



The Save British Science Society

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SBS 04/11

A snapshot reassessment of SBS's Five Scientific Tests

SBS's assessment of how its Five Scientific Tests for the scientific health of the UK are fairing two years after they were first published

1. Two years ago, SBS published Five Scientific Tests by which the overall scientific health of the UK could be judged.
2. The tests measure aspects of public investment in research; the state of scientific careers; educational opportunity; private investment in research; and government use of scientific advice. The initial assessment was that none of the tests was met.¹
3. Here, we present a snapshot reassessment of the five tests, and show that it remains true that none of them has yet been met. Thus, despite the undoubted improvements put in the place by the current Government, there remains much to do if the UK is to make the most of scientific and technological potential.

Snapshot reassessment of the Five Tests

TEST 1: UK investment in research and development to be at least the average of competitor industrialised countries.

Snapshot assessment: Government-financed expenditure on research and development in the UK has been an average of 0.55% of Gross Domestic Product using all available figures since 2000. The equivalent average for other countries are Germany : 0.79%; France : 0.83%; USA : 0.78%; Japan : 0.58% and Canada : 0.59%.

Source: OECD, Main Science & Technology Indicators, 2003, version 2, Table 12

TEST NOT MET

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TEST 2: Universities and Public sector laboratories able to compete with other countries and other careers to attract the best researchers.

Snapshot assessment: University Professors currently earn between 20 and 35% less than people doing jobs of a similar level of skill and responsibility in other sectors. Industrial scientists aged 30-34 earn at least 12% to 13% more than their counterparts in universities.

Source: Royal Society of Chemistry *Trends in Remuneration Report 2004*; HayGroup Pay Database: 2004.

TEST NOT MET

TEST 3: Every GCSE student has the opportunity to be taught by specialist teachers trained in physics, biology and chemistry.

Snapshot assessment: Only 64% of secondary school lessons in general and combined science are taught by people who claim to have a degree in the subject. 74% of biology lessons 78% of chemistry lessons and 72% of physics lessons are taught by people with a relevant degree, but these figures include teachers with general science degrees.

Source: DfES, Secondary Schools Curriculum and Staffing Survey [SFR 25/2003]

TEST NOT MET

TEST 4: Scientific industry investing in UK economy at the level of competitor countries.

Snapshot assessment: R&D Intensity (R&D as a percentage of sales) is at an average of 2.5% in the UK, compared with 5.2% in the USA, 4.3% in Japan, 4.6% in Germany and 3.1% in France.

Source: DTI, *R&D Scoreboard*

TEST NOT MET

TEST 5: Proper funding of science in government ministries, and no political interference in handling scientific advice on contentious issues

Snapshot assessment: Overall government investment in research and development via the civil ministries is £767million lower in real terms this year than in 1997, a fall of 44%.

Neither the Department of Culture Media and Sport nor the Department for International Development has yet appointed a Chief Scientists to give independent advice.

Source: DTI, Forward Look of Government funded science, engineering and technology

TEST NOT MET

October, 2004

¹ SBS Press release: SBS PR 02/07