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DAG

10 DOWNING STREET

LONDON SW1A 2AA

From the Private Secretary

10 December 1987

Dear Tom,

THIRD REPORT OF THE EDUCATION, SCIENCE AND ARTS SELECT  
COMMITTEE 1985-86: ACHIEVEMENT IN PRIMARY SCHOOLS

The Prime Minister has seen your letter to me of 3 December, to which was attached a revised draft reply to ESAC about achievement in Primary Schools.

The Prime Minister had one comment relating to paragraph 6(i). This paragraph states that the legislation does not affect how the subjects in the National Curriculum will be taught and does not require the organisation of children's learning into separate timetabled subjects. The Prime Minister believes that the National Curriculum will be ruined if it is not divided into separate timetabled subjects. She would therefore wish the two sentences after "... compulsory education" to be omitted. She is otherwise content, subject to the views of colleagues.

I am copying this letter to Mike Eland (Lord President's Office), Murdo Maclean (Chief Whip's Office), Jill Rutter (Chief Secretary's Office), David Crawley (Scottish Office), Jon Shortridge (Welsh Office) and Geoffrey Podger (Department of Health and Social Security).

Yours sincerely  
James Richards

PP D R NORRGROVE

T. B. Jeffery, Esq.  
Department of Education and Science

JW



PRIME MINISTER 1

ACHIEVEMENT IN PRIMARY SCHOOLS

You commented in the summer on a draft response to a report by the Education, Science and Arts Select Committee about achievement in primary schools. The draft was immensely long and detailed and you felt it inappropriate to publish such a major policy statement before the Education Bill had even been published. DES have now circulated a revised draft which is much more acceptable (it look much longer than it really is because it has a number of annexes which reproduce material which is already public).

There is one comment you may want to make. Paragraph 6(i) says that the national curriculum does not require the organisation of children's learning into separate timetable subjects. "Primary schools will thus continue to have scope as now for work on themes and projects covering a range of core and foundation subjects". Would you want to propose omitting the passage I have highlighted?

DK

Yes - we shall miss the  
core curriculum if it is not divided  
up into different subjects.

ms

David Norgrove

9 December 1987





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David Norgrove Esq  
Private Secretary  
10 Downing Street  
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3 December 1987

Dear David

THIRD REPORT OF THE EDUCATION, SCIENCE AND ARTS SELECT  
COMMITTEE 1985-86: ACHIEVEMENT IN PRIMARY SCHOOLS

Your letter of 16 July in response to Rob Smith's of 10 July recorded the Prime Minister's view that our response to the above report should not make too broad and definitive statement of policy at a time of great change, and should not be in the form of a White Paper.

... I attach a shorter draft Memorandum to the Committee which sets out the Secretary of State's proposed response to the Report. As you will see it is largely factual relating, where appropriate, the Government's proposals in the Education Reform Bill to the Committee's views and recommendations. The Secretary of State intends to send this to the Chairman of ESAC with a short covering letter. He also proposes to publish the Memorandum, and to announce this by means of a Parliamentary Question and a press notice on the same day.

A reply to ESAC's third report is overdue, since it was published in September 1986, and the Secretary of State wishes to send his Memorandum to the Committee at an early date. He sees its publication as a further important opportunity to explain in particular the proposals for the National Curriculum in the Education Reform Bill, and to dispel misunderstandings. He hopes that the Memorandum will set at rest the fears of those in primary education who criticised the proposals in the consultation document for what they saw as its bias towards the secondary phase, and who voices their concern that the Government did not appear to attach sufficient importance to primary education.

What is said in the Memorandum is consistent with the Clauses on the national curriculum in the Education Reform Bill, and with the proposals we set out in the consultation document.



The Secretary of State believes that the Government could gain a great deal now from the statement in its opening paragraphs which recognises that a child's years in primary school are of crucial importance because they lay the foundation for later learning and are of value in their own right.

I am sending copies of this letter to the private secretaries of the Lord President, the Chief Whip, the Chief Secretary and the Secretaries of State for Scotland, Wales and the social services. It would be particularly helpful to receive any comments by 9 December so that the Secretary of State can send the Memorandum to the Committee before Parliament goes into the Christmas recess.

Yours,  
Tom.

T B JEFFERY  
Private Secretary



THIRD REPORT FROM THE EDUCATION, SCIENCE AND ARTS COMMITTEE, SESSION 1985-86:  
ACHIEVEMENT IN PRIMARY SCHOOLS

Memorandum by the Secretary of State for Education and Science

1. I have considered the Education, Science and Arts Committee's Third Report for the Session 1985-86 on Achievement in Primary Schools. In my letter of 11 December 1986 to the Chairman of the Committee (Appendix A) I replied to the Committee's recommendations about the Council for Accreditation of Teacher Education.
2. I share the Committee's view on the importance of primary education. It lays the foundation for all future learning. No less than the secondary phase, it is a preparation <sup>for</sup> ~~of~~ the responsibilities and opportunities of adult life. It is also of value in its own right to primary age pupils in their day to day relationships and experiences with the world and society.
3. The challenge for primary educators is to provide a curriculum for all children which gives them a firm grounding in a broad range of knowledge, skills and understanding and the necessary practical applications, which develops positive and helpful attitudes, and which fosters their individual abilities and aptitudes. The demands of this task equal those of secondary education. A corresponding degree of effort needs to be put into meeting them. The quality of the primary curriculum must not be allowed to be second best; its delivery must be as effective as that of other phases of education.
4. The recent HMI publication, "Some Aspects of Good Practice in Primary Schools" (HMSO 1987) identifies and describes good practice seen in individual primary schools, focussing upon effective learning and some of the associated aspects of teaching observed in the course of their inspections. Many of our primary schools achieve the high standards there described. There remain too many, however, which achieve them in only part of their work or not at all.



5. The Government's policies for school education and the provisions on schools in the Education Reform Bill, now before Parliament, together with the consultation documents which preceded them, are aimed at improving the performance of schools and their pupils in the primary phase no less than the secondary. I believe that there is much in common between what the Government is seeking to achieve and the overall approach of the Committee towards primary education. Among the provisions of the Education Reform Bill relevant to the Committee's concern are those on the national curriculum, collective worship, financial delegation, and the admission of pupils to maintained schools. As the Bill contains specific proposals dealing with or affecting most of the matters on which the Committee made recommendations on primary education, I have judged that on this occasion it would be more appropriate to respond to its Third Report by submitting a memorandum rather than giving a more detailed reply to the Committee's recommendations in the form of a command paper.

