Supplement to Government Gazette

OF

WESTERN AUSTRALIA.

[Published by Authority.]

No. 43.] PERTH: TUESDAY, JULY 15. [1903.

WESTERN AUSTRALIA.

Education Department,
Perth, 10th July, 1903.

HIS Excellency the Governor in Executive Council, in pursuance of the powers vested in him by Section 22 of "The Elementary Education Act, 1871, Amendment Act, 1893," has been pleased to approve of the following as the Regulations made under the said Act.

CECIL ANDREWS,
Inspector General of Schools.

REGULATIONS.

Education Department,
Perth, 1st July, 1903.

PRELIMINARY.

All previous Regulations shall be deemed to be repealed.

In these Regulations, unless the context requires a different construction,—

"Minister" means the Minister of Education.

"Department" means the Education Department.

"District Board" means a District Board of Education.

"Inspector General" and "Inspector" mean, respectively, the Inspector General of Schools, and an Inspector of Schools under the Elementary Education Acts.

"Government School" means a School established and maintained as such under the said Acts.

"Efficient School" means a School recognised by the Minister as giving efficient instruction for the purposes of the compulsory clauses of "The Public Education Act, 1899."

The masculine includes the feminine.

GOVERNMENT SCHOOLS.

1. Government Schools under the Department are of seven classes:—

(*a.*) State Schools.
(*b.*) Half-time Schools.
(*c.*) Provisional Schools.
(*d.*) House-to-House Schools, or Schools in sparsely-peopled districts.
(*e.*) Special Schools.
(*f.*) Evening Schools.
(*g.*) Technical, Art, or other Schools supported by grant from Parliament.

2. Application for the establishment of the several classes of Schools must be made on the forms prescribed, which may be obtained at the office of the Education Department.

a. State Schools.

3. A State School may be established in any locality where an average attendance of twenty children, between the ages of six and fourteen years, can be guaranteed.

4. Should the average daily attendance at any State School, during a period of twelve months, fall below twenty, such School shall be made Provisional or Half-time, unless it can be shown that temporary causes have prevented the attendance from reaching the required standard. The classification of Schools may be revised after a less period if there is sufficient evidence that the variation in numbers is likely to be permanent.

b. Half-time Schools.

5. Wherever at least twenty children, between the ages of six and fourteen, are residing within an estimated radius of ten miles from a central point, and can be collected in two groups, affording an aggregate average attendance of sixteen children, an Itinerant Teacher may be appointed, and Schools so established shall be designated Half-time Schools.

6. Aid will not be granted towards the maintenance of Half-time Schools unless suitable buildings are provided by the applicants.

7. Each schoolroom shall have at least 11 square feet per scholar of floor space, a boarded floor, a fire-place, an out-office, and be properly lighted and ventilated. Some good drinking water must be available.

8. The teachers of Half-time Schools must make the same Returns and keep the same Registers as those of State Schools.

9. Half-time Schools shall be classified in the same manner as State Schools, and the Teachers shall be paid the same rates of salary. Where necessary, an annual allowance of £15 for forage may be paid in addition to the salary.

10. Teachers shall conduct their schools as State Schools, but the subjects of instruction may be limited by leave of the Department.

11. Teachers of Half-time Schools must divide their time equally between the two Schools—in the first week two days at one School, three days at the other; the next week *vice versa*. If other arrangements be found more suitable, they may be adopted under the authority of the Inspector General.

c. PROVISIONAL SCHOOLS.

12. In a district where, in the Minister's opinion, the permanence of settlement is sufficiently assured for some time, a Provisional School may be established when not fewer than ten and not more than nineteen children, between the ages of six and fourteen, can regularly attend such School; provided that no Provisional School shall be established within four miles, by the nearest route practicable for children, of any existing State, Provisional, or Half-time School.

13. The Minister may, at his discretion, grant an annual sum, not exceeding £12, as lodging allowance.

14. Provisional Schools shall be conducted in every respect as State Schools.

15. Teachers of Provisional Schools need not necessarily be Classified Teachers, but will only be appointed after their competency for the office has been ascertained by an Inspector.

16. When a Provisional School has maintained an average daily attendance of twenty or more for at least six months, it may be raised to the status of a State School, if, in the opinion of the Minister, the increase is likely to be permanent. The Teacher, on taking the necessary certificate, will then be paid in accordance with the scale for Teachers of State Schools.

17. To ensure the continuance of a Provisional School, an average attendance of not fewer than ten pupils must be maintained. Should the average attendance be less than ten for a period of six months, the School will be closed, unless the settlers are prepared to guarantee part payment of the teacher as under Regulation 19.

18. The necessary school buildings and furniture for Provisional Schools, as well as the requisite books and apparatus, will be provided at the cost of the Department.

d. HOUSE-TO-HOUSE SCHOOLS, OR SCHOOLS IN SPARSELY-PEOPLED DISTRICTS.

19. In sparsely-peopled districts the settlers may apply for a grant for the teaching of the children between the ages of six and fourteen years. The settlers must satisfy the Minister that--

(*a.*) Proper room or rooms have been provided.

Note.—Every such room must have a boarded floor and at least two windows. There must be ten square feet of floor space per scholar. A plan must be sent to the Department showing the size and shape of the building, the position of the windows, etc. Provision must be made for ventilation. Good water must be available. One out-office, at least, must be provided.

(*b.*) A competent Teacher has been secured.

(*c.*) No State, Half-time, or Provisional School is within four miles of the homes of any of these children.

(*d.*) They are willing to supplement the Grant from the Department by such amount as will provide the Teacher with a salary of at least £60 per annum.

(*e.*) They must pay monthly to the Teacher, or to the Department on his behalf, the deficiency on each month's salary, and must depute one of their number to collect the money, and to receive notice from the Department of the amount needed.

20. If several families are visited, and a central room has not been provided, the Department will determine the mode in which the Teacher's time shall be apportioned.

21. The Grant to Teachers engaged in such Schools shall be at the rate of £4 10s. per annum, up to a maximum salary of £90 per annum, for each pupil in average daily attendance. In addition to such Grant they may be allowed, where necessary, a sum of £10 per annum as forage allowance. The salary will be paid on the average of the previous month.

22. The necessary furniture, books, and apparatus will be supplied.

23. As a condition to the payment of the Grant, the Teacher must--

(*a.*) Keep a record of pupils' attendance in a satisfactory manner.

(*b.*) Furnish punctually and accurately such returns as may be required by the Department.

(*c.*) Insist on the carrying out of a system of Home Lessons, if several families are visited.

(*d.*) Furnish a report to the Inspector General at the end of each month upon the work done during that period.

24. The subjects of instruction in House-to-House Schools may be limited to Reading, Writing, Spelling, Arithmetic, and History, or Geography, if several families are visited.

e. SPECIAL SCHOOLS.

25. In a district, the distance of which from Perth prevents regular visits by an Inspector, the Minister may establish and maintain Special Schools.

26. These Special Schools will be classed as State Schools, but the Teachers may be paid at a higher rate than the scale fixed by the Regulations for State Schools.

27. The Teachers of Special Schools must be Classified Teachers.

28. Special Schools shall be conducted in all respects in accordance with the Regulations for State Schools, provided always that the Minister shall have power to amend or alter, at his discretion, the Regulations dealing with the hours of instruction in these Schools.

EVENING SCHOOLS.

29. The Minister may establish and maintain an Evening School in any district from which a petition for its establishment has been received, signed by parents, guardians, or other residents of the locality, on behalf of not fewer than ten persons who desire to attend such Evening School.

30. Persons below the age of fourteen years are not eligible as pupils at an Evening School.

31. Teachers of Evening Schools, who may also be Teachers of Day Schools, will be appointed by the Minister.

32. An Evening School will, as a rule, be conducted in a Government Schoolroom, and the ordinary School furniture and apparatus may be used. Fuel and light will be provided by the Department, but the pupils must pay for any extra books that may be necessary.

33. The pupils of an Evening School shall meet, as a rule, three times weekly, and every such meeting shall be of not less than two hours' duration. If fewer meetings are sanctioned, the salary due to the Teacher, under Regulation 38, shall be proportionately diminished.

34. The course of instruction must be secular only, and shall comprise such subjects as the Minister may decide.

35. Every pupil shall pay a fee to the Teacher weekly, in advance. Such fees shall be sent to the Department by the Teacher at the end of each month. The amount of fee in each School shall be determined by the Minister, who may, at his discretion, make special charges for extra subjects.

36. The Teacher of an Evening School shall keep a register of attendances, and shall make quarterly and annual returns on the same forms as in State Schools.

37. Evening Schools shall be subject to the same control and inspection as State Schools, but owing to difficulties in securing frequent inspection, District Boards, and Correspondents appointed by the Department are invited to make Evening Schools their special care.

38. The salaries of Teachers of Evening Schools shall be as follows:—

The Principal Teacher shall receive salary at the rate of £3 per annum for each pupil in average attendance up to twenty, and 10s. for each additional pupil beyond that number.

When the number of pupils is over thirty, a second Teacher must be employed, and he shall be paid at the rate of £2 for each pupil above twenty in average attendance, until the number reaches forty-five in average attendance, when a third Teacher may be given.

Further Teachers must be appointed for every twenty-five in average attendance beyond this number, and shall be paid at the rate of £2 for each pupil.

Special arrangements may be made by the Minister in the metropolis, or in other large towns, where necessary.

APPOINTMENT, PROMOTION, AND CLASSIFICATION OF TEACHERS.

39. As a general rule no persons will be appointed as Teachers unless they have satisfactorily passed an examination. In some cases persons who have not been examined may be appointed on probation, but such appointments will not be confirmed until the required examination has been passed. This examination must be passed as soon as possible after the probationary appointment. Such persons must satisfy the Inspector that they are able to teach a class properly, and to keep it in order, attention, and activity.

40. The following persons may be employed as Teachers in Government Schools without examination, provided that they satisfy the Department as to their knowledge of practical School Management:—

(1.) Persons holding certificates from a recognised Training Institution in the United Kingdom or elsewhere in the British Dominions.

(2.) University graduates who have had experience as Teachers.

(3.) Teachers holding higher certificates of the Education Departments of the United Kingdom or elsewhere in the British Dominions.

Note.—The classification awarded will be at the discretion of the Minister, who will take into account the amount and nature of their teaching experience and qualifications.

41. On their first admission into the service of the Department, all Teachers will be appointed provisionally, and will not necessarily be classified until an official report on their skill in practical School Management has been received. Classified Teachers are reckoned as civil servants, and may be placed on the permanent staff after two years' satisfactory service. Satisfactory service implies that the reports of the Inspectors have been satisfactory, and that a teacher's conduct has been exemplary.

42. Married women will not, as a rule, be accepted as Teachers. Female Teachers intending to marry must notify the Minister of such intention a clear calendar month beforehand. Their appointments lapse on marriage, and they will only be eligible for re-appointment as supply teachers.

43. Teachers employed under the Education Department are prohibited from writing to the newspapers, and are required to refrain from all actions in public affairs calculated to give offence to any section of the community, or to impair their own usefulness as Teachers.

