

# Government of Madras.

EDUCATIONAL DEPARTMENT.

Recd.

Regd.

} 1910.

Enclosures

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G.O., No. 8, 6th January 1910.

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## Secondary School-leaving Certificates.

Sanctioning the transfer of "Science" from list A to list B of the subjects of study specified in the scheme for the award of —.

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## GOVERNMENT OF MADRAS.

## EDUCATIONAL DEPARTMENT.

READ—the following papers :—

## I

## G.O., No. 427, Educational, dated 21st July 1909.

ABSTRACT.—Approving a scheme for the award of secondary school-leaving certificates and directing its publication in the *Fort St. George Gazette*.

## II

Letter—from the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S., C.I.E., Director of Public Instruction, Madras.  
To—the Secretary to Government, Educational Department.  
Dated—the 20th December 1909.  
No.—Ref. on Cur. 8388.

I am requested by the Board for the award of Secondary School-leaving certificates to submit to the Government the following resolution :—

“Resolved to request the Government to sanction the transference of ‘Science’ from list A of the subjects of study (G.O., No. 427, Educational, dated 21st July 1909, annexure paragraph IV) to list B”.

2. The Board has no doubt whatever as to the great importance of science in the school curriculum, but at the same time it entertains no fear that the subject will be in any way neglected by the change proposed.

3. The only direct change involved is that there will be no public examination in the subject.

4. The Board has attempted to draw up such a syllabus as would define the scope of an examination common to the pupils appearing from all the schools of the Presidency and has found it impracticable to do so without continuing all the evils which have in the past been attendant on the corresponding examination at the Matriculation.

5. There is a widespread and growing desire on the part of school authorities to arrange for some simple practical science course in the school, but this is just the subject which one school may well develop in one way and another in another way. A written examination common to the whole Presidency will tend to interfere with such developments and it will be impossible to make such an examination serve as a reliable check upon the school marks. The check to be exercised in the case of subjects which more easily admit of definition as to scope will be considerably discredited if mixed up with an unreliable check in this subject.

6. The Board will indicate various lines upon which school work in science may well proceed, the Inspectors may be relied upon to see that the work is of a practical nature, and lastly as every school will contain pupils intending to proceed to a college where physics and chemistry are required in two out of the three possible courses there will be every inducement to provide opportunity for a good foundation for scientific work.

7. I presume that the reason for placing science in the A list was an idea that this would ensure attention being paid to it; but beyond the undesirable result of leading the pupils to learn by heart to a large extent some text-book which seems likely to cover the scope of the examination, I do not think it will have that effect. The securance of a practical science course in schools must be attained by more efficacious means.

## Order—No. 8, Educational, dated 6th January 1910.

The Government accept the proposal of the Board for the award of Secondary School-leaving certificates and sanction the transfer of “Science” from list A to list B of the subjects of study specified in the scheme for the award of Secondary School-leaving certificates.

2. The following notification will be published in the *Fort St. George Gazette* :—

## NOTIFICATION.

In paragraph IV of the scheme for the award of Secondary School-leaving certificates published at pages 383 to 386 of Part I-B of the *Fort St. George Gazette*, dated 27th July 1909, delete “Science” from list A and insert it in list B.

(True Extract.)

L. M. WYNCH,  
Ag. Secretary to Government.

To the Director of Public Instruction.  
„ Commissioner for Government Examinations.  
„ Registrar, Madras University.  
Gazette.  
Editors' Table.

NOTES CONNECTED WITH G.O., No. 8, EDUCATIONAL,  
DATED 6TH JANUARY 1910.

[SUBJECT.—*The position of "Science" in the scheme for the award of school leaving certificates.*]

*Previous papers.*

G.O., No. 510, Educational, dated 6th July 1908.  
" " 427 " " 21st " 1909.

*Demi-official*—from the Hon'ble Dr. A. G. BOURNE, D.Sc., F.R.S., C.I.E., Director  
of Public Instruction, Madras.  
To—the Secretary to Government, Educational Department.  
Dated—the 19th December 1909.  
No.—127.