#### THE CURRICULUM IN PRIMARY SCHOOLS

6. Chapter 1 of the Education Reform Bill, which sets out a legislative framework for the curriculum in schools, addresses many of the concerns expressed in the Committee's report.

- (i) It provides for a broad, balanced and relevant curriculum in maintained primary and secondary schools by setting out the core and other foundation subjects which children need to cover during the years of compulsory education. The legislation does not affect how the subjects in the national curriculum will be taught and does not require the organisation of children's learning into separate timetabled subjects. Primary schools will thus continue to have scope, as now, for work on themes and projects covering a range of core and foundation subjects.
- (ii) The proposals for attainment targets, where appropriate, at about the age of 7 and at 11 in the primary years, and at 14 and 16 in the secondary phase, recognise the importance, to which the Committee drew special attention, of setting "milestones and



objectives along the road to learning". These are set out in the Bill in terms of the knowledge, skills and understanding which children of different abilities should be able to achieve by those ages. Programmes of study will set out, where appropriate, the content, skills and processes which children need to learn in support of the attainment targets.

- (iii) In order to measure progress towards the targets the Bill provides for the introduction of national arrangements for assessment, including testing, for the core subjects of English, mathematics and science and, as appropriate, for the other foundation subjects. This system of assessment will enable teachers and parents to judge pupils' progress in relation to clear objectives and to take appropriate action where it is needed. A focus which is primarily on the needs of the pupil will be particularly important at the primary stages.
- (iv) These arrangements will be part of the curriculum of all pupils registered at maintained schools during the years of compulsory education. They will apply to all children with special educational needs, unless a child has a statement under the Education Act 1981 which modifies how the national curriculum should apply because of his or her particular needs or circumstances. The Bill will also enable the holder of my office, when making Orders setting out the arrangements for any core or foundation subject, to modify their application in respect of children with special categories of need.
- (v) While the Bill assigns a central role to the Secretary of State in introducing and maintaining the national curriculum, it requires him to exercise that role only after he has received and considered the advice of the National Curriculum Council (NCC) and, as respects examinations and assessment, of the School Examinations and Assessment Council (SEAC). The Bill requires the Secretary of State to establish these Councils as independent statutory bodies. The NCC will also consult widely on his behalf, and report its



conclusions, before Orders setting out proposals for the attainment targets and programmes of study for any core or other foundation subject can be drafted. He must then consult again on his draft Order before it is laid before Parliament.

- (vi) The Education Reform Bill will also enable the Secretary of State to make regulations about the information which schools will be required to make available to the parents of each pupil, and more generally. In addition to what the law already requires, this will include giving the parents of each pupil an assessment of how he or she has performed against the appropriate attainment targets and what will be learned next, including information about the school's schemes of work.

7. As the Committee knows, initial advice on the attainment targets and programmes of study for each core and other foundation subject will be prepared by working groups of teachers and others to form the basis for subsequent discussion and consultation. I have already appointed those for Mathematics and Science. I have also established a Task Group on Assessment and Testing to advise on the broad principles and practical considerations that should inform the assessment arrangements which the Bill envisages. Copies of the terms of reference and remit letters of these groups are at Appendix B. In addition, I expect the findings, knowledge and experience of the Assessment of Performance Unit to make an important contribution to these developments. The Unit will continue its national monitoring work, but with the range of surveys gradually extended in line with the scope of the national curriculum, and with the intervals between surveys being increased. I also intend that fuller use should be made of the Unit's information on pupils' learning processes and difficulties, to provide practical help for teachers and for those in initial and in-service teacher training.

8. The Government shares the views of the Committee on the important place of religious education in the school curriculum. The Education Reform Bill, Clause 1 of which emphasises the moral and spiritual purposes of education, will place new duties on local education authorities, governing bodies and headteachers to secure compliance with what the Education Act 1944 requires



on religious education. The Government attaches particular importance to maintaining the requirement for a daily act of worship in all maintained schools. Following consultation in the light of the Committee's recommendations on collective worship, the Bill proposes amendments to the provisions of the 1944 Act so as to permit collective worship in separate groups of pupils, and at times during the school day other than first thing in the morning.

#### SCHOOL ORGANISATION, GOVERNING BODIES, AND HEADTEACHERS

9. The objective of the proposals in the Education Reform Bill on the Admission of Pupils to Maintained Schools is to ensure that schools admit pupils up to the limits of their available capacity. In this way as many parents as possible will have the chance of getting their child into a school of their choice. The Government objective is to apply the new provisions to secondary schools from September 1989, and to primary schools from a later date should that then be appropriate. The proposals address the issue of parental choice to which the Committee also attaches importance.

10. The Education Reform Bill will require LEAs to prepare schemes which delegate budgetary responsibility to the governors of all secondary schools and primary schools with more than 200 registered pupils. Local education authorities will have discretion to include smaller primary schools in their schemes for financial delegation from the outset. The Secretary of State will have power to bring such schools generally into the scope of legislation at a later date. The Government's objective is to give the governors of such schools a wide freedom to take expenditure decisions which match their own priorities, together with increased responsibilities for the staff of the school. I would expect that governing bodies would look to the head teacher for advice on the management of their schools, and would delegate many of the day to day spending decisions. I share the Committee's view that the quality of the head teacher is critical in determining whether a primary school is good or otherwise. The proposals on financial delegation will enable the head teachers of larger primary schools to play a more effective part in the kind of future planning for their schools to which the Committee attaches importance. I intend to provide guidance on financial delegation, and will be



discussing the form of this and of the associated training that will be required with interested parties.

#### RESOURCES

11. The amount spent per pupil in primary schools rose by 27% in real terms between 1979-80 and 1986-87. This reflects the fact that although pupil numbers fell by 15% over the period, total expenditure rose by 7% in real terms. Subject to Parliament's approval of the necessary legislation, about £65m will be provided over the next three years to fund work in support of the Government's proposals for the national curriculum, particularly that of the NCC and SEAC. Priority will also be given to supporting the national curriculum when resources are allocated for Education Support Grants and for training grants for teachers: many of the existing grants already reflect the priorities of the national curriculum, or support areas of primary education which the Committee believes to be in need of additional funding. The changes brought about by the national curriculum will be introduced progressively over a period of years, and it will be for LEAs and schools, within planned levels of resources, to ensure that staffing, as well as spending on support services, books and equipment, are directed to achieve the national policy.