44. Teachers will be appointed, promoted, and removed on a due consideration of their claims and merits. They are, therefore, prohibited from seeking the interest of influential persons to obtain promotion, removal, or other advantages. Their classification, seniority, preparation of pupils for scholarships, bursaries, etc., and the state of their school premises and gardens will be taken into consideration as well as the tone of the School and the results of the examinations and reports of Inspectors.

45. (*a.*) In the case of the appointment of a Teacher to a School, train or other fares only from Perth will be paid. Any other expenses must be paid for by the Teacher himself, unless otherwise specified at the time of the appointment.

(*b.*) Teachers in the Department transferred to other Schools will be allowed free charges on luggage, as follows: Single Teachers up to one half-ton weight; Married Teachers up to two tons weight.

(*c.*) Teachers transferred from one School to another at their own request must pay all expenses, with the exception of their fare, which may be granted them at the discretion of the Minister.

(*d.*) When Teachers are transferred by the Department the usual rate of allowances, in addition to fares, will be:—

Teachers of Provisional Schools and Schools of Class VI., and Assistant Teachers, 7s. 6d. per diem.

Teachers of Schools of Classes III., IV., and V., 10s. per diem.

Teachers of Schools of Classes I. and II., 12s. 6d. per diem.

Full daily rate may be claimed when the journey extends over a day and a night. Half allowance will be granted when the journey, though less than a day and a night, is longer than 6 hours. Teachers travelling by steamer, where fare covers board, will not be entitled to the allowance.

(*e.*) All accounts for expenses must be rendered in duplicate, and vouchers for all payments must be attached. These must show the time of departure for and arrival at destination.

(*f.*) In the case of a married Teacher, fares and half allowances will be allowed for his wife and children.

(*g.*) An additional 25 per cent. may be allowed on the Goldfields.

46. The attainments of Teachers and Candidates for employment as Teachers will be tested by written and oral examinations, and their skill in teaching determined by their ability to manage a School or Class; and, according to their attainments and skill, they will be classified in the following grades:—

The First or highest Class will have three grades: A1, A2, and A3.

The Second Class will have two grades: B1, B2.

The Third Class will have two grades: C1, C2.

Teachers may also be appointed without classification who have shown sufficient ability in examination or otherwise, but have not reached the standard necessary for a certificate. They may be required to sit for the "C" or other examination, and to obtain such percentage of marks as may be determined.

47. The following will be considered in awarding or revising the classification of Teachers:—

(*a.*) The result of the Department's examinations.

(*b*) Reports of Inspectors.

(*c.*) Certificates of the Education Departments of the United Kingdom or elsewhere in the British Dominions, and the reports of the Inspectors of those Departments.

(*d.*) Degrees of recognised Universities of the United Kingdom or elsewhere in the British Dominions.

Note.—Graduates of such Universities may be granted the "B" Certificate without passing the whole of the "B" examination of the Department if they can satisfy the examiners in reading, writing, arithmetic, school management, music, drawing, and drill, and in addition, for females, domestic economy and needlework, and any other subject specified in Appendix II. not covered by the examination for such University Degree: Always provided that they have satisfied the Department of their practical skill in teaching.

48. The Classification of any Teacher in the Service shall be liable to reduction or cancellation for inefficiency, neglect of duty, or misconduct, and the Minister shall be the sole judge of such inefficiency, neglect, or misconduct.

49. An examination of Teachers shall be held annually. Teachers who desire to be examined, with a view to promotion, must notify the Department in writing of their wish at least one month before the date of examination, which date will be notified in the *Government Gazette* or Education Department *Circular*.

50. In the event of any Teacher having to travel to attend the Annual Examination for classification, travelling expenses by road, rail, or steamer will be refunded if the Teacher is successful in passing the examination, or has obtained at least 50 per cent. of marks on the whole examination.

51. The Examinations for Certificates will be conducted by the Education Department and in accordance with Schedules laid down from time to time. (*See* Appendix II.)

52. A Manual Training Certificate will be awarded to Teachers who pass an examination in practical and theoretical work. Teachers who hold this certificate and teach manual training in their Schools will receive an addition of £10 to their salary.

53. Teachers in the lower grade of the "C" or "B" Class will not be allowed to sit for a higher class, but must first have reached the first grade in their class. Teachers will not, except under special circumstances and by special permission of the Minister, be allowed to sit for the "B" examination till they have been in Class "C1" for two years, or Teachers in Class "B1" to sit for the "A" examination till they have been so classified for three years. A teacher will not be allowed to sit for the "B" or "A" examinations until he has been recommended by his District Inspector, and before sitting for the "A" examination he must also have received a good report in practical skill in teaching from the Inspector-General or Chief-Inspector.

54. Teachers can be promoted from one class to another by examination only, but in each class a Teacher may, without examination, be advanced to a higher grade in the same class for good service. Good service implies that in the last three years during which the Teacher has held his classification, his school has increased in efficiency; that the Inspectors' reports throughout that time have been good, and that his general conduct has merited the Minister's approval. The Minister may, at his discretion, raise a "C2" Teacher to the "C1" grade after two years' good service.

Before a teacher can be classified A1 he must have received two excellent reports, and his school must be in a high state of efficiency.

55. A Teacher, whatever his grade, on appointment to any School, must notify the Minister of the date of his arrival and of his commencing duty, and is required to give not less than one month's notice of his intended resignation, which shall take effect on the last day of the month indicated. Before receiving the salary for the last month, he must, if in charge of a School, hand over to a person duly authorised all School property belonging to the Minister, and make out, in duplicate, an inventory of the same: one copy to be forwarded to the Minister, the other to be left in the School Portfolio, both copies to be certified by the person authorised to receive the School property. He must also have sent in Attendance Returns made up to the date of his leaving, and he must be able to show all books and records complete and in order. Teachers on the Permanent Staff must give a full month's notice, to take effect on the last day of a calendar quarter. No Teacher can give a month's notice to terminate at the end of January; but Teachers not on the Permanent Staff need not give more than a full calendar month's notice at any other time of the year. Where full notice is not given, pay may be forfeited at the discretion of the Minister. The above refers to Teachers leaving School either on resignation, transfer to another School, or termination of their engagement by the Department.

56. Leave of absence on full pay for Teachers in the Service will only be granted at the discretion of the Minister under very exceptional circumstances, and not for private business. Sick leave shall in no case exceed two months on full pay, such leave to be granted at the discretion of the Minister; in very exceptional cases this may be extended by an additional two months on half-pay, after which time all emoluments will cease. Sick leave will not be granted except on a certificate, stating the nature of the illness, given by a properly qualified medical man, and in case of continued illness, exceeding one month in duration, a fresh medical certificate, with an application for further leave, must be submitted every fortnight after the expiration of the first month. In granting sick leave the Minister will be guided largely by the length of service of the Teacher applying, and whether he is on the Permanent Staff list or not. Leave of absence without pay may be granted at the discretion of the Minister, but all leave of absence is subject to the exigencies of the Service permitting it. Head Teachers cannot grant holidays to members of their staff, except in a case of emergency, which must at once be reported to the Minister. Teachers who fail to attend on the re-opening of their Schools after the Christmas holidays, from whatever cause, forfeit all claim to pay for the January portion of the holidays, unless there are very special circumstances, the Minister to be sole judge of such. As a rule medical certificates from outside the State will not be accepted. Teachers who require extended rest will be expected to get certificates from doctors within the State.

57. Teachers may be fined, at the discretion of the Minister, for misconduct or for breaches of the regulations; their pay will be stopped if they are absent without leave from School for the period of such absence. Schools may not be closed without leave, and a fine may be inflicted for such closing. Repeated breaches of regulations render the Teacher liable to loss of classification or dismissal.

58. Schools will be classified as follows:—

Class I.	Average attendance of		400 and upwards.
Class II.	„	„	300 to 400.
Class III.	„	„	200 to 300.
Class IV.	„	„	100 to 200.
Class V.	„	„	50 to 100.
Class VI.	„	„	20 to 50.

Schools below 20 will be only Provisional.

59. When any State School fails to maintain the average attendance specified in Regulation 58, the Minister may remove such School to a lower class. A School will only be transferred to a higher or lower class upon the

average attendance for a period of not less than six months. The Department will not necessarily make such an alteration except on a full year's attendance.

60. Head Teachers may be required to possess Certificates as follows:—

When in Schools of Class	I.	... ...	A1.
"	" II.	... ...	A2.
"	" III.	... ...	A3.
"	" IV.	... ...	B1.
"	" V.	... ...	B2.
"	" VI.	... ...	C1.

61. A Teacher may be removed from the School in which he is employed to another of a lower class should he fail through any default on his part to maintain the requisite number of pupils in average attendance, or to satisfy the conditions of the standard of proficiency, and the Minister shall be the sole judge of any such default.

62. Schools will be classified at the close of each calendar year, subject to the provisions of Regulation 59.

63. Whenever a school is raised from one class to the one above it, the Head Teacher is liable to removal or to transference to a school of the class he has previously held, if he should, in the opinion of the Minister, make way for another teacher with qualifications more suitable for a School of the higher class.

64. When Schools are first established they will be placed in such classes as may be decided by the Minister.

SCALE OF SALARIES.

65. The annual salaries of classified Teachers in charge of Schools shall be according to the following scale:—

For a Teacher in charge of a School of—

	Male.		Female.
Class I. ...	£370 to £450	...	£300 to £350.
Class II. ...	£320 to £370	...	£260 to £300.
Class III. ...	£270 to £320	...	£230 to £260.
Class IV. ...	£220 to £270	...	£180 to £230.
Class V. ...	£180 to £220	...	£150 to £180.
Class VI. ...	£140 to £180	...	£120 to £150.

Provisional.

	Male.		Female.
A. Schools over 15 ...	£100 to £140	...	£90 to £120.
B. " below 15 ...	£80 to £100	...	£70 to £90.

These salaries will rise by annual increments of £10, at the discretion of the Minister, if the Inspector's report is good, and the Department is completely satisfied with the Teacher's work and conduct during the year.

The annual increments are awarded at the end of each calendar year.

(*a.*) A deduction of £5 will be made from Female Teachers who are not qualified to teach sewing.

(*b.*) Quarters will, when possible, be provided. In other cases an allowance may be granted of £25 per annum for Schools in Classes I. to IV., and of £15 per annum in Schools of Classes V. and VI.

(*c.*) An additional sum, not exceeding £30 or £40 per annum, may be granted to Teachers of Schools on Goldfields where the cost of living is very high.

(*d.*) In special cases the Minister may arrange where there is a Girls' or Infants' School, or both, that they should be under the general supervision of the Headmaster of the Boys' or Senior School. The status of the Headmistress of such a school will be a subject of special arrangement, and the salary fixed at the discretion of the Minister.

66. No unclassified Teacher in charge of a School shall receive a higher salary than—Males, £110; Females £90. Unclassified Teachers, whether heads or assistants, who have experience may commence above the minimum of the scale, at the discretion of the Minister.

67. If a Teacher be appointed to a School of a higher class than that to which he or she is entitled by Regulation 60, the salary to be paid to that Teacher shall be determined by the Minister.