I am sending in an official letter about the position of "science" in the school leaving certificate. I have discussed the matter with Mr. Hammick and he has promised to secure a decision without delay and I said I would ask you to let him have the papers as soon as possible.

If the letter has come please hurry it up.  
N. S. BRODIE—20-12-09.

We have to print the certificate forms at once and the matter is being held over on this account.

*From the Director of Public Instruction, dated 20th December 1909,  
R.C. No. 8388.*

The Board for the award of Secondary school leaving certificates (constituted by G.O., No. 598, Educational, dated 6th November 1909) requests the Government to transfer "Science" from list A to list B of the subjects of study for the Secondary school course.

2. In paragraph IV of the scheme for the award of school leaving certificates sanctioned in G.O., No. 427, Educational, dated 21st July 1909, the subjects of study are grouped into three groups A, B and C. A and B contain the subjects ordinarily studied by every pupil in a Secondary school, and C additional subjects, one or more of which may be taken by a candidate. The difference between the subjects in A and B is that in the A subjects there is a public examination and the school marks are moderated with reference to the results of that examination, while in the B subjects there is no public examination and the school marks are not moderated.

*Vide* paragraph VI (6) of the scheme on page 6 of G.O., No. 427, Educational, dated 21st July 1909.

3. The effect of the present proposal will be that "Science" will continue to be a subject to be ordinarily studied in a Secondary school, but there will be no public examination in it and the marks given for it by the headmaster will not be moderated. The reasons for the proposed change are fully explained in paragraphs 4 and 5 of the Director's letter.

4. The Board entertains no fear that "Science" will be in any way neglected by the change proposed; the Board further states—

(1) that it will indicate the various lines upon which school work in "Science" may well proceed;

(2) that the Inspectors may be relied upon to see that the work is of a practical nature, and

(3) that as every school will contain pupils intending to proceed to a college where Physics and Chemistry are required in two out of the three possible courses, there will be every inducement to provide opportunity for a good foundation for scientific work.

5. In the scheme for the award of the school leaving certificate as originally proposed by the Committee, "Science" was included in list B. But the Government considered that it should be transferred to the A list and altered the scheme accordingly—*vide* paragraph 6 (V) of G.O., No. 427, Educational, dated 21st July 1909, also paragraph 12 of Sir George Forbes' note, dated 7th May 1909, on page 37 of the notes with G.O., No. 427, Educational, dated 21st July 1909, and his later note, dated 29th June 1909, on page 44. The Hon'ble Mr. Hammick was however opposed to the proposal—*vide* paragraph 6 of his note, dated 12th June 1909, on pages 41 and 42 and his note, dated 30th June 1909, on page 45. The question was then discussed in Council and settled—*vide* the order in Council, dated 2nd July 1909, on page 45 of the notes with G.O., No. 427, Educational, dated 21st July 1909.

6. Dr. Bourne now says that the placing of "Science" in the A list, which was apparently made with the object of ensuring attention being paid to it in schools, will not produce the desired effect, but will, on the other hand, have "the undesirable result of leading the pupils to learn by heart to a large extent, some text-book which seems likely to cover the scope of the examination." He thinks that more efficacious means will have to be adopted to secure a practical science course in schools.

7. It is for consideration whether the proposal of the Board to retransfer "Science" to list B may be approved.

T.K.—22-12-09.

Dr Bourne has, it is submitted, made out a case for the removal of "Science" from the A to the B list.

K. RANGASWAMI AIYANGAR—22-12-09.

As the matter was decided in Council, I do not note at length. I venture, however, to point out the great danger of allowing science on the list of subjects on which there will be a public examination, in that the fiasco of the Matriculation may occur again. In other words, boys who have no aptitude for Physics will simply learn by rote a text-book and probably fail.

C. A. SOUTER—22-12-09.

N. S. BRODIE—23-12-09.

My notes and the other notes on pages 42, 44 and 45 of the file B show how the matter was treated. I was strongly against "Science" being made a subject for examination, and Mr. Forbes' arguments seemed to me most unconvincing.