12. It is not feasible to give school pupils an entitlement to resources in the strict sense of a particular level of resources, because the actual level from year to year must depend on what can be afforded, as well as on competing claims. But every child is entitled to a fair share of the resources available, and this implies a more uniform allocation of those resources than prevails now. The Government's support for local authority current spending on education is for the most part provided through the block grant element of rate support grant, at the heart of which is the assessment of grant-related expenditure. This aims at allowing authorities to provide a common standard of service for a common rate in the pound, taking into account the different characteristics of their area.

13. The Government attaches particular importance to ensuring that parents and the community know on what basis available resources are distributed in



their area, and how much is being spent at each school. The Education Reform Bill's proposals for financial delegation provide a new framework for the allocation of resources to schools by local education authorities. Each authority, having decided how much in total they will spend on primary schools and other stages of the education system, will be required to allocate its budget between schools through a formula based principally on the number of pupils at each school, but also taking account, where appropriate, of other factors.

#### UNDER FIVES

14. The Government's proposals for the national curriculum in the Education Reform Bill apply to registered pupils of compulsory school age in maintained schools. However, the Committee also considered and made recommendations about the education of children in their early years. The Government stated its policy for the under fives in "Better Schools" (chapter 4). My view remains that the age of admission to compulsory education should not be altered, and that it is for local education authorities to decide what forms of provision and how much, if any, to make for the pre-compulsory phase, in the light of local needs, demands and resources. It is also for parents to decide whether to take up any provision available. The period of compulsory education should have some priority; but I will aim to maintain the present level of expenditure on under fives in real terms within the Government's plans for local authority expenditure.

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15. The Government shares the Committee's view about the importance of the role of parents and the home in children's cognitive, social and physical development at this stage, and the need for playgroups and other facilities for parents with young children, and for the provision of advice and information for parents on the facilities which are available locally. Departments have been reviewing the present degree of coordination of services for under fives and are studying proposals for improving coordination. With their funding the National Children's Bureau has set up an Under Fives Unit which is concentrating much of its work on this area.



16. Playgroups and other forms of day care for children are justified in their own right and answer specific needs of parents as well as children. They can play an important educational role. The DHSS provides a grant of some £385,000 a year towards the central administrative expenses of the Pre-school Playgroups Association (PPA). Earlier this year the DES announced an increase in its annual grant to the PPA to £108,000 in 1987-88, and some £150,000 thereafter. This grant goes to support the costs of fieldstaff engaged in training and advisory work with the PPA's regional network of voluntary helpers.

17. There is a recent trend for more local education authorities to adopt a policy of admitting children to primary reception classes before the term in which they reach five. The admission of "rising fives" should depend upon the maturity and readiness of the children; the teaching approaches, ancillary staff, accommodation and resources must be appropriate to the stage of the children's development. Through their reports on inspections of individual schools and other publications, HMI describe good practice and ways of improving provision. A further HMI publication on the education of under fives is planned.

#### CONCLUSION

18. I have accepted some major recommendations made by the Committee with or without modification. In some cases these have already been acted upon. Other recommendations have been overtaken by the Government's proposals for education reform. Some recommendations I cannot accept:- these are identified in the annex which follows. There remains a number of recommendations not covered by either the memorandum or its annex. Of these, some are for consideration by local education authorities or other bodies. I shall take account of the rest in the formulation of future policy in regard to primary education.

19. I am grateful to the Committee for its wide-ranging contribution to the development of ideas on the future of primary education. I share the Committee's view that a child's experience of primary school and the education he or she receives there has a substantial, and often crucial,



effect both on future attitudes to education and on later achievement. I am therefore particularly concerned to ensure that the changes now being proposed in primary education will build on the good practice which is already operating in the best of our primary schools. If Parliament enacts the Education Reform Bill, the Committee will have an important role to play, alongside the NCC and SEAC, in considering the development of primary and secondary education within what will be a new legislative framework.

Department of Education and Science  
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December 1987



## RECOMMENDATIONS REJECTED BY THE SECRETARY OF STATE

14.18 The Secretary of State recognises the important educational role of play groups and other forms of day care for children. However he does not believe that the evidence justifies a change in Departmental responsibilities for such provision, or that such a change would be widely welcomed.

14.50 The Secretary of State believes it would be impracticable for HMI to collect and appraise schemes of work for every school.

14.66/74 The Department has supported and has funded research work on pupils' attainments and their measurement, and on school organisational issues. However within the resources available priority will have to be given to educational research which is related to the Government's proposals in the Education Reform Bill.

14.103/112 In 'Better Schools' the Government recognised the importance of school libraries. The Secretary of State looks to local education authorities and schools to explore ways in which the resources available can be most effectively deployed. He is not convinced that legislation is needed to back the school library service or that there is a need for a centrally established body.

14.105 The Secretary of State believes that parental and other adult collaboration in the teaching of reading can be valuable where carefully planned and closely integrated with the work of the school. But he considers that schemes are best developed and supported mainly at local level in the light of local circumstances.

14.115 The Secretary of State believes that local education authorities must continue to decide the level of resourcing, including repairs and maintenance, in schools they maintain. He believes that he can best promote a more equitable and uniform distribution of resources through legislating for financial delegation to schools, based on clear principles including relating school budgets in large part to pupil numbers.

14.120/127 The Secretary of State believes that the present arrangements for primary and secondary school liaison, as supplemented by the requirements of the national curriculum, within which schools and local education authorities can devise the arrangements best suited to the local situation, are appropriate.



14.138 The Secretary of State does not consider that further legislative provision to supplement the Education (School Teachers' Pay and Conditions of Employment) Order 1987 (SI1987/650) is required. The amount of teaching that a headteacher should do, and whether he or she should have a regular timetabled teaching commitment, will depend on the circumstances of individual schools.