68. When there is a vacancy in the Head Teachership of a School for a period exceeding two months, the Assistant in charge will receive, during the time he has been acting, half the salary of the Head Teacher and half his own, subject to a favourable report of his conduct of the School by an Inspector, and at the discretion of the Minister.

69. The annual salaries of Assistants shall be:—

Assistants Holding—	Male.	Female.
A Certificate	£190 to £220	£170 to £200
B1 "	£170 to £190	£150 to £170
B2 "	£150 to £170	£130 to £150
C1 "	£130 to £150	£110 to £130
C2 "	£110 to £130	£90 to £110
Unclassified	£80 to £110	£60 to £90

Annual increments are made on the same conditions as for Head Teachers.

The annual increments will be awarded at the end of each calendar year.

(*a.*) In large Schools, where the Minister may deem desirable, a first Assistant may be appointed, and such Assistant shall receive from £15 to £30 per annum, in addition to the salary as laid down above, at the discretion of the Minister and in accordance with the size of the school and the extent of the Teacher's duties. In mixed schools of Class I. a first male and a first female Assistant may be appointed at the discretion of the Minister.

(*b.*) An additional sum, not exceeding £30 or £40, may be granted to all Teachers in the Goldfields and Special Schools where the cost of living is very high.

70. Married Teachers and others may be appointed on supply, either during the absence of a Teacher or to fill a vacancy on the School staff, when no other Teacher is available. Only the weeks during which the Teacher is actually employed in teaching will be paid for. There will be no pay for holidays. Engagements can be terminated at a week's notice at any time.

The scale of salaries will be as follows:—

Supply Teachers in Charge—	Male, per week.	Female, per week.
Class VI.	£3 4s. to £3 12s.	£2 16s. to £3 4s.
Provisional A ...	£2 5s. to £2 16s.	£2 2s. to £2 10s.
Provisional B ...	£1 18s. to £2 5s.	£1 12s. to £2

Salaries of Assistants on Supply holding—	Male, per week.	Female, per week.
B1 Certificate ...	£3 16s. to £4 6s.	£3 8s. to £3 16s.
B2 Certificate ...	£3 8s. to £3 16s.	£3 to £3 8s.
C1 Certificate ...	£3 to £3 8s. ...	£2 10s. to £3
C2 Certificate ...	£2 10s. to £3 ...	£2 2s. to £2 10s.
Unclassified ...	£1 16s. to £2 5s.	£1 10s. to £1 16s.

An additional 13s. 6d. or 18s. may be granted to Supply Teachers in the Goldfields and Special Schools where the cost of living is very high.

Supply Teachers acting as Head Teachers in Schools above Class VI. for a period exceeding two months may receive half the salary of the Head Teachers and half their own, subject to the approval of the Minister.

The higher salary in each class cannot be paid except where the teacher has been acting on supply constantly for a period of two years in that class.

71. All appointments are temporary and provisional. They may be confirmed by the Minister after a satisfactory year's service. No claim for an increase of salary will be considered till the Teacher has been on the staff for a complete year. No person may teach in any School, with or without pay, unless he has been appointed to that School, or has received special permission from the Minister.

MONITORS.

72. Monitors may be employed to serve in Schools where the average attendance is at least 30. They may be of two classes—Half-time Monitors and Full-time Monitors.

73. Candidates for the office of Monitor must be not less than 14 or more than 18 years old. They must be free from any bodily infirmity likely to impair their usefulness, and must be of good moral character. On appointment a satisfactory medical certificate must be furnished, on the form provided by the Department, and an agreement entered into. The first three months of appointment will be on probation.

74. Candidates must pass in the subjects specified in Appendix I. at the regular Candidates' Examination held in December each year; but when specially recommended may be examined at other times, on the understanding that they will be required to sit again at the regular Annual Examination next following, in the same or higher class as may be determined by the Department. Applicants whose age, qualifications, experience, etc., make them eligible to sit for a higher examination than the Candidates may do so by special permission of the Department.

75. Candidates who have passed the Junior or Senior Adelaide or some other equivalent University Examination, not more than one year previously, are eligible to be appointed Monitors without examination; they will, however, be required to serve one month on trial without salary. If their age is suitable, they may, at the discretion of the Department, be admitted as Full-time Monitors, but will be required to sit at the following Monitors' Full-time Examination.

76. The remuneration of Monitors shall consist of (*a*) instruction to be given by the Head Teacher, and (*b*) an annual salary. A Time-table, showing the time at which the lessons are proposed to be given and the subjects for each day's study, must be submitted by the Head Teacher to the Chief Inspector for his approval. Direct instruction of two hours shall be given by the Head Teacher to Half-time Monitors, and of three hours per week to Full-time Monitors. The Head Teacher shall give half-an-hour on each of the two other school days in the week to the correction and explanation of Home Work, both oral and written.

For the employment of Half-timers during school hours, compositions and written work bearing on their studies should be given. Work must be always set by the Head Teacher, so that there is no idleness. If a chapter or two of a text-book are given to be read as Home Work, questions might be set to be answered, in writing, without book, in school, or, if at home, in a form which would not allow the book to be merely copied.

77. Salaries shall be paid to Monitors at the following rates:—

	Males.	Females.
Half-time, First Year	£30 ...	£20
" Second Year	£42 ...	£30
Full-time, First Year	£56 ..	£40
" Second Year	£66 ...	£50

Before a Monitor can draw the Full-time salary he must have passed the examination prescribed for Monitors, 16 years of age, except as provided in Regulation 75.

Monitors entering the service in the higher class (Full-time), not having been through the Half-time probation, must serve a probation of three months' practical teaching and obtain a satisfactory report from an Inspector before the appointment can be confirmed. If the report be unfavourable the appointment will lapse. During the three months' probation the salary will be at the rate of—Males, £42; Females, £30.

An additional sum not exceeding £10 per annum may be granted to Monitors in the Goldfields and Special Schools where the cost of living is very high.

78. Monitors must sit for the Full-time Examination at the first opportunity after attaining the age of 16 years. A Monitor will not be held to have passed either "Half-time" or "Full-time" Examination unless he obtain a pass in the "Failing subjects" mentioned in Appendix I., and also gain 50 per cent. of the possible marks.

Should a Monitor fail in the Examination, or neglect his studies, or fail to satisfy the Department as to his competency to teach, his services may be dispensed with at once at the discretion of the Minister.

At the age of 18 he will be required to sit for the "C" Examination, unless special permission to the contrary be given by the Department.

Monitors who gain sixty per cent. of marks in the "C" Examination, and forty per cent. in each failing subject, may be appointed unclassified teachers, provided that the reports on their practical work be satisfactory.

79. The Monitors' Lesson Book must be faithfully posted in accordance with the instructions therein contained.

80. Monitors will be half-time only until they have passed the age of 16, when they may be appointed full-time at the discretion of the Minister. Head Teachers must on no account keep their Monitors working full time, when under 16, owing to the absence of another teacher or any similar cause. All Monitors must be released from any school work at 12 noon and 3·45 p.m., and they must not be required to do any work for the day school out of school hours, except for the preparation of their own lessons. During the first three months of a Half-time Monitor's appointment, which is purely probationary, he is not to be counted on the school staff.

81. Head Teachers are required to exercise strict moral supervision over their Monitors; to see that they attend regularly and punctually at their own lessons, whether in central classes or ordinary school; and that they give proper attention to their lessons and to their private studies. They must direct and supervise their methods of teaching, and correct their notes and lessons. At least one criticism lesson should be given each week.

82. In country schools, when the attendance warrants the appointment of a Monitor, and a suitable applicant, under Regulations 73, 74, and 75, is not obtainable, a temporary "Monitor on Supply" may be appointed if the Inspector's report is satisfactory. The salary will be in accordance with Regulation 77, but whether on the half or full-time scale will rest entirely with the Department. Appointments made under this Regulation will, of course, lapse when a suitable person is obtained, unless the appointee has qualified in the meantime under Regulations 74 or 78, and is of suitable age.

83. Monitors may be appointed to Manual Training Classes. Such Monitors shall be subject to the usual conditions, except that they shall be required, in addition, to pass an examination in woodwork, and that a special curriculum shall be specified in Practical Plane and Solid Geometry and Scale Drawing. They may be allowed to omit Geography, History, Music, and Drill. At the expiration of their engagement these Monitors shall be required to pass an examination equivalent to that of the City and Guilds of London Institute, as well as the prescribed portion of the "C" Examination. They may then be employed as Teachers in Manual Training Classes, but shall attend lectures for further instruction in Manual Training. Half-time Manual Training Monitors shall receive their general instruction in the State School to which the Manual Training Centre is attached.

TEACHERS OF SEWING.

84. Teachers of sewing shall be paid as follows:—

In Schools of Class V.	£20
In Schools of Class VI.	£12

An additional sum, not exceeding £4, may be granted to Sewing Mistresses in the Goldfields Schools where the cost of living is very high.

85. The same person may be appointed to the combined positions of Sewing Mistress and Monitor in the same School. The wives of Head Teachers may be appointed Sewing Mistresses during the time their husbands hold such appointments. Sewing Mistresses will not be required where there is a Female Teacher competent to teach sewing, and their appointment will lapse on the appointment of such Teacher.

SCHOOL STAFF.

86. The staff of Teachers, in addition to the Head Teachers employed in all the State Schools, shall, at the discretion of the Minister, and as far as practicable, be as follows:—In Schools of Class VI., where the average attendance is above 30, one Monitor; in Schools of Class V., where the average attendance is between 50 and 75, one Assistant; if the numbers are between 75 and 100, an Assistant and a Monitor; in Schools of higher classes it will be reckoned that beyond 25 assigned to the Head Teacher, every 50 children in average attendance will require one Assistant. Monitors may be employed in addition, at the discretion of the Minister. Full time Monitors will count for 25 children.

TRAINING COLLEGE FOR TEACHERS.

87. The Minister may, in special cases, allow other persons than those who have won the Scholarships to attend the Training College as boarders or day boarders at their own expense.

Evidence of teaching capacity may be required.

An Annual Examination will be held for Candidates anxious to enter the Training College at Claremont. Candidates of either sex may enter from 15½ to 17½ years of age, and the course of training will, as a rule, be for three years. Scholarships will be provided to defray the cost of training of those highest on the examination list, on payment of a sum of £10 per annum as a contribution towards the expense of board, lodging, and tuition. Should winners of Scholarships be residing with parents or friends they may become day boarders, and, in addition to free tuition, may receive a money Scholarship towards their maintenance of £20 per annum.

88. Examinations will be held at the end of each year of training, and if the progress or conduct of the students be not judged satisfactory by the Minister, or the reports of the Masters of Practising Schools are unfavourable, the Minister may discontinue their Scholarships and require them to leave the Training College.

89. Candidates will be expected to pledge themselves to remain the full time in the College, if so required, and to teach for three years in the Schools of the Department after training is completed. If they fail to do so, they may be called upon to refund the whole or part of the cost of their training, at the discretion of the Minister.

90. Teachers in the Training College who, in the final examination at the end of the training, shall have gained over seventy-five per cent. of the possible marks shall be entitled to a B2 Certificate, and those obtaining more than sixty per cent. to a C1 Certificate.