It seems to me quite sufficient to ask yourself what do you mean by "Rudimentary Science" to see how absurd it is to make it a subject of examination. I am quite ready to admit that you can examine in Rudimentary Physics, Elementary Chemistry, Elementary Botany, Zoology, Heat, Light, or any other specific subject, but what on earth is meant by "Elementary Science" as a subject for examination I cannot understand.

One school may have a master who has taken a good degree in Geology and Mineralogy. I can understand in such a school Elementary Science will take the line of teaching the boys some facts of nature as regards these subjects and on them would no doubt hang, if the teaching was good, some good general instruction in organic chemistry, elementary facts about light, some general ideas about zoology and botany—all coming from a distinct elementary course of instruction on Geology and Mineralogy. In another school the master might be a chemist and his instruction would be different but equally good for the boys. In another it might be botany which was taught as the leading subject.

How on earth one Board in Madras is to set a paper to meet all these different courses at the different schools, I cannot make out.

The subject is called "Science"; if we called it "Elementary Physics" it might be possible to set a paper in it, but to tell an examiner to set a satisfactory paper in "Elementary Science"; seems to me to be to give him an impossible task.

It was what was tried in the Matriculation and notoriously failed.

In this matter I consider we have no choice, we must either lay down that every school is to teach some one department of science, *e.g.*, Physics or Chemistry or we must allow each school to teach "Science," in its own way and trust the Inspectors to satisfy themselves that it is being taught properly: and omit "Science" as a subject for examination. If the Committee draw up any kind of syllabus to guide students in a science course, we may be perfectly certain that some cunning fellow will at once produce a text-book which every boy will cram by heart and demolish any paper that may be set.

I think we must drop science as a subject for examination in the school leaving examination, at the same time we may warn the Director of Public Instruction to be particularly careful that all the reports on these schools contain special reference to the teaching of science and that in the case of schools where the course is reported to be unsatisfactory, remedial measures should be immediately taken.

His Excellency the Governor should see.

M. H[AMMICK]—27-12-09.

I took no part in the previous discussions about the school leaving certificate, but I read all the papers, I think, and I remember being particularly struck when reading the notes to G.O., No. 427, Educational, dated 21st July 1909, with what seemed to me the weakness of the position taken up by Sir G. Forbes with regard to science. His high appreciation of the value of science proper blinded him, I think, to the futility of trying to teach elementary science in Indian schools, as a subject for test by examination.

I agree with my Honourable Colleague, and would transfer science from the A to the B list.

J. N. A[TKINSON]—3-1-10.

I can appreciate the difficulties which Dr. Bourne points out and I am ready to fall in with the proposal to transfer "Science" from A to B.

A. L[AWLEY]—4-1-10.

Please draft.

L. M. WYNCH—6-1-10.

Draft submitted for approval.

T.K.—6-1-10.

K. RANGASWAMI AIYANGAR—6-1-10.

C. A. SOUTER—6-1-10.

Issue.

L. M. WYNCH—6-1-10.

[G.O., No. 8, Educational, dated 6th January 1910.]

READ AGAIN G.O., No. 427 Edl, dated 21- 7- 1909

” ” ” ” ..... ” ” ..... 150

READ ALSO:—

C. No. 2310, From the D. P. J., No. 8388, dated 20-12-1908.

” ” ..... ” ” ..... ” ..... ” ..... ” ..... 190 .

" " " " " "

190

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21.7.09

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Register, Madras University  
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h. 18. h-I-B 2711-1-10

The Govt. accept the proposal of the Board for the award of Secondary School leaving certificates and sanction the transfer of "Science" from list A to list B of the subjects specified of Study in the Scheme for the award of Secondary School leaving certificates.

7.31. 2. The following notification  
6-1-10 will be published in the Fort  
Saint George Gazette: —

Notification

In para. IV of the Scheme for  
the Award of Secondary School-leaving  
Certificates

Certificates published at pages 383  
to 386 of Part I-B of the Fort Sa  
George Gazette dated 27<sup>th</sup> July  
1909.

Delete "Science" from list A  
and insert it in list B.

RD  
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