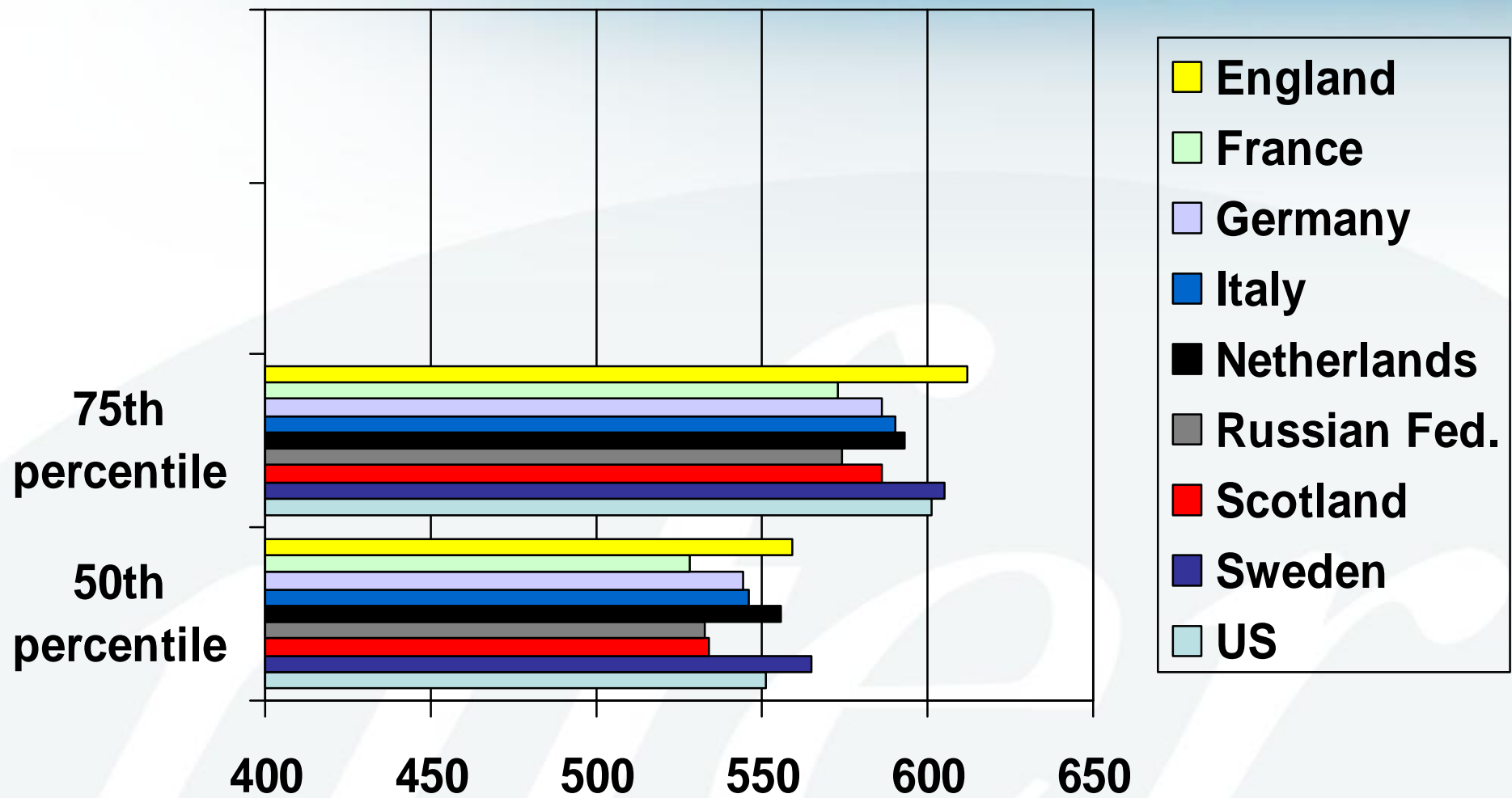
PIRLS 2001 – 5th & 25th percentiles



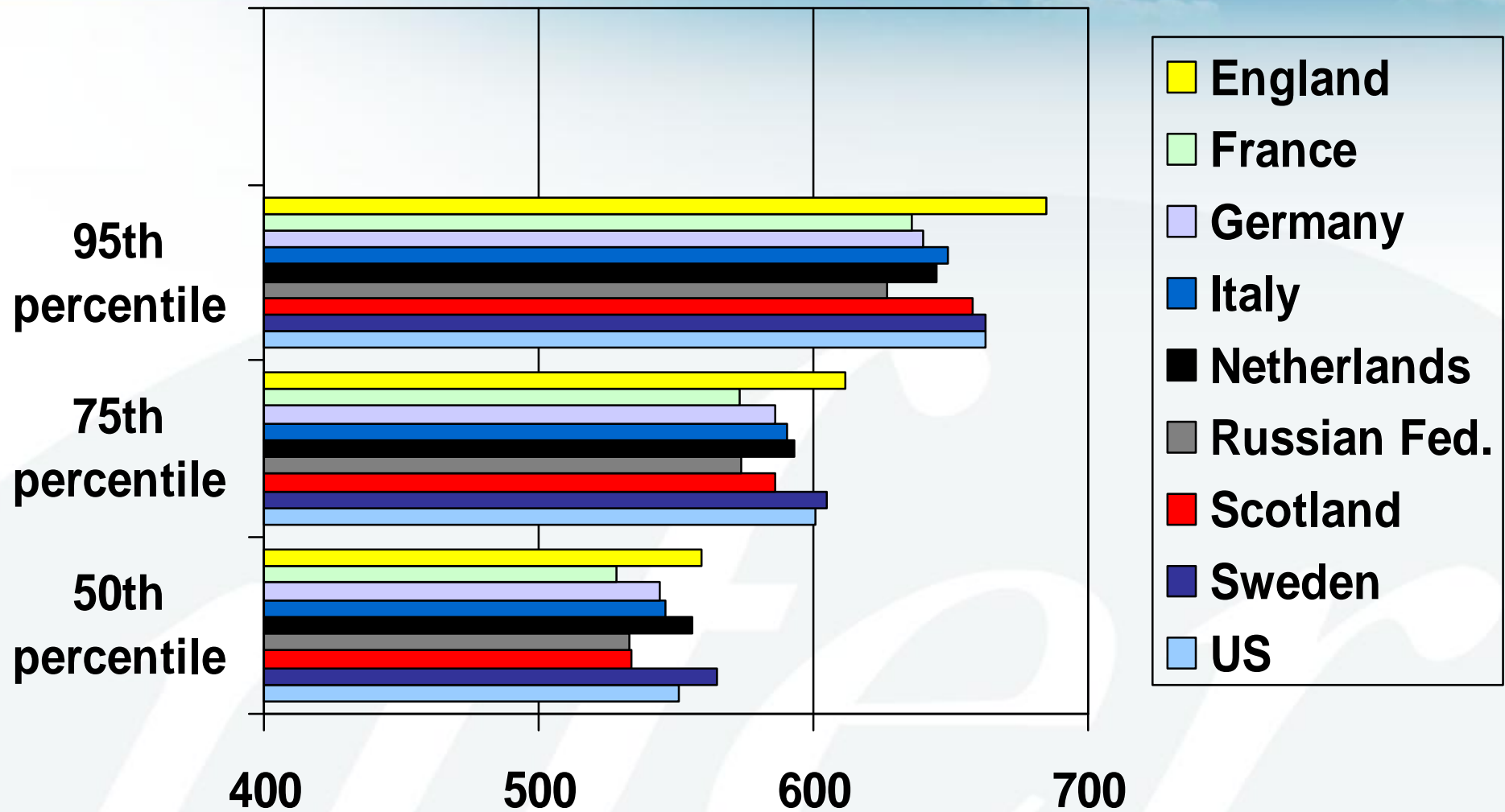
PIRLS 2001 – 5th, 25th & 50th percentiles



PIRLS 2001 – 50th & 75th percentiles



PIRLS 2001 – 50th, 75th & 95th percentiles



TIMSS 2003

25 countries at G4 (9-10 year olds)

46 countries at G8 (13-14 year olds)

Comparison group for this presentation:

- **Pacific Rim: Singapore; Japan; Korea; Hong Kong**
- **Western Europe: England; Scotland; Sweden; Italy; Netherlands, Belgium (FL)**
- **Russian Federation**
- **United States**

Maths achievement at ages 9-10 (G4)

Scotland scored within the international average band; all other comparison countries scored above the international average.

Singapore

Hong Kong

Japan

Belgium (FL)

Netherlands / Russian Federation / **England***

US

Italy

Scotland

* England achieved at a significantly lower level than the Netherlands

G4 maths achievement

- **Singapore 594 scale points** (5.6 SE)
- **England 531** (3.7)
- **International average 495** (0.8)
- **Scotland 490** (3.3)
- **Lowest scoring country 339** (4.7)

Maths achievement at ages 13-14 (G8)

All comparison group countries scored above the international average

Singapore

Hong Kong / Korea

Japan

Belgium (FL) / Netherlands

Russian Federation / US / **England / **Scotland*** / **Sweden*****

Italy

* Scotland and Sweden achieved at a significantly lower level than the Russian Federation

G8 maths achievement

- **Singapore 605 scale points** (3.6 SE)
- **England 498** (4.7)