91. The Department cannot guarantee that all those who have passed through the course of Training in the College shall receive an immediate appointment, but they will be given preference over other applicants not so trained.

GENERAL INSTRUCTIONS.

92. Teachers cannot be allowed to accept any paid employment from any employer other than the Government, nor can they be permitted to take any office or appointment, whether honorary or paid, without the consent in writing of the Minister.

93. Teachers of all grades must make themselves acquainted with the Regulations and Instructions to Teachers, a copy of which will be supplied to each member of the School Staff on application.

94. All directions from Inspectors and all Departmental Orders are to be strictly observed by Teachers. Should a Teacher at any time feel aggrieved, he may appeal to the Minister for redress, but pending such appeal no Teacher will be justified in disobeying orders.

95. No sectarian or denominational publication of any kind whatsoever shall be used in School by the Teachers, nor shall any sectarian or denominational doctrine be inculcated by them.

96. All absences of Teachers are to be entered in the School Journal. The Head Teacher must inform the Minister and the District Board if a Teacher is absent from duty, or habitually unpunctual. If any Teacher is obliged, through sickness, to be away from his duties for more than three days, he must, wherever possible, forward at once to the Minister a certificate signed by a duly qualified medical man, stating the nature of such sickness, etc.

97. Circulars and pictures from tradesmen or other advertisements must not be distributed or hung in the Schools, unless the names of the advertisers are obliterated. The only exceptions allowed will be for specimens of the processes of various manufactures which might be useful for object lessons. The leave of the Minister must be obtained.

Teachers are not to allow collecting cards or subscription lists to be given to the children in the schools for raising money from the public. Children should not be allowed to solicit or beg for money for any purpose.

GENERAL MANAGEMENT OF SCHOOLS.

98. In all Government Schools the daily routine shall be that specified below; but the Minister may give permission in special cases for variations to be made.

Secular Instruction from 9 a.m. to 12 noon. The Roll shall be called and marked at 9 a.m., and again called and finally closed at 9·50 a.m. There shall be a recess of 10 minutes for the elder children and of 20 minutes for infants, between 10·30 and 11·15. The School shall be dismissed at 12 noon and re-assemble at 1·30 p.m., when the Roll will be called and marked. The Roll shall be finally closed at 1·45. Secular instruction from 1·30 to 3·45 p.m., when the School will be dismissed. Fifteen minutes recess may be given for the infants between 2·30 and 3 p.m.

All Teachers are required to be present at least 15 minutes before school time, in order to prepare the materials for their work, and to secure good behaviour among the scholars.

Classes may not be detained after the recognised hours as laid down above. Detention of individual children is allowed as a matter of discipline—for idleness in school, failure to attempt home lessons, unpunctuality, disobedience, or similar faults, but not for inability to learn. Such detention should not be during the dinner recess, but only after the afternoon session, nor, except in very exceptional circumstances, for more than half an hour. Longer periods should be entered in the Punishment Book.

Children may not on any account be detained during the recess in the middle of morning school, when all rooms should be thoroughly aired.

With the permission of the Department, children over 16 years may be retained in the School. In each such case a fee of 6d. per week must be paid to the Teacher, which may be retained by him. A statement should be forwarded with the Quarterly Summary showing the

amounts so received. The attendances of these children should be noted on the Registers, but entered apart from the ordinary scholars, and not included in the totals.

99. Attendance must be marked in the Registers by a stroke, thus "/."

Children present at 9 a.m. and 1·30 p.m. shall be marked in red ink; those who attend before the Roll is finally closed shall be marked in black ink. Absentees must be indicated by placing "*a*" in the space, or by "*s*" if they are known to be sick. Children coming after the Roll is closed must be reckoned as absent. If allowed to stay, their attendance may be noted in the Journal.

If a child leaves before the two hours of secular instruction are finished, its mark for presence should be cancelled by another stroke across it, thus ×, and deducted from the total.

Where the children are attending Manual Training, Cookery, or Laundry Instruction a small letter, *m*, *c*, or *l*, should be placed in the top left-hand corner of the square opposite the child's name. The Registers must be totalled, omitting all those so marked. When the Teacher ascertains from the Instructor of the Centre that the child was present, the usual stroke must be placed in the square, and the additional numbers placed (in red ink) above or below the previous figures at the bottom of the column. Teachers must see that the book containing the names of the children attending the classes is carried to the Instructor at each lesson and returned marked with the attendances after the lesson.

100. No erasures must be made in any School Register. If it is necessary to make a correction, a line must be ruled through the incorrect figures, and the correct ones placed by their side, or in the margin. All such corrections must be initialled and dated, and an explanation entered at the time in the School Journal. The Head Teacher is responsible for the safety, neatness, and accuracy of all School Registers and Records, but he may appoint Assistants and Pupil Teachers to keep the Registers of their respective class or classes. Teachers must be exact in marking and totalling their Registers at the times laid down above.

101. The District Board, in consultation with the Head Teacher, shall fix the time during which Special Religious Instruction, provided for by Section 18 of "The Elementary Education Act, 1871, Amendment Act, 1893," shall be given; subject, however, to the approval of the Minister.

102. Teachers are required to do all in their power to secure the good behaviour of their pupils, both in the School and play-ground, and when proceeding to or returning from School. Habits of cleanliness should be enforced, and pupils should be taught to be honest, truthful, considerate of the property and feelings of others, obedient to their teachers, their parents, and the laws of their country.

103. The discipline enforced in Schools must be mild and firm. All degrading and injurious punishments must be avoided. The "boxing" of children's ears is strictly forbidden, as is also the corporal punishment of girls of twelve years old and over. The Department does not view with favour the corporal punishment of girls below the age of twelve, except under very extreme circumstances.

104. Corporal punishment may, as a last resort, be inflicted by the Head Teacher only, or by an Assistant under the direction and on the responsibility of the Head Teacher. The Teacher must at once enter the particulars in the Punishment Book. Corporal punishment may be employed for offences against morality, for gross impertinence, or for wilful and persistent disobedience. It must not, as a rule, be inflicted in public, but after School has been dismissed. It must not be inflicted for failure or inability to learn, for trivial breaches of School Discipline, or for neglect to prepare Home Lessons. One school cane only should be kept. That should be under the control of the Head Teacher, with the Punishment Book, and be obtained from him by any Assistant to whom he may have delegated his authority.

105. When a child is admitted to any School the parent shall be required to fill up and sign an Admission Form as prescribed hereunder. It shall be the duty of the Head Teacher to enter his name and all necessary information in the Admission Register at once. All Admission Forms are to be kept and shown to the Inspector on his visit to the School. The Religious Denomination to which the parents of the child belong will be sufficiently indicated by writing the letters in the column for Parents' or Guardians' name as under:—C.E., Church of England; R.C., Roman Catholic: M., Methodist; C., Congregational; P., Presbyterian; S., Salvation Army; O.D., other denominations; N.O., no religious persuasion. When a child is re-admitted to a School, the name should be entered again; but the old admission number of the child should be used. The particulars as to withdrawal must be entered in ink immediately it is known that the child has been withdrawn. No child's name should be removed from the Registers unless satisfactory reason has been shown for the child's withdrawal from the School. The Compulsory Officer must be notified of all names removed.

INQUIRY FORM FOR ADMISSION REGISTER.

.....School,

.....1 .

M.....

Kindly supply me per Return with the following information respecting your.....

Yours truly,

.....

Head Teacher.

Name of Child	.....
Date of Birth (Year and Month) ...	.....
Residence	.....
Where born	.....
School last attended	.....
Standard last passed	.....
Guardian or Parent's Name	.....
Religious denomination of Parent or Guardian	.....
Do you object to your Child receiving General Religious Instruction from the Teacher?	.....

Signed.....(*Parent or Guardian*).

Teachers must revise the addresses of the parents frequently so that the Admission Register may contain accurate information for the Compulsory Officer.

106. No child shall be expelled from any School without the express sanction of the Minister, but any Head Teacher may suspend a child until the Minister's decision can be known. Such suspension, and the grounds for it, must be at once reported to the Minister, and to the District Board.

107. The attendance of any child suffering from any contagious, offensive, or infectious disease, or who is habitually of uncleanly habits, may be temporarily suspended by the Teacher. Such suspension must be immediately reported to the Minister, and to the District Board.

108. Every Head Teacher will be required to make proper provision for the supervision of the children when at play, both in the recess during school hours and in the recess for dinner. The arrangements made must appear on the Time Table, and all Teachers must take a part in this duty.

109. In the absence of the Principal Teacher, the Senior Assistant is empowered to enforce obedience.

110. The undermentioned Registers and Forms shall be kept in every class of School under the supervision of the Minister, according to the directions supplied to every Teacher:—

(1.) Admission Register.
(2.) Register of attendance of all children from 3 to 16 years of age inclusive.
(3.) Summary of Attendances.
(4.) Time Table.
(5.) Punishment Book.
(6.) School Journal.
(7.) Teachers' Time Book.
(8.) Portfolio of Official Documents.
(9.) Inspection Report Portfolio.
(10.) Visitors' Book.
(11.) Teachers' Quarterly Examination Book.
(12.) Monitor's Book.
(13.) Any other Register or Form ordered by the Department.

111. Quarterly and Annual Returns shall be furnished from every School. Returns must be neatly made out in duplicate, one copy to be preserved in the School Portfolio and the other forwarded to the Department. The Annual Returns must be forwarded with the December Quarterly Returns.

112. Negligence in compiling or sending Returns, in keeping School Registers, or in replying to correspondence, shall render a Teacher liable to a fine, and if repeated, to a loss of classification. Any Teacher guilty of fraudulently making false entries in any Register or Return will be dismissed. The amount of the fine mentioned in this clause shall be determined by the Minister.

113. In mixed Schools the names of boys and girls should be separated in the Attendance Register (*e.g.*, boys' names to begin at No. 1 and girls' at No. 21). All the columns must be fully posted up and dates placed in the necessary places. The names and full particulars as to age, etc., of every child must be entered in ink at the time of admission. Application must be made to the parents or guardian on the prescribed form, copies of which will be supplied.

114. At the close of each quarter the Registers must be made up, and care must be taken that the total attendances of each child balance the weekly totals. The totals in the Register of Attendances must be transferred into the Quarterly Summary, in ink, at the close of each week. The Quarterly and Annual Summaries of Attendances must be posted up at the same time as the Quarterly and Annual Returns. These Returns must be made up to the last Friday in each calendar quarter, and be posted to the Department within four days from that day. If exceptional circumstances should cause the attendance on any day to fall below one half of the number in average attendance during the previous quarter, permission may be given by the Department to omit that day in calculating the average attendance for that week, provided that the circumstances are at once reported.

115. Registers should be checked and signed, at least four times a year, by a member of the District Board, their Delegate, or Correspondent. Teachers are expected to bring the Registers before the members of District Boards at their visits, and remind them of the importance of this checking:—

(*a.*) Registers may be destroyed after six years. Summaries and Inspection Report Portfolio should be retained.
(*b.*) Registers should be sent to the Department to be checked at the end of each School year.