14.161/162/163 The Secretary of State said in his letter to the Chairman of the Committee of 11 December 1986 (Appendix A) that the Government has the fullest confidence in the Council for the Accreditation of Teacher Education (CATE). It is carrying out an important task rigorously and effectively but with tact and consideration, thereby contributing substantially to the improvement of the quality of initial teacher training originally set in hand by the White Paper 'Teaching Quality' (Cmnd 8836) in 1983. The period of office of the members of the Council has now been extended to the end of 1989, which should allow the Council to complete at least one round of scrutiny of those courses which existed when the Council started its work. In the meantime, the Government proposes no changes in the Council's remit, but will be considering in the light of experience what should be the arrangements for the longer term.

14.185 The Government has no plans to introduce recruitment procedures for the Department's employees which give preference to any particular group.

14.190 The Secretary of State believes that local education authorities should make arrangements for liaison with other authorities and institutions providing in-service training that best suit their circumstances. Under the Training Grants Scheme they are required to state their arrangements for regional co-ordination and what plans exist for their development. At present the Secretary of State sees no need for a new body to co-ordinate INSET at a national level.





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FROM THE SECRETARY OF STATE

Sir William Van Straubenzee MP  
Chairman  
Education, Science and  
Arts Committee  
House of Commons  
LONDON SW1A 0AA

11 December 1986

**ESAC REPORT: ACHIEVEMENT IN PRIMARY SCHOOLS**

The purpose of this letter is to provide the Education, Science and Arts Committee with my initial, response to its report: Achievement in Primary Schools, which was published on 22 September.

I welcome the publication of this report. The Government attaches great importance to the primary phase of school education. As the Committee recognises in the preface to its report, this phase lays the foundation for all later learning. No less than the secondary phase, it prepares for citizenship, for work and for other responsibilities of adult life. It is also of great importance in its own right, offering opportunities which do not recur for developing positive attitudes, skills and understanding. The challenges primary teachers face are as demanding as those in secondary education. I attach high priority to meeting those challenges so that primary education is as good as it can be and as effectively delivered.

I share your view that primary education is too often overlooked and undervalued, not only by the general public but by policy makers and even by educators. The thorough consideration given by the Committee to the issue of achievement in primary schools and the publication of its report will help us in our joint aim of raising public awareness of the importance of the subject it addresses.

The findings of the report and its recommendations give us much food for thought. Many of the recommendations do not call for a response from the Government. But many of the recommendations directed to my Department raise policy issues of some complexity. I need time to consider these thoroughly. The Government's substantive comments on the report will therefore follow in due course.

There is, however, one issue to which I would like to refer now. The report contains recommendations (particularly at 14.161 to 14.163) about the criteria governing courses of initial teacher training, set out in Circular 3/84, and the Council for the Accreditation of Teacher Education (CATE) which is reviewing courses against those criteria.



I shall consider the Committee's recommendations carefully and make a full response in due course, but for now I should make it clear that the Council has my full confidence. As I told the House on 30 October it was established only after the fullest consultation with all the major interest groups and there was similar wide consultation about the criteria which form the basis for its scrutiny of teacher training programmes. I believe that the Council is contributing substantially to the improvement of initial teacher training. It is carrying out that important task effectively and with tact and consideration. I will review the Council's position when it has completed its remit. In the meantime I propose no change in its terms of reference or the criteria to which it is working.

*Ken*

*Kenneth*



NATIONAL CURRICULUM SUBJECT WORKING GROUPS  
TERMS OF REFERENCE

1. PREAMBLE

1.1 The Government has announced its intention to legislate for a national foundation curriculum for pupils of compulsory school age in England and Wales. The aim is to equip every pupil with the knowledge, skills, understanding and aptitudes to meet the responsibilities of adult life and employment. Within the secular national curriculum, the Government intends to establish essential foundation subjects - maths, English, science, foreign languages, history, geography, technology in its various aspects, music, art and physical education. The degree of definition and the requirements to be set for each of these subjects will of course vary widely, but maths, English and science are at the centre of the curriculum and working groups are therefore being established first in these subjects. The Secretary of State for Wales will be considering what particular provision will be needed to accommodate the distinctive needs of the Welsh curriculum.

1.2 For most foundation subjects, the Government wishes to establish clear objectives - attainment targets - for the knowledge, skills, understanding and aptitudes which pupils of different abilities and maturity should be expected to have acquired at or near certain ages. To promote these objectives, the Government wishes to establish programmes of study for the subjects, describing the essential content which needs to be covered to enable pupils to reach or surpass the attainment targets. Taken together, the attainment targets and programmes of study will provide the basis for assessing pupils' performance - in relation both to expected attainment, and to the next steps needed for the pupils' development.

1.3 The Government wants attainment targets and the content of what is taught to reflect current best practice and achievement



Both the objectives (attainment targets) and means of achieving them (programmes of study) should leave scope for teachers to use their professional talents and skills to develop schemes of work, within a set framework which is known to all. It is the task of the subject working groups to advise on that framework. The assessment instruments used, including tests, will be developed separately in the light of the working group's recommendations and those of the TGAT (see 3g below). This group will report by Christmas and I will then invite the Working Group to reflect its findings in their work.

## 2. THE TASK

2.1 Against this background, the mathematics/science working group is first to submit an interim report to the Secretary of State by 30 November 1987 outlining:

- a) the contribution of mathematics/science to the overall school curriculum which will inform their thinking about attainment targets and programmes of study;
- b) their provisional thinking about the knowledge, skills, understanding and aptitudes which pupils of different abilities and maturity should be expected to have attained and be able to demonstrate at or around the end of the academic year in which they reach the ages of (7), 11, 14 and 16. (The working group may recommend that a different age than 7 should be used to check progress in attainment during the first years of primary education, but some checking before the age of 11 is required);
- c) provisional thinking about the programme of study through from 5 to 16 which would be consistent with the attainment targets provisionally identified.

2.2 In the light of this thinking, the working group should also make initial recommendations in their interim report about assessment of performance related to the attainment targets, and in particular what might appropriately be measured



by externally set tests rather than by other techniques of assessment.

2.3 By 30 June 1988, the working group is to submit a final report to the Secretary of State, setting out and justifying its final recommendations on attainment targets and the programme of study for mathematics/science.