- **Scotland 498** (3.7)
- **Italy 484** (3.2)
- **International average 467** (0.5)
- **Lowest scoring country 264** (5.5)

Notable findings, TIMSS 2003 maths

- England: above average but not at highest level
- Scotland: above average at G8; average at G4
- England's G4 score increased from 1995 (largest increase in any country); Scotland stable at G4
- G8 scores stable (England between 1995, 1999 and 2003; Scotland between 1995 and 2003)
- Both 9-10 and 13-14 year olds relatively strong in data handling and relatively weak in number

Gender differences in TIMSS 2003 maths, G4

Girls:

Singapore

Boys:

Netherlands; US;
Italy; **Scotland**

None:

Hong Kong; **England**; Belgium (FL);
Japan; Russian Federation

Gender differences in TIMSS 2003 maths, G8

Girls:

Singapore

Boys:

US; Italy; Belgium (FL)

None:

England; Sweden; Hong Kong;
Japan; Russian Federation;
Scotland; Netherlands; Korea

PIRLS 2001 outcomes

To find out more...

- **International outcomes:**
<http://isc.bc.edu/pirls2001.html>
- **National report for England:**
www.nfer.ac.uk/pirls

TIMSS 2003 outcomes

To find out more...

- **International outcomes:**
<http://isc.bc.edu/index.html>
- **National report for England:**
<http://www.nfer.ac.uk/timss>

PIRLS 2006

- **Over 40 countries**
- **England and Scotland**
- **Northern Hemisphere survey:
March – June 2006**
- **Reporting November 2007**

TIMSS 2007

- **Over 60 countries**
- **England and Scotland**
- **Northern Hemisphere survey:
March – June 2007**
- **Reporting December 2008**