116. Teachers are required to keep the School Records neatly and accurately. They must also post up the undermentioned documents in a conspicuous place in the schoolroom, viz.:—

The Regulations.
List of books used for secular instruction.
Time Tables (General and Pupil Teachers').
List of Members of the Local District Board.
Authorised Price-list of Books for Sale.
Conscience Clause.

A complete file of the Department's *Circular* must also be kept in the School.

Records of the Teachers' Quarterly and Annual Examinations must be carefully preserved, and the worked papers of each child retained in the School for at least a year.

117. All official communications are to be addressed "Education Department." No name is to be placed on the envelope, but correspondence of a purely local character should be forwarded through the District Board. (*See* Regulation 206.)

118. When it is necessary to treat of more than one subject at a time, a separate letter must be devoted to each subject, but separate envelopes should not be used. The strictest economy must be exercised in the use of stamps. In all correspondence Teachers must use the letter paper supplied by the Department and not the ordinary foolscap. Letters must be written on one side only, and a margin of at least one and a half inches should be left blank. A revision of the rates of postage will appear in the *Circular* from time to time. Stamp returns should be sent in quarterly. All kinds of printed forms sent in to the Department should be sent by packet post in an unsealed envelope.

119. Correspondence from Assistants and Monitors must be forwarded through the Head Teachers, who must initial the letter, and may express their opinion on the subject referred to. Head Teachers are not at liberty to refuse to forward letters from their subordinates.

120. Communications must not be forwarded by telegram except under special circumstances. Telegrams cannot be sent "on service" by Teachers, but if the matter is sufficiently urgent, the expense will be refunded by the Department.

121. All returns should contain only the entries proper to them. They should not contain information requiring to be considered apart from the Returns, nor any request or inquiry needing a reply.

122. When for any reason a child leaves one School to attend another, it shall be the duty of the Head Teacher of the first-named School to supply the Head Teacher of the latter School with a Transfer Note. If the note is not brought by the child when applying for admission at the latter School, the Head Teacher must apply to the Teacher of the first-named School, who must forward it at once. On the day of the annual visit of the Inspector, the Head Teacher must produce a Transfer Note for each child admitted during the year, unless such child has not attended any School receiving State aid within the State. When a child is admitted to a School from another School in the State, and the Teacher, on examination, finds that the child is not able to do the work of the Standard which his transfer note states he has passed, he should forward the worked papers and transfer note to the Department, and ask its advice.

123. Medals and Prizes are given to children for a punctual attendance every half day on which the School has been opened during the year. No exceptions are allowed in the case of the medal. Unpunctuality or absence for more than 15 half days during the year will disqualify for prizes. In the case of a half-time School the limit is reduced to 10 half-days. Lists of children qualified must be sent to the Department with the Registers at the end of each School year. Children who have attended School regularly and punctually for an unbroken period of three years will receive a bronze medal; those who have attended for four years will receive a gold-plated copper medal.

124. The Inspector's Report Portfolio, which contains the results of the Annual Inspection of the School, should be faithfully preserved. The Teacher must not add to, alter, or remove any part of it, nor must he allow any other person to do so.

125. All School Records, Registers, and Documents shall be considered the property of the Minister, and the principal Teacher shall not allow the same to be removed from the School.

126. (1.) As a general rule, all children between seven and eight years of age should be placed in the First Standard, though children below that age *may* be placed in the First Standard if sufficiently advanced.

Exceptions:

(*a.*) Children who have not been on the Roll of any School for more than twelve months.

(*b.*) Children who through bodily or mental weakness are not ready for promotion.

The permission of the Department, *in writing*, must be obtained for all such exceptions.

(2.) The Head Teachers of Boys' or Girls' departments must not admit children below seven years of age.

(3.) The annual promotions from the Infants' Classes to the Standard Classes must be made, at latest, on the first day of the month succeeding the Annual Inspection. Promotions may also be made at other times during the School Year by permission of the Department.

(4.) Children above the age of seven years, who are not sufficiently advanced to be classified in the First Standard, may be admitted into or retained in the Infants' School or Class by the special permission of the Department.

(5.) No child shall be allowed to remain in the Infants' Classes after having attained the age of eight years, or in a Standard Class in an Infant School after having reached nine years.

127. An entry must be made in the Journal at least once a week. Only the Inspectors and the Head Teacher may make entries. Members of District Boards should be requested to write their names in the Visitors' Book, or if they omit to do so, the Teacher should enter them when they visit the School.

128. In the absence of the Head Teacher the Senior Assistant is empowered to make entries in the School Journal.

129. The following are proper subjects of remark, but any occurrence affecting the attendance or efficiency of the School shall be noted:—

(*a.*) Visits of Members of District Boards and others.

(*b.*) Causes of low attendances.

(*c.*) Absence of Teachers.

(*d.*) Insubordination of Junior Teachers.

(*e.*) Results of Test Examinations.

(*f.*) Reasons for departures from the Time Table.

TEACHERS' TIME BOOK.

130. The Teachers' Time Book must contain the names of every member of the School Staff.

131. The entries must be made at the time of arrival or departure, each Teacher making his own entry. The School time is to be regulated by the School clock, for the correctness of which the Head Teacher is responsible.

132. Teachers who leave the School premises during the mid-day recess must enter both the times of departure and arrival.

133. The entries for each week must be separated by a red ink line.

PORTFOLIO.

134. The Portfolio should contain all letters and circulars received from, and a copy of all letters and returns made to, the Department.

135. Stationery, Blank Forms, and the like are not to be kept in the Portfolio.

136. A classified Index to the Contents of the Portfolio must be kept.

137. No document may be taken away or destroyed without the consent of an Inspector.

FREE STOCK.

138. School Books, Apparatus, etc., will be supplied to Schools as may be deemed necessary; these will include Reading Books, Paper, Pens, Ink, Chalk, Pencils for the Scholars' use, and Maps, Diagrams, Pictures, Blackboards, Easels, and any other articles necessary for the School. Children may be allowed to purchase Reading Books and other stock mentioned in this Regulation, but it must be clearly understood that children are not to be compelled to buy these books.

139. The Head Teacher must make a return on the Annual Requisition Form of the amount and condition of the free stock in use in the School. A duplicate must be kept in the Portfolio.

140. Requisitions should be forwarded at the end of each School year, and will not be considered at other times unless they are of extreme urgency, or could not have been included in the Annual Requisition.

141. All Requisitions, unless very urgent or specially ordered by an Inspector, should be sent through District Boards or Correspondents.

142. Such books only as are supplied or sanctioned by the Minister shall be used in any School.

BOOKS, ETC., FOR SALE.

143. Pupils will be required to pay for all books and materials not mentioned in Regulation 133. The authorised price list of books and materials is to be exhibited in each School, and no Teacher is to charge more than is fixed therein.

144. Teachers, on application, will be supplied by the Department with books, etc., for sale. Such books will be forwarded free of cost to the Teacher, who will be charged 10 per cent. less than the price to be paid by the scholars, provided that the account is paid to the Department within one month, or is included for deduction on the salary sheet. Teachers are not permitted to obtain stock for sale, except from the Department. They should also see that parents are not required to purchase too many books at the same time.

145. Requisitions for books, etc., for sale can only be made monthly.

146. The accommodation of schools is calculated on the basis of 11 square feet per child. When the average attendance of any school passes the accommodation, the teachers should report the matter to the Department. Children should not be refused admission until the Department has sanctioned this course.

SCHOOL HOLIDAYS.

147. The vacations sanctioned by the Minister are:—Five weeks at Christmas, Good Friday and Easter week, and one week from the last Monday in August. The holidays allowed other than these, are—Australian Anniversary, January 26th; Anniversary of the Colony, June 1st; Proclamation Day, October 21st; and King's Birthday, November 9th. When any of these dates fall upon any day other than a Monday, the holiday shall be kept on the Friday or Monday following. The day chosen must be notified to the Department.

148. The Minister may change the dates fixed for any vacation, if it shall appear that the alteration will be for the convenience of the people in any neighbourhood.

149. No School is to be closed upon any School-day, without the written authority of the Department, except under Regulations 216 and 233. An Inspector may grant a holiday, not exceeding one day, within a fortnight after

the Annual Inspection. Instructions even from medical officers must be received through the Department. Medical officers who think schools should be closed will communicate with the Department, but Teachers must obtain authority from the Inspector General before closing.

SCHOOL PREMISES.

150. The Head Teacher will arrange for the regular cleaning of the Schoolrooms, will see that the closets and all external premises are kept clean, and that the fences and gates are uninjured by the Pupils. He will report promptly to the District Board and Department any damage done to the School Buildings or Furniture, as also any necessity for emptying the closets. If the water for the use of the pupils should become bad, the District Board and Department should be informed thereof, and care is to be taken to prevent any persons, other than the Pupils or Teachers, from obtaining water from the School tanks or wells. Teachers should see that ashes or earth are provided in the closets for use by the children.

151. An allowance for the cleaning of Schoolrooms, etc., will be made to the Head Teachers of Schools as under:—

(*a.*) S.P.D. Schools, £2 per annum (or 3s. 4d. per month).

(*b.*) Provisional, £3 per annum (or 5s. per month).

(*c.*) Schools with average of 21-35, £4 per annum (or 6s. 8d. per month).

(*d.*) Schools with average of 36-55, £6 per annum (or 10s. per month).

(*e.*) Schools with average of 56-75, £8 per annum (or 13s. 4d. per month).

(*f.*) In schools of over 75 average attendance, an allowance at the rate of 2s. per room per week may be granted. Closets to be counted as one room.

(*g.*) All Goldfields schools (irrespective of attendance) may be paid at the rate of 3s. per room per week.

2. In consideration of this allowance, the Head Teacher will be required:—

(*a.*) To have the premises, including outbuildings, swept and dusted daily, and washed with sufficient frequency to keep them thoroughly clean.

(*b.*) To find soap for the lavatory and provide for the washing of the towels.

(*c.*) To lay all fires necessary, ready to be lighted, from May 1st to October 1st.

3. The average attendance for the half-year ended 31st December will fix the allowance for the succeeding year.

152. The Head Teacher is responsible for the safe custody of the School buildings and furniture. He must see that the tanks are clean, taps, etc., in order, windows fastened, and doors locked at night. In winter it is necessary that he should see to the safety of the buildings from fire. He should also see that gutters, drains, etc., are not choked. If window panes are broken the Head Teacher will make every endeavour to discover the culprit, and the parent of the child must pay for replacing the broken pane.

Teachers are expected to keep their quarters in ordinary repair. Broken hinges, window panes, fasteners, etc., must be replaced by the Teacher. Teachers arriving at the School and finding deficiencies of this character left by their predecessors should at once report to the Department.

Teachers not residing in quarters at the Schools must furnish the Department with their full private address.

SCHOOL INSTRUCTION.

153. The Programme of Secular Instruction shall be as specified in Schedules I. to IV., and as defined in the Amendment Act, 1893, Clause 20. Such "secular instruction shall be held to include general religious teaching as distinguished from dogmatic or polemical theology."

154. When any parent or guardian objects to a pupil receiving the general religious instruction prescribed in the Programme, notification to this effect shall be made to the Teacher in writing, who will report to the Department the arrangements made for the instruction of the child in other subjects during the time of religious teaching.

155. No pupil is to be required to receive Special Religious Instruction (Amendment Act, 1893, Clause 18), if the parent or guardian of such pupil objects in writing to such religious instruction being given.

The Teacher must report such cases to the Department on the Annual Form. In small schools where there is only one room, religious teachers of different persuasions must give instruction at different times. Arrangements must also be made for the instruction of children of other denominations in secular subjects.

In schools of more than one room, the delegates of different denominations can teach the children of their denomination at the same time in different rooms.

When the same representative is duly delegated to act for various denominations, each denomination should be considered as a separate class, and so noted in the record of attendances.

156. A Return must be sent to the Department at the end of each year, showing the attendance of the special Religious Teachers, the hours of Instruction, together with the number of children in attendance, and of those withdrawn under the Act because of objections on the part of their parents. No person may be allowed to give special instruction unless the Teacher has received official information in the *Circular* or by letter that he is the duly authorised delegate of that denomination. The Return must comprise—

(*a.*) The Religious Denominations giving Special Religious Instruction.

(*b.*) The time at which such instruction is given.

(*c.*) The names of clergymen or representatives of each denomination.

(*d.*) The total number of visits paid on behalf of each denomination.

(*e.*) The total attendances made at such visits and the average attendance per visit.

(*f.*) The number of children withdrawn from Special Religious Instruction in accordance with parents' written wish.

(*g.*) The number of children withdrawn from the General Religious Instruction, referred to in Regulation 154, in accordance with parents' written wish.

157. The Teacher must ascertain from the parents or guardians of the pupils attending his School the religious denomination to which they belong. (*See* Regulation 105.) If a parent notifies in writing that he wishes his child to attend the instruction given by the delegate of a denomination other than that which appears in the Register, the Teacher must retain the parent's letter as his authority for permitting such an attendance.

158. The Teacher, in every school under the superintendence of the Minister, shall see that the religious books used in the classes for special religious instruction are confined to the time and place of such instruction, and not left in the way of children whose parents may object to them.

159. Visitors shall have access to every School maintained or aided by the Minister during the hours of secular instruction—not to take part in the business nor to interrupt it, but simply to observe how it is conducted. If, however, their presence is subversive of the discipline of the School, the Teacher may request them to withdraw, but should report any such cases to the Department.

160. Teachers must prepare a Time Table, which must be signed by an Inspector, for the general work of the School. Each subordinate Teacher must also possess a copy of the Time Table of the class or classes for which he is responsible. Both the General and Class Time Tables must be hung on the School walls.

161. The Time Table must, as far as possible, be strictly adhered to. Any departure from it must be entered at once in the School Journal. If possible, the Forms supplied by the Department must be used.

162. Preparation of Materials for teaching and of Needlework Exercises, Compilation of Returns, Making-up of Registers, and the like, must not be done during the hours mentioned in the Time Table.

163. Where school concerts are held, Teachers must forward to the Department, for printing in the *Circular*, a balance sheet showing the receipts and expenditure of the concert or entertainment, and also the expenditure of the balance.

164. If School Banks are started by the Teachers, the form of book-keeping and the arrangements for auditing the books must be submitted to the Department for approval.

165. No Home Lessons are to be given to children attending Infants' Classes. The giving of Home Lessons to the Standard children is left to the discretion of the Teacher, but Home Lessons should not take more than half an hour to complete in Standards I. to III. inclusive, nor more than an hour in Standards IV. to VII.

166. The Head Teacher of any school should divide the work of each class as prescribed in the Programme into monthly parts. He should hold at least one examination per month on the work thus allotted. Both the division of the work and the results of the Monthly Test Examinations should be preserved and shown to the Inspector. It is not necessary that he should examine every child in every subject each month, but a sufficient examination must be held to enable him to thoroughly test the progress of the class, and to report the same, if asked, to the District Inspector.

ANNUAL INSPECTION.

167. A Government School shall, as a general rule, be visited at least twice in each year by an Inspector. One visit, hereinafter called the "Annual Visit," shall take place as nearly as possible in the same month in each year.

168. Before the Inspector's Annual Visit the Head Teacher shall hold an examination of all the children on the School Roll in all the subjects as prescribed in Schedules I., II., and III. for the several standards. The result of this examination shall be recorded in the Teacher's Quarterly Examination Book. These Examinations must be completed in every detail before the date of the Inspector's Annual Visit.

169. In addition to this Final Examination, Periodical Examinations shall be held by the Head Teacher in order to test the progress of each class and of each scholar. In these examinations the subjects of Scripture, Geography, English, History, Object Lessons, Drill, Music, and Manual Training may be considered as Class or Collective Subjects, and progress in them marked by the terms, Excellent, Good, etc. The results of the examinations held three, six, and nine months respectively, from the beginning of the School Year, shall be entered in the Teacher's Quarterly Examination Book. The results of other periodic examinations, if any, shall be recorded elsewhere. Whenever a child is promoted, the fact should be recorded in the column set apart for that purpose in the Quarterly Examination Book.

Under Manual Training should be included Needlework for girls, Kindergarten for infants and younger children, Clay-modelling, and any other kindred subjects previously approved of by the Department.

170. At the annual visit of the Inspector, the Head Teacher shall prepare for him—

(*a.*) On form "Stat. A5" full information as required.

(*b.*) Material for Needlework Exercises in accordance with Needlework Requirements in Schedule I.

(*c.*) List of Classes grouped for any subject as approved by the Department.

171. The Quarterly Examination Book shall be initialled by the Inspector, unless he sees fit to exercise the right referred to in Regulation 172 of holding an individual examination, in which case the teacher shall draw up a list of all the children in the various standards, and the Inspector shall record the results of the examination of each child. These results he may direct to be substituted for those obtained by the Head Teacher. The initials of the Inspector in the Quarterly Examination Book simply imply that he has seen and examined the book and does not consider it necessary to substitute the results of his own examination for the results shown therein.

172. In order to satisfy himself of the general efficiency of the instruction given in the school, the Inspector shall examine a due proportion of the pupils in each standard in such subjects as he shall choose. He may, if he think fit, examine all the pupils of the school, or of any standard, to ascertain their individual progress, and he may at his discretion direct that the results of such examination shall be substituted for the results shown in the Quarterly Examination Book.

173. The Head Teacher shall be held responsible for the promotion of his pupils. Such promotions will of necessity be most numerous after the final examination held just previous to the Annual Visit of the Inspector, but they may be made at any time during the year, whenever the Head Teacher considers that the interests of the child call for such promotion.

174. Children, as a rule, will be expected to advance at least one standard per year, but the Head Teacher shall have full discretion to classify his pupils in different classes for different subjects, according to their ability and proficiency in the several subjects. Each pupil, however, should be placed in the same class for the following subjects:—Reading, spelling, writing, and composition. If children are retained in the same standard for more than one year owing to sickness, mental or physical weakness, or other causes, the Inspector's attention should be drawn to such children.

175. In all standards and subjects a "good" pass should be marked by a cross (x), and a "bare" pass by a stroke (/), and a failure by a cypher (0). In calculating the percentage two marks shall be allowed for a "good" pass, and one mark for a "bare" pass.

176. The Head Teacher or Inspector may at any time examine the scholars in the work of any lower standard than that in which they are taught. In all subjects intelligent answers, even though somewhat incorrect, should be counted more valuable than mere verbal accuracy.

177. In making his report the Inspector will take into account—

(*a.*) The intelligence of the Methods of Instruction.

(*b.*) The fitness of the classification, according to the age and capability of the scholar.

(*c.*) The behaviour of the children while under examination, and the general tone pervading the school.

(*d.*) The neatness and accuracy of the School Registers.

(*e.*) The neatness and cleanliness of the schoolroom and all appliances, also of the playground and out-buildings.

(*f.*) The preparation and observation of the Time Table.

178. Any Teacher who may have reason to complain of the manner in which an inspection has been conducted by an Inspector must report the circumstances to the Minister within 48 hours of the conclusion thereof.

179. The Head Teacher may, with the approval of an Inspector, group two or more classes for instruction in any subject, except Arithmetic. The approval of the Inspector to such grouping must be in writing. Care must be taken in arranging such grouping, to see that no child omits any part of the curriculum in any subject.

180. Immediately after the annual visit of the Inspector, the Head Teacher shall issue a certificate to each pupil who has passed in Reading, Writing, Spelling, Arithmetic, and Drawing. In cases where the Inspector, at the annual inspection, reports that the Teacher's examination has not been up to the required standard, the Inspector shall decide as to which scholars shall receive certificates.

181. The Inspector may require from the Head Teacher a written explanation as to the reasons why any child, who is considerably above the average age of the class in which he is placed, is retained in such standard.

182. The average age of the children in each standard must be entered in the Teacher's Examination Book at the beginning of each quarter.

183. The classification of new scholars who have received their education in other States or countries should be made with due discretion. The Head Teacher should take into account the attainments of such children, but due regard should also be paid to their general intelligence and aptitude. Scholars transferred from one School in this State to another must not be placed in a lower class without the special permission of the Department in writing.

DUTIES OF INSPECTORS OF SCHOOLS.

184. Inspectors of Schools shall, subject to the approval of the Minister, do all that is necessary for the enforcement of these Regulations.

185. The duties of an Inspector are to visit and inspect all Government Schools, and to forward, within six days of the inspection, a Report of each School to the Department.

186. A summary of each of these reports will be forwarded by the Department to the Secretary of the District Board.

187. A more detailed report of each inspection will be forwarded by the Department to the Teacher.

188. The Inspectors are authorised to determine all questions of School management, and to take the teaching of a class, or of a school, into their own hands for a time, to show the Teachers how defective methods may be improved. They are to examine into the condition of Schools, and to inquire into all matters which it may be expedient to report to the Minister.

189. Teachers will remember that Inspectors are their superior officers, and as such will treat them with respect and courtesy; and Inspectors, in their intercourse with Teachers, will be guided by a feeling of respect for their office and sympathy with their labours. Errors are to be pointed out as kindly as possible, and not in the hearing of the pupils.

190. Every School is to be visited at least twice in each year, unless distance or some unavoidable cause shall make two visits impracticable.

191. Of the Inspector's two visits, one should be fixed about the time of the end of the School Year, and notice should be given to the Teacher and District Board at least seven days before his visit. Other visits without notice may be paid during the year.

192. The Inspector will, as much as possible, leave the management of the School or class in the hands of the Teacher. He may re-arrange or direct the work at his discretion.

193. When a School is visited the Inspector will enter the time of his arrival and departure in the School Journal.

194. The Inspectors shall, at the end of each year, forward to the Minister, through the Inspector General, a report on the efficiency of the Schools inspected by them; and the Inspector General shall forward to the Minister a general report on all Schools receiving State aid.

195. The Governor may from time to time appoint any person temporarily to perform the duties of an Inspector of Schools at such remuneration as he may deem fit, and the person so appointed shall have all the powers of an Inspector under these Regulations.

SCHOOLS CERTIFIED TO RECEIVE BOYS OR GIRLS COMMITTED UNDER "THE INDUSTRIAL SCHOOLS ACT, 1874" (38 VICTORIA, NO. 11), "THE INDUSTRIAL AND REFORMATORY SCHOOLS ACT OF 1893" (56 VICTORIA, NO. 5), AND "THE PUBLIC EDUCATION ACT, 1899" (63 VICTORIA, NO. 3).

196. The Secular instruction shall consist of Reading, Writing, Spelling, Arithmetic, Drawing, and, as far as possible, the elements of English, Geography, History, and Vocal Music. It shall be given for not less than three hours daily.

If under the special circumstances Industrial training cannot be carried out, the children shall receive Elementary Education for not less than five hours daily.

197. The children shall be examined in accordance with Schedule I. The examination shall be individual in Reading, Writing (including Spelling and Composition) and Arithmetic, and collective in other subjects.

The Schoolmaster shall prepare, for the approval of the Education Department, a Time Table for School work; he shall also keep a register of School attendance, and a School Journal. He shall carefully enter all School punishments in a book to be kept for that purpose. He shall also prepare for the use of the Inspector of the Education Department, immediately prior to the School examination, a list of all children resident in the institution, giving their ages, date of admission, and, where possible or necessary, the standard they have previously passed.

DUTIES OF DISTRICT BOARDS.

198. The Minister reserves to himself the ultimate control and management of Schools; but he will avail himself of the assistance of District Boards in this and other matters.

199. Every District Board, at its first meeting, shall elect from the members a Chairman, a Secretary, and any other honorary officers which the Board may deem expedient. The duty of the Secretary will be to correspond with the Minister on behalf of the Board.

200. A meeting of the District Board shall be held at least once in three (3) months, and the Minister shall be advised of the time and place fixed for the regular meetings. Three members shall form a quorum.

201. Members of a Board who are absent from two-thirds of the meetings, or have failed to pay three visits to a School within the District during a whole year, cease to be members.

202. A District Board may, by resolution passed at a duly constituted meeting thereof, appoint any member or members to perform the duties prescribed by the 16th Clause of "The Elementary Education Act, 1871," of visiting any of the Schools under the supervision of the Board; and it shall be the duty of the member or members so appointed to report the results to the Board, who will, if necessary, report to the Minister. In the case of an isolated School, distant from the residence of any member of the Board, the Board may appoint one or more persons, not being members, to act on their behalf, subject always to the approval of the Minister.

203. Each School should have a Member of the Board or other delegate specially attached to it.

204. When an application has been received for the establishment of a School, it shall be referred to the District Board for their consideration and report; and when a new School is to be built, the District Board shall, when required, select a site for the approval of the Minister.

205. The duty of Members of District Boards is to foster the Schools under their care by every means in their power; to see that the rules laid down for the guidance of Teachers are adhered to; to smooth down the difficulties of

Teachers by constant encouragement and sympathy; to have at heart the mental, moral, and physical welfare of the scholars, and to see that they are brought up in habits of punctuality, of good manners and language, of cleanliness and neatness; and also that the Teachers impress upon the children the importance of cheerful obedience to duty, of consideration and respect for others, and of honour and truthfulness in word and act. They will generally supervise the Schools, but it is no part of their duties to interfere with the curriculum of instruction, or with the Teacher's authority in the School, as long as he carries out the Regulations. It is desirable that a member of the District Board should meet the Inspector on the occasion of his fixed Annual Visit to the School, and discuss with him and the Teacher any matters that may have arisen during the year in connection with the School. Members are asked to check the registers and sign them at least four times a year (*see* Regulation 115). They should make themselves acquainted with the rules for registration (*see* Regulations 98 and 99), and their signatures will be supposed to show that the times of closing the rolls have been properly observed by the Teacher.

206. The following correspondence from the Teachers to the Department must come through the District Board Chairman or Honorary Secretary, who must forward it, if urgent, immediately, with any remarks he may have to make, without waiting for a meeting:—

The Annual Requisitions:

Correspondence relating to—

(1.) Damage to School property or any repairs necessary;

(2.) Any defects in sanitation concerning any part of the premises;

Applications for the use of School buildings;

Any closings of the School;

Notifications that a Teacher has commenced or returned to duty;

Complaints of parents;

Other matters with which the Board should, in the Teacher's opinion, be acquainted.

All communications should be addressed "The Education Department, Perth," and should not have any name or official title of any person in the Department.

207. The District Boards are specially charged with the duty of seeing that the School Buildings are kept in proper repair.

208. Urgent repairs, calling for immediate action, may be carried out by the District Board without previously submitting tenders for the same, but the Minister's permission to proceed must be first obtained by telegram or letter.

209. From time to time the District Board may send in a report to the Minister, showing the repairs, alterations, or additions required at each School, with an estimate of the cost.

210. No member of a District Board may be directly or indirectly interested in any work submitted by the Board for the approval of the Minister.

211. District Boards are empowered to investigate any complaints that may be made to them as to the conduct of Teachers and their relations to the parents. They are, however, expected to protect the Teachers from frivolous and vexatious complaints. They must report to the Minister the result of their investigations.

212. Should any Teacher be found by the Board to have infringed the Regulations, the circumstances are to be immediately reported to the Minister.

213. A District Board may suspend a Teacher for the following reasons:—

Intemperance, immoral conduct, gross neglect of duty, or continued absence from duty without leave.

Such suspension of a Teacher shall be at once reported to the Minister, who shall then direct an inquiry to be held.

214. District Boards are expected to use every endeavour to induce parents to send their children regularly to school before proceedings are taken against the parents under the Compulsory Clauses of the Act.

215. Compulsory Officers shall act under the direction of the Department, but may, at the request of the District Board, report to them all cases recommended for prosecution, so that they may, if they wish, advise the Department. Any suggestions must be sent in promptly.

216. The Chairman of the District Board is empowered to grant not more than two days' holiday in each year. These holidays are not to be granted for the personal convenience of teachers, and the permission must be given in writing on the prescribed form. They should, as a rule, be given for the most important local *fête* or show in the year, when the majority of the children would be likely to be absent. They must not be given at the beginning or end of the term to supplement the regular holidays. District Boards should use their influence to see that Sunday School picnics or minor *fêtes* take place in the holidays or on Saturdays.

217. In recommending the time for special religious instruction, the District Board should take care that the daily routine of the School, as laid down in the Regulations, is not unduly interfered with.

218. Members of District Boards, when visiting, are invited to enter in the Visitors' Book their names and any remarks they may wish to make.

219. Applications for the use of the School Buildings, for other than School purposes, should be made to the District Board (or Warden or Resident Magistrate where Boards are not established), and by them remitted, with their remarks, to the Minister for his consideration.

220. Applicants must make satisfactory arrangements for lighting and cleaning the room or rooms, and for putting the School furniture in proper order without expense or trouble to the Teacher.

221. The minimum charge for the periodical use of a building on Sundays for services or Sunday School will be 10s. per calendar quarter or part of quarter, payable in advance. Should a Sunday tenant rent the School for week nights also, for purposes connected with their services, the charge will be 2s. per meeting. Other periodical uses may be granted on week nights, for purposes approved by the Minister, who shall fix the fee to be paid in each case. In default of payment in advance, permission to use the building will be withdrawn.

222. Teachers are not entitled to accept the services of any lecturer, entertainer, or other outside person, even after school hours, without first obtaining the authority of the Department for his entrance to the school.

223. The charge for the occasional use of a School Building shall be not less than 5s., paid in advance. The same provision as to the cleaning, etc., of the schoolrooms, mentioned in Regulation 220, shall also be complied with.

Note.—The payments due under Regulations 221 and 223 must be paid to the Teacher before the key is handed over, who must immediately remit the same to the Minister. The Teacher will be held responsible in case of failure in payment.

224. District Boards shall also perform the following duties:—

(*a.*) See that the School buildings and premises are protected from damage and trespass.

(*b.*) Take precautions for excluding from the School, during the ordinary business, all books not sanctioned by the Minister.

(*c.*) Inspect without notice, at least once a quarter, the School Registers and Records. They should check and initial or sign them.

(*d.*) See that the School is open on all the usual school-days, and that the Teacher is present at his work.

(*e.*) Forward to the Minister a Half-yearly Return (30th June and 31st December), showing the times and places, when and where the meetings of the District Board have been held, and the number of attendances made by each member of the Board.

COMPULSION.

225. If a parent or guardian of any child of compulsory age under "The Public Education Act, 1899," Section 7, Subsection 1, pleads that "the child is under efficient instruction at home or elsewhere," such child may be examined by an Inspector, who shall, if the Compulsory Standard be satisfactorily passed, grant a Certificate of Exemption.

Schools will not be declared efficient, or published on the list of Efficient Schools, which have less than eight pupils in attendance. Persons instructing a less number of children can be reported upon in order that the Minister may decide that the instruction is such that it may be deemed a reasonable excuse for exemption from School.

226. A continuous attendance of two full hours' secular instruction is reckoned as half a day's attendance.

227. Children must attend School between the ages of six and 14. Teachers are expected to inform the Compulsory Officer or local authority of any children within their area who are not attending School. This area comprises all children over nine years of age, within a distance of three miles by the nearest road. This distance is reduced to two miles for those less than nine years old. The Department has no objection if the parents wish their children to be instructed when they are between the ages of three and six, to have them placed on the roll and taught in the ordinary way. No child under three can be admitted. Where there is no separate Infants' School it would not be desirable to admit children below the age of four years. Children over 14, but below 16, might remain in the School if of good behaviour, and unless their influence on the younger children is likely to be bad. Children over 16 can only remain in the School on payment of a fee of sixpence per week, which should be retained by the Teacher, but accounted for to the Department.

228. A supply of absentee notes is furnished to all schools on application. These should be regularly used in cases of absence without notification.

In districts where the police act as compulsory officers the fortnightly absentee return should be regularly sent to the local officer. If the form has not been received back by the teacher within 14 days, inquiry should be promptly made. On receipt of the form from the police, duly filled in, this should be carefully examined, noted, and forwarded to the Department, together with any remarks necessary.

Teachers should frequently revise the addresses of the parents. In town care should be taken to ascertain the number of the house where possible.

Names are to be withdrawn from the roll when the children have left the district and gone to another school, when they have been exempted from school attendance by reason of their age, or when they have left the State. In the case of children residing beyond the compulsory radius of the school, who do not attend for over a quarter, their names should be omitted from the roll.

229. Sickness or other unavoidable causes may be taken as a reasonable excuse for absence, if the parent has given the Teacher written notice within seven days. In the case of the absence of a child for four half-days in a week, not so excused or exempt from School, the Teacher must, on every alternate Friday, notify the fact to the Compulsory Officer of the District or other local authority charged with carrying out the compulsory clauses of the Act. When sending the names of children to the Compulsory Officers Teachers must be careful to verify the addresses of the children. They should from time to time check the addresses of all the children in the School as far as possible.

230. Teachers should keep written excuses in a file for reference if necessary. Teachers must also furnish lists of all children who leave their schools, and the names of all those admitted, with the name of the School previously attended, if in the State. In the case of sickness, the Minister may require a medical certificate at his discretion.

HEALTH REGULATIONS.

231. In order to maintain the sanitary condition of the school, Teachers must see—

(*a.*) That the whole premises are properly ventilated, both during school hours and after the children have left.

(*b.*) That any bad smells arising from closets, lavatories, etc., are reported at once to the Department.

(*c.*) That the disinfectant supplied by the Department is used upon any urinals, closets, etc., where it is necessary.

INFECTIOUS DISEASES.

232. Children who present themselves in a dirty condition are to be required to wash at once, and, if necessary, must be sent home for the purpose.

Any child showing symptoms of an infectious disease, or coming from a house where an infectious disease exists, must be sent home at once, and the Department should be informed, through the District Board, of the case, in order that inquiries may at once be made with a view to proper steps being taken to prevent the carriage of infection to the other scholars of the school.

Under Section 114 of "The Health Act, 1898" (62 Vict., 24), it is provided that teachers should notify to the Central Board and the Local Board of Health any such case of infectious disease; and the parent or guardian of the child, and owner or occupier of the house, are required also to notify the teacher of the school of the occurrence of such disease in any house or building in which any child attending any school resides.

Medical practitioners are required to report infectious diseases to the Local Board of Health. The infectious diseases which have to be so reported are:—Small-pox, Asiatic Cholera, Plague (including Bubonic Plague), Yellow Fever, Typhus Fever, Scarlet Fever (or Scarlatina), Typhoid Fever (Enteric Fever), Diphtheria, Diphtheric Croup, Leprosy. In the case of Typhoid it has been decided by the Central Board of Health that there is no danger in children from the patient's house attending school.

There are, however, other diseases which are infectious, such as Mumps, Measles, Chicken-pox, Whooping-cough, Blight, and Ringworm, for which there is no statutory requirement as to notification by the medical officer. Teachers must, however, notify these to the Department, through the District Board, and exclude the children in the same way as for the other more serious diseases.

Before allowing children excluded because of infectious diseases to return to school, the teacher should have obtained from the Medical Officer of Health, or a legally qualified medical practitioner, a certificate that, in his opinion, the child may be permitted to resume attendance without danger to the other scholars. The usual terms for exclusion are:—

In cases of Mumps or Measles, one month.
" " " Chicken-pox, two weeks.
" " " Whooping-cough, while the cough continues.

Children coming from homes where measles, mumps, chicken-pox, and whooping-cough exist, but who are not themselves suffering from these diseases, need be excluded for not more than fourteen days.

Any child suffering from ringworm should be excluded from school, and before he or she is re-admitted a medical certificate should be produced stating that the child is cured; but wherever such a certificate is not readily procurable, the teacher should exercise his, or her, discretion in re-admitting the child.

Symptoms of Infectious Diseases.

Most of these maladies are attended by the appearance of a rash upon the skin, but this eruption does not at once show itself. The child may ail for a day or two first, and the rash not make its appearance until later. But even before the rash shows itself, there are usually certain symptoms present which should give rise to suspicion on the part of the teacher, and these indicate the need for watchfulness over the child.

Thus, a child sickening for an infectious disease usually complains of headache or of sore throat, and often the first symptom perceptible is a shivering fit and occasional sickness.

The more definite symptoms belonging to each disease will now be described, but it must be recollected that *all* these symptoms are not always present at the same time, or even at all. The teacher, however, will be acting wisely in allowing a child who is obviously ill to go home at once.

The more common symptoms of the diseases to which attention should be directed are:—

Scarlet Fever or Scarlatina.—The child feels ill, shivers, has a sore throat, which is followed, usually about twenty-four hours from the beginning of the illness, by the appearance of a scarlet rash on the chest, which often extends over other parts of the body, and the limbs. The tongue is often furred, and the papillæ are large and red ("strawberry tongue"), the throat is red, and the rash may consist of a uniform blush, or of a number of fine red spots. At a later date the skin peels, and the child cannot be regarded as free from infection until this process is fully completed.

Diphtheria.—This affection often comes on less suddenly and severely than scarlet fever. There is no eruption, but one or more white patches appear on the back of the throat, on the soft palate, or on the tonsils.

Measles.—This disease makes its appearance in the same manner as a severe cold, the child becoming ill and shivering, sneezing, and having a running from the eyes and nose, and sometimes a sore throat. An eruption appears later, usually after the child has been ill three days. It consists of a number of raised red spots, first upon the face, then the chest, and often upon other parts of the body, and the limbs, usually arranged in a crescentic form. The symptoms of German Measles, however, are somewhat different, and there is an absence of the indications of a severe cold.

Small-pox.—This illness usually begins with shivering, vomiting, headache, pains in the limbs, and particularly in the back. After the child has been ill two days, a pimply eruption appears upon the face, chest, wrists, and often upon other parts of the body. A little later the pimples become watery, and have a depression in their centre; later still the eruptions become mattery, and a scab forms on each pimple. In mild cases there may be only a few points of eruption present. The child is not free from infection until all the scabs have been shed.

Chicken-pox.—The child is ill for a few hours, usually 24, and a number of glistening watery pimples appear in successive crops on the face, chest, and often on other parts of the body, and the limbs. The whole of the eruption does not come out at once, but it usually appears in successive crops. The eruption scabs over in a day or two, and the child is not free from infection until all the scabs have fallen.

Whooping-cough.—The child has a severe cough, which comes on in paroxysms, and it coughs until it is out of breath. After some days' illness the crowing noise or "whoop," which is characteristic of this disease, is heard; this sound being produced by the child drawing in its breath at the end of a paroxysm of coughing.

Mumps.—The child becomes ill and feverish, and at the end of a few days complains of aching of the jaw. A swelling then appears on the side of the face, lasting for more than a week.

Diarrhœal Affections.—These cases should be very carefully watched, especially as typhoid fever often begins in this way. If children suffer from this ailment in the school, the attention of the school cleaner should be particularly called to his work of cleansing the E.C's.

233. In the case of an infectious disease occurring in the house in which a teacher is living, he or she must at once cease attending school, and report to the Department, so that it may be decided what steps should be taken to save the school from possible danger. The teacher should also report to the Local Board of Health.

The teacher must make arrangements to obtain a medical certificate that there is no danger to the school from his continued attendance. It will probably be necessary that either the patient should be removed to the hospital and the house disinfected, or that the teacher should seek lodgings or live with friends during the continuance of infection. Unless this is done, pay cannot be given.

234. If the temperature by the school thermometer exceeds 105 degrees Fahrenheit in any school or classroom, and cannot be reduced by the teacher, he should apply, where possible, to the nearest delegate or member of the District Board of Education or Committee of School Management, or, failing them, to the Warden or Resident Magistrate or a doctor for permission to close the school. Failing any of the persons mentioned above giving permission, the teacher may close the school on his own responsibility, but in any case the matter must be reported to the Department.

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63 VIC., 3

SCHEDULE.

Section 15. PUBLIC EDUCATION ACT, 1899.

Return of Children below the Age of Fourteen Years.

No.	Name of each child in full.	Sex.	Age.	Where under instruction, showing whether at home, or at private or other schools.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

I, , of , certify the above to be a true return concerning all children below the age of fourteen years now residing in this dwelling house.

Dated the day of , 1 .

(Signature or mark, with witness thereof, of person certifying.)

To , residing at

TAKE NOTICE that this return will be called for on or after the day of , 1 , and that any householder neglecting to fill it up by that day, and return it when called for, or wilfully filling it up with an untrue statement, or giving false information to the person leaving the same, is liable, on conviction, to a penalty not exceeding Five pounds, or, in default, to one month's imprisonment.

SUBJECTS OF INSTRUCTION.

SCHEDULE I.

SCRIPTURE AND MORAL LESSONS.

Teachers are expected to give the children a general knowledge of the narrative of the Bible and of the moral teaching contained in it. Lessons are to be given orally by the teachers. They are to impress upon the children the value of the Scriptures as a basis of moral instruction, as the oldest historical record, and also as the finest collection of literature in the language. The revised version may be used as being the nearest translation to the original, but any version which they may possess may be used by the teachers. They must confine themselves to the narrative and moral teaching, and must strictly refrain from inculcating any particular denominational views. Moral lessons must also be given in truthfulness, honesty, cleanliness, perseverance, reverence, modesty, and courtesy; on temperance, and the use of alcohol, etc.

The upper classes should receive instruction in the ordinary duties of a citizen. A record of each lesson must be kept and shown to the Inspector.

INFANTS.—Lessons on the children of the Bible.

STANDARD I.—Learn the Lord's Prayer: simple stories from the Book of Genesis: leading facts in the life of Our Lord told in simple language.

STANDARD II.—Learn St. Matthew V., verses 1–12: lessons from the life of Moses: simple lessons from the life of Our Lord.

STANDARD III.—Learn the Ten Commandments: lessons from the lives of Samuel and David, together with the story of Ruth: fuller account of the life of Our Lord, with lessons from the following parables:—"The Talents," "The Good Samaritan," "The Lost Sheep," "The Lost Piece of Money," "The Prodigal Son," "The Pharisee and the Publican."

STANDARD IV.—Learn Psalm XXIII., and St. Matthew XXII., verses 35–40: lessons from the Pentateuch, with special reference to the lives of Abraham, Isaac, Jacob, Joseph, and Moses, with the practical lessons to be derived therefrom, together with the teaching of the Law of Moses with reference to the "Poor," "Stranger," "Fatherless," "Widow," "Parents," and "Children." Lessons from the Gospel according to St. Luke.

STANDARD V.—Learn I. Corinthians, Chapter XIII., and Psalm XCI.: lessons from the books of Joshua and Judges: study of the Acts of the Apostles, I–XII.: John I.: James V.

STANDARD VI.—Learn Psalms CXXI. and CXXII.: lessons on the life and times of Samuel: study of the Acts of the Apostles, XIII–XXVIII.: Peter i., ii.: Philemon.

STANDARD VII.—Learn Psalm XC. and Hebrews I.: lessons from the Books of Kings and Chronicles: lessons from the Epistles: Philippians.

ARITHMETIC.

GENERAL PRINCIPLES.

1. In the earlier stages all numbers are to be learned and all processes explained by the actual observation and handling of suitable objects; and in all stages every process is to be thoroughly understood by the pupil. Simple apparatus and diagrams—coins, weights, and measures—must be provided.

2. Mental exercises are in all cases to precede written, and concrete quantities are to precede abstract.

3. The processes used in written arithmetic are not always suitable for mental calculation, and therefore should not be followed in working sums in the head. Speaking generally, mental calculation works from the higher constituent part to the lower, while in written work we begin with the last part thought about (the units). There are, of course, exceptions to the latter—*e.g., see* "Division."

4. Problems and applied questions should have reference to daily life and experience.

Teachers will find the course fully treated in the various parts of the "Adelaide Teachers' Manual of Arithmetic" and in Sonnenschein and Nesbitt's "New Science and Art Arithmetic," Part III.

INFANTS.

Though there are three classes of infants, the stages in Arithmetic are not divided by the Department, but are left to the discretion of the Teacher.

The numbers from 1 to 12.—To understand and make calculations with these. To write figures from 0 to 9. Counting forwards and backwards by intervals of 1, 2, and 3 up to 12. Addition, Subtraction, Multiplication, and Division