### 3. APPROACH

3.1 Working groups will be given an indication of approximately how much time they should assume to be available within the curriculum for mathematics/science. This time will also be intended to cover the teaching of cross-curricular themes to which mathematics/science can contribute. The working group should consult informally with relevant interests and have regard to the work of the other subject working groups. Additionally it should take account of:

- a) best practice and the results of relevant research and curriculum developments;
- b) the national and subject criteria for GCSE, taken together with recent work to establish a more objective approach to measuring attainment through the GCSE, which should provide the starting point for recommendations relating to attainment at age 16 and programmes of study for ages 14-16;
- c) the need for continuity and progression throughout compulsory schooling;
- d) the contribution which mathematics/science can make to learning about other subjects and the contributions which these subjects can make to learning about mathematics/science;
- e) the need for attainment targets and programmes of study to reflect cross-curricular themes and subjects;



f) the need to devise attainment targets and programmes of study appropriate for pupils of different abilities. The working group should give particular thought to the application of attainment targets in mathematics/science to lower attaining pupils; and,

g) the work of the Task Group on Assessment and Testing which the Secretary of State is setting up to make early recommendations on common criteria for the assessment framework and the choice of techniques of assessment.



## MATHEMATICS CURRICULUM WORKING GROUP

### CHAIRMAN

Professor Roger Blin Stoye FRS

Professor of Theoretical Physics at the University of Sussex. He has been Chairman of the School Curriculum Development Committee since it was set up in 1983. He has been involved with schools education since the 1960s and has served on national educational committees since 1976, including the Education Committee of the Royal Society of London.

### MEMBERS

Dr Margaret Brown

Reader in Mathematical Education at King's College, University of London.

Professor Hugh Burkhardt

Director of the Shell Centre for Mathematical Education, University of Nottingham.

Clifford David

Principal of Afan Tertiary College, Port Talbot.

John Dichmont

Head of Lyn Croft Primary School. Eastwood, Notts.

Barbara Edmonds

Head of Mathematics at 14-18 school in Leicestershire (Long Slade College, Birstall).

Duncan Graham

Since April 1987 he has been Chief Executive of Humberside County Council. Prior to that he was County Education Officer for Suffolk.



Graham Hoare

Head of Mathematics, Dr Challoner's Grammar School, Amersham, Bucks.

Hugh Neill

Staff Inspector of Mathematics in ILEA.

David Owen

Primary Mathematics Adviser, Devon.

Dr Ray Peacock

Research Coordinator, Philips, (UK).

Professor Sigbert Prais FBA

Senior Research Fellow, National Institute of Economic and Social Research London.

Professor C Ambrose Rogers FRS

Emeritus Professor of Mathematics, University of London.

Ann Sawyer

Head of Shawhurst Infants School Hollywood Wythall, Hereford and Worcestershire.



## SCIENCE CURRICULUM WORKING GROUP

### CHAIRMAN

Professor J Jeffrey Thompson

Professor Jeff Thompson is Professor of Education and Pro-Vice-Chancellor, University of Bath. A chemist, Professor Thompson, has taught in secondary education and lectured in chemistry at the University of Oxford. He chairs the Steering Committee of the Secondary Science Curriculum Review, a project operating under the aegis of the School Curriculum Development Committee which is also supported by the Association for Science Education.

### MEMBERS

Peter Benton

Director General of the British Institute of Management.

Kenneth Dobson

Publications and Resources Officer for coordinated science with Suffolk LEA.

Dr Rosalind Driver

Reader in Science Education at the Centre for Studies in Science and Mathematics Education, University of Leeds.

Carys Griffiths

Deputy Head Teacher, Woodford Junior School, Plymouth.

Professor Wynne Harlen

Sidney Jones Professor of Science Education, University of Liverpool.



John Holman

Head of Science at Watford Grammar School.

Gwilym Humphrys

Director of Education, Gwynedd.

John Nellist

Staff Inspector (Secondary) Cumbria Local Education Authority.

Audrey Randall

Head Teacher, Brookland Infants School, Cheshunt, Hertfordshire.

Colin Smith MBE

Head Teacher, Delaval County Middle School, Blyth, Northumberland.

George Walker

Head Teacher, Cavendish School, Hemel Hempstead, Hertfordshire.

Ray Watkin

Deputy Head Teacher, North Ossett High School, Wakefield.

Hugh Wilcock

Head Teacher, Paganell Junior School, Birmingham.

Joy Wilson

Mrs Wilson has been seconded by Cheshire Local Education Authority and is now Area Evaluator on the DES funded project "Initiatives in Primary Science: an Evaluation (IPSE).





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21 August 1987

#### **NATIONAL CURRICULUM: SCIENCE WORKING GROUP**

The purpose of this letter is to offer more detailed guidance about your task than is contained within your terms of reference.

#### **Attainment Targets**

2. By "attainment targets" I have in mind clearly specified objectives for what pupils should know, understand and be able to do at or around the end of the academic year in which they reach the ages of 7 - or thereabouts - 11, 14 and 16. It is essential that attainment targets provide specific enough objectives for pupils, teachers, parents and others to have a clear idea of what is expected and to provide a sound basis for assessment and testing. The working group may recommend that a different age than 7 should be used to check progress in attainment during the early years of primary education, but some checking before the age of 11 is required.

#### **Programmes of Study**

3. I am expecting the programme of study to provide a detailed description of the content, skills and processes which all pupils need to be taught so that they can develop the knowledge and understanding they will need to progress through school and eventually to adult life and employment. This detailed description needs to be set within an outline or overall map of the science curriculum which takes account of what may be expected of pupils of different abilities. The degree of definition in the requirements set will vary considerably between foundation subjects, but will be greatest for the three core subjects of which science is one.

4. Within the overall programme of study, the Government's intention is that there must be space to accommodate the enterprise of teachers, offering them sufficient flexibility in the choice of content to adapt what they teach to the needs of the individual pupil.



5. I expect that the development of attainment targets and programmes of study will be an iterative process. Some consideration of content is likely to come into your thinking about attainment targets. And before you are able to define attainment targets with the degree of specificity required, you will probably wish to stand back and consider objectives and the contribution of science to the overall school curriculum in more general terms. The precise way in which you arrive at your conclusions is for you to determine but I would stress again the importance of specificity in the definition of attainment targets.

### **Differentiation**

6. I am looking to you to recommend attainment targets which set out the knowledge, skills and understanding which pupils of different abilities should be able to achieve by the end of the school year in which they reach one of the key ages. They should allow scope for the very able, those of average ability, and the less able to show what they can do. So far as possible I want to avoid having different attainment targets for children of different levels of ability. I shall expect you to justify any essential exceptions from this principle. In general I seek targets for each of the key ages which may be attempted and assessed at a range of levels, and which challenge each child to do the best that he or she can.

7. Attainment targets should reflect current best practice and achievement. They should be sufficiently challenging at all levels to raise expectations, particularly of pupils of middling achievement, as well as stretching and stimulating the most able. I hope that you will give particular thought to the application of attainment targets to lower attaining pupils.

### **Special needs**

8. The Government propose that where a pupil has a statement of special needs under the 1981 Education Act, the statement should specify any national curriculum requirements which should not apply to that individual pupil. In addition, the holder of my office will be empowered to define in regulations circumstances in which the application of the national curriculum provisions to individual pupils might be modified for any foundation subject. For example, the modern languages regulations might indicate that pupils with severe difficulties in English should be introduced to a foreign language later than or on a different basis from most children. I should be grateful if you would consider whether any comparable modifications of the regulations could be justified in the case of science.

### **Assessment and Examinations**

9. Attainment targets will provide objectives against which pupils' progress and performance can be assessed. The main purpose of such assessment will be to show what a pupil has learnt and mastered, so as to enable teachers and parents to ensure that he or she is making adequate progress and to inform decisions about the next steps.

10. I envisage that much of the assessment at ages 7 (or thereabouts), 11 and 14 will be school-based. It will be done by teachers as an integral part of normal classroom work. But in addition there will be nationally prescribed tests done by all pupils to supplement the individual teachers' assessments. Teachers will administer and mark these, but their marking - and their assessments overall - will be externally moderated.



11. I have established a Task Group on Assessment and Testing (TGAT) to advise on the practical considerations which should govern all testing and assessment including the basis for marking and recording of results. The terms of reference of TGAT are attached to this letter. TGAT is to report as early as possible in the New Year. In the light of its recommendations, the Government will commission various organisations to develop and pilot assessment instruments.

12. The main focus of your work will be on attainment targets and the programme of study. However, in your interim report I expect you to offer advice in broad terms about assessment in relation to the attainment targets you have in mind, particularly what might appropriately be measured by nationally prescribed tests. In preparing your interim report, you will need to consult TGAT which will be developing its general advice about assessment in parallel with your thinking about the assessment of science. In your final report, I shall expect you to offer advice, again in broad terms, about the other techniques of assessment for which you see a place. In so advising, you will need to take account of the assessment strategy which I shall be proposing in the light of advice from TGAT. I shall offer further guidance to you on this in the New Year.

### GCSE

13. In defining attainment targets and the programme of study for 16 year olds, I suggest that you take as your starting point the GCSE National Criteria, including the draft criteria for "The Sciences: Double Award", currently the subject of consultation. You should not regard yourselves as bound by these, however: in particular, they may not be sufficiently specific for your purposes as regards objectives and/or content. You will want to take note of the SEC's work on making GCSE grades more objective: the reports of the relevant grade criteria working parties may be a source of ideas, and the SEC's further development work with respect to individual GCSE science syllabuses should make a useful contribution to your group's deliberations.

14. The Government expects that all pupils will take GCSE examinations in science or equivalent examinations approved against relevant GCSE criteria. It does not, therefore, anticipate the need for alternative assessment arrangements in science. But the Government expects that, within a common GCSE framework for science, differentiation of papers will be needed to cover the full ability range. We will look, in due course, to the newly formed School Examinations and Assessment Council (SEAC) to advise on whether, and if so how, the GCSE criteria need to be revised to reflect the national curriculum attainment targets and programme of study for ages 14-16, and to approve syllabuses accordingly.

### TVEI .

15. The TVEI pilot projects are providing valuable experience in identifying the most effective ways in which the education of 14-18 year olds can be made more relevant to the demands of employment and adult life. From September 1987, authorities are progressively involved in extending the TVEI pilots into a national scheme. The objective will be to give young people aged 14-18 in all maintained schools and colleges access to a wider and richer curriculum based on the lessons emerging from the pilot TVEI projects. In drawing up their plans, LEAs are required to reflect the Government's policy for the school curriculum in England and Wales as summarised in the curricular criteria based on "Better Schools", and issued by the DES in July 1986.

16. Authorities will want to use TVEI to build on the framework offered by the national curriculum and to take forward its objectives. The Government intends that the legislation should leave full scope for schools to determine how teaching is organised



and the teaching approaches used so that the curriculum is delivered in the best way suited to their pupils. This flexibility should enable schools to accommodate any special emphasis within their TVEI plans, while still meeting the requirements of the national curriculum. You will wish to consider developments so far under TVEI so that they inform your deliberations.

### **General Principles**

17. Generally in framing your recommendations, I expect you to consider the need for

- continuity and progression throughout the period of compulsory schooling and beyond
- breadth and balance
- relevance: the content and teaching of the various elements of the national curriculum should bring out their relevance to and links with pupils' own experience and background and their practical application and continuing value to adult and working life
- all elements of the curriculum to contribute to the development of general personal qualities and competencies in young people which will be of value to them in adult and working life - for example, self-reliance and self-discipline, a spirit of enterprise, a sense of social responsibility, the ability to work harmoniously with others, an ability to apply knowledge and use it to solve practical real life problems.

It will also be important to bear in mind that the curriculum should provide equal opportunities for boys and girls; and to consider, in this context, the expectations and attitudes of girls to science. You should also take account of the ethnic and cultural diversity of the school population and society at large.

### **Wales**

18. You will need to bear in mind that your recommendations will relate to the whole of England and Wales and should allow enough flexibility for schools to give weight, where appropriate, to local circumstances. There will be arrangements in Wales for separate consideration of, and consultations about, the group's report. These will take account of any particular Welsh needs.

### **Resources**

19. An increased emphasis on science and on practical science for all has implications for teacher time, for equipment and for accommodation but the Government expects the national curriculum and associated assessment to be developed and implemented broadly within the planned level of resources. In particular, the Government's expenditure plans provide for a further improvement in the overall pupil teacher ratio to 17:1 by 1990. It will be for authorities and schools to ensure that staffing resources as well as annual spending on support services, books and equipment and accommodation are directed to support the national curriculum.

20. For its part, the Government will give priority to support of the national curriculum in allocating resources for Education Support Grants and LEA Training Grants. This will build on existing support for new developments through these grants, for example



the ESG funding for primary science and technology and the LEA Training Grants for retraining teachers in the shortage disciplines including science.

21. The Government aim to make the first sets of Orders, relating to attainment targets and programmes of study for science and mathematics, early in the first half of 1989 following wide consultation through the proposed National Curriculum Council. On this timetable, schools may expect to begin implementing these first Orders at the start of the academic year 1989-90. I shall look to you for advice on whether the Orders relating to science should be brought in on a phased basis rather than for all children in both primary and secondary schools at once.

### **Ages and Stages; Time Allocations**

22. You should assume that all pupils other than those with statements of special need under the Education Act 1981 which specify otherwise will study science throughout their compulsory schooling and take a GCSE examination in science or equivalent examinations approved against relevant GCSE criteria.

23. Science and technology are not in practice taught as separate subjects in primary schools and it would not be sensible to try to do so. In view of this, I want you to look jointly at primary science and technology. To enable you to do this, I propose to appoint 3 or 4 additional members with knowledge of and expertise in primary technology.

24. In framing your recommendations you should assume that on average some 12.5% of the total curriculum time is available for combined science and technology in the primary phase. You should assume that between 10% and 15% of the total curriculum time is available for science for secondary pupils in years 1-3 and between 10% and 20% in years 4-5.

25. The range of times suggested for science in the secondary phase is intended to allow schools a measure of flexibility. In the fourth and fifth years we think the majority of pupils, and especially those capable of studying one or more of the separate sciences beyond age 16, should take a balanced science course, occupying no more than 20% of curricular time, leading to a double GCSE award. But you will also need to consider the needs of a minority of pupils for whom a single GCSE award in the sciences may be more appropriate. I look to you to advise on the circumstances in which pupils should be steered towards a single award rather than a double award course. The Government's general policy on secondary science remains that set out in "Science 5-16: A Statement of Policy", namely that science courses covering selectively and in a coordinated way the essential elements of all three sciences are preferable at this stage to study of the sciences as separate subjects.

### **Links with other subjects**

26. "Science 5-16: A Policy Statement" said that primary teachers should link work in science with the development of the language and mathematical competence of their pupils and with the practical component of the curriculum more generally; while secondary teachers should work closely with their colleagues in mathematics, CDT and home economics departments; and more widely so that the contribution which other subjects can make to the teaching of science and vice versa is fully exploited. In framing your recommendations I hope you will take account of these possibilities. You will need to give particular thought to the links between science and technology. Under the Government's proposals, technology is a foundation subject and a technology working group will be set up within the next 6-9 months to develop attainment targets and a programme of study for the secondary phase, linking with the emerging thinking of your group.



27. There are a number of important subjects, themes and skills which can be taught and developed through the foundation subjects. I look to you to consider the place of such aspects within the science curriculum and to cover them within your consideration of attainment targets and programmes of study. All subjects should promote the development of good written and spoken English; and numeracy. In the case of science I would expect you to cover the scientific aspects of health and safety education (excluding sex education) and the practical use and application of computers and Information Technology in control, simulation, data storage and retrieval. Subjects such as astronomy and earth sciences may provide suitable contexts in which important scientific concepts can be developed. Beyond this, "Science 5-16: A Policy Statement" suggested how science might contribute, for example, alongside other foundation subjects, to

- the development of personal qualities and values such as curiosity, healthy scepticism, respect for the environment and for the care of living things
- awareness of industrial applications of science and uses and misuses of energy.

You may have further suggestions. Time for covering these aspects within science will need to be found within the overall time available for science as indicated in paragraph 24 above.

### Conclusion

28. Generally in carrying forward your work you should take "Science 5-16: A Statement of Policy" as your policy framework. In particular you will find it helpful to follow the 10 principles set out in paragraph 13; and the guidance on the content and objectives of primary science (paras 24-27) and on a broad science curriculum for all secondary pupils (paras 69-85). You may also find it useful to take account of good practice in those LEAs that have developed effective and well-founded policies for science. I hope that you will draw on the collective wisdom and experience of professional bodies such as the Association for Science Education.

29. I look forward to receiving, by 30 November 1987, your interim report covering the ground indicated in paragraphs 2.1 and 2.2 of your outline terms of reference as elaborated in this letter. Your final report should be with me no later than 30 June 1988 and earlier if possible.

*Yours sincerely*  
*Robert M. Smith*





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30 October 1987

### NATIONAL CURRICULUM: TASK GROUP ON ASSESSMENT AND TESTING

1. The purpose of this letter is to offer more detailed guidance on your task than is contained in your Terms of Reference.

#### Relationships with the Subject Working Groups

2. You will have seen the letters of guidance which I have sent to the Chairmen of the Mathematics and Science Working Groups. I have asked those Groups to recommend attainment targets which provide objectives specific enough to offer a sound basis for the assessment and testing of pupils' progress and performance; and programmes of study detailing the content, skills and processes which all pupils need to be taught. I have made clear that the main focus of those Groups' work is to be on attainment targets and programmes of study, but I have asked them, after consultation with your Group, to offer advice in broad terms by the end of November about assessment in relation to the attainment targets they are developing, and particularly what might appropriately be measured by nationally-prescribed tests. I have also asked them to offer general advice in their final reports (June 1988) about assessment, including testing, in relation to their subjects, which should take account of the overall strategy to which I hope your recommendations will lead.

3. I shall be sending broadly similar letters to other Working Groups for foundation subjects when they are set up. Your Group will need to liaise closely with the operational Subject Working Groups, and with the Committee on English chaired by Sir John Kingman. The process of developing attainment targets, programmes of study and an overall system of assessment, including testing, will be iterative.

#### Scope of the task

4. I seek advice on a coherent system of assessment, including testing, to cover the whole period of compulsory schooling. I hope that your Report will include general criteria applicable to the system as a whole but capable of accommodating appropriate variation eg between subjects; and more specific criteria for the choice and use of



assessment and testing arrangements for particular subject areas or age-ranges. The latter in particular should take account of discussion with the operational Subject Working Groups and with informed people and organisations in other subject areas.

5. The Group's recommendations must be practicable to implement and cost-effective. I hope that your recommendations will take account of the very considerable amount of assessment which is already carried out as a normal part of teaching and learning in our schools, and will recognise that all forms of assessment affect the teaching and learning assessed. I am looking for arrangements which, by supplementing the normal assessments made by teachers in the classroom with simply-administered tests, will offer a clear picture of how pupils, individually and collectively, are faring at each of the age points. Such arrangements should help to promote good teaching.

#### The purposes and nature of assessment

6. Our consultation document recognises a number of purposes which assessment, including testing, may fulfil, and different uses to which information derived from assessments may be put. These include diagnostic or formative purposes, mainly concerned with ascertaining what stage a pupil has reached, identifying strengths and weaknesses and planning the appropriate next steps in the pupil's education; summative purposes, concerned with recording in a systematic way the pupil's achievement overall, particularly compared with attainment targets for each subject; and purposes mainly concerned with publicising and evaluating the work of the education service and its various parts in the light of pupils' achievements. I attach importance to all of these, and expect your recommendations to cover all. But as I have said in my letter of guidance to the Chairmen of the Science and Maths Working Groups, the main purpose of the national assessment, including testing, in relation to agreed attainment targets for national curriculum foundation subjects will be to "show what a pupil has learnt and mastered, so as to enable teachers and parents to ensure that he or she is making adequate progress and to inform decisions about the next steps".

7. I seek advice on a coherent national system for assessment and testing in relation to agreed attainment targets that recognises the different purposes to which assessment is put and takes account of how they interrelate with and complement each other, bearing in mind the points that I set out in paragraph 5 above.

8. The Group will no doubt consider a range of assessment approaches including written, practical and oral tests, and a variety of arrangements for administering, marking and moderating assessments and reporting their results. I seek advice on how these approaches should come together within a commonly-applicable system to achieve the objectives I have spelt out above.

#### The amount of assessment

9. I hope that the Group's advice will cover both the overall volume and the combinations of assessment and testing methods which can reasonably be accommodated, either within the normal teaching process or alongside it, but without adverse effects upon teaching time or pupils' workloads.

#### Ages and stages

10. Our consultation document envisages four formal assessment points during compulsory schooling. There is already assessment at age 16 for most pupils through GCSE and other public examinations. My assumption is that GCSE, or equivalent level examinations approved against GCSE criteria, will provide the basis for assessment in the foundation subjects at 16+ for virtually all pupils, and that consequently the GCSE criteria will be revised as appropriate to reflect agreed attainment targets and programmes of study and to ensure that the examinations present appropriate challenges



to pupils at all levels of ability. The Group's recommendations will be relevant for those conducting this revision of the GCSE national criteria.

11. Our consultation document proposes that other assessment points should be at age 8 - when decisions about examination courses to be pursued at age 16 are normally taken; age 11 - the most usual transition point between primary and secondary education; and around the age of 7, the precise age for the first assessment stage for each subject depending on the advice of subject working groups. I expect the Group's advice to distinguish what forms of assessment, including testing, would be most appropriate for each of these age points. I assume that the reporting of the results of assessment, including nationally prescribed testing, should take place towards the end of the school year in which the majority of pupils in a teaching group reach one of the age points, although cumulative assessment contributing to the final grading may take place throughout the stage preceding that. If the Group finds compelling arguments for ages and stages other than those proposed in order to offer a coherent system, it should so advise me. I shall also particularly value advice on how assessment and testing, and interpretation of the results at the first age point (7 or thereabouts) can properly take account of the wide variation in pupils' starting points in formal education, including their previous experience in pre-school education.

#### Differentiation

12. I am asking the subject working groups to recommend attainment targets for the knowledge, skills and understanding which pupils of a range of different abilities should normally be expected to achieve at the four age points; but so far as possible to avoid setting qualitatively different targets - in terms of areas of knowledge, skill or understanding - for children of different ability. My objective is that teachers should not have to prejudge what attainment targets are appropriate for a particular pupil; differentiation should be by outcome not pre-selection. I therefore seek advice on the measurement and recording at a range of different levels of positive achievement in reasonably discrete elements, within each common target area. Some elements might constitute essential performance targets for all pupils; others might allow for a series of graduated outcomes.

13. I shall particularly welcome advice on the application of such an approach to the two extremes of the performance range - the very able, and the least able.

#### Reporting on the results of assessment

14. I attach considerable importance to improving communication and understanding at various levels about educational objectives and performance; and information derived from assessment and testing will play a key part in that. I seek advice on the information which will be required to meet the purposes identified by the Group, taking account of the need for a sufficiently detailed profile of a pupil's performance to give a full and fair indication of attainment, but also of the need to be able to present aggregated information in ways that will be useful to a wider public than the teacher, pupil and his or her parents. I should welcome advice on procedures for ensuring consistency and compatibility between different approaches to assessment, including testing, and for aggregating results. I also seek advice on a standard scale or scales of marks for describing attainment, and would welcome the Group's views on the potential role of records of achievement in recording and reporting performance and attainment, at all stages of schooling. The Group should advise on the practical implications of the reporting and recording arrangements it proposes for schools and LEAs.

#### Administration and moderation arrangements

15. Our consultation document suggests that arrangements will need to be made



for the development, piloting and standardisation of assessment instruments including tests; for storing and retrieving such instruments; and for distributing them to schools. I should be grateful for any advice the Group wishes to offer on such arrangements in the light of the system it recommends.

16. The consultation document also proposes that assessment including the administering of nationally prescribed tests should be done in schools by teachers; but that arrangements should be made, probably with the GCSE examining groups, for external moderation of this work. Again I should be grateful for the Group's views on cost-effective and practical arrangements for securing "quality control" of school-based assessments, so as to secure credibility and confidence within the education service and with the public at large.

### Conclusion

17. I look forward to receiving the Group's report by Christmas 1987. I recognise that it may not be possible to cover all the ground above by then, but hope that you will be able to advise on the main issues in paragraph 1 of your terms of reference and paragraphs 4-13 above, leaving other issues and fuller elaboration for later advice. I shall make your report, together with my conclusions, available for the guidance of the subject working groups, and intend that it should be published.

*Henry*  
*Henry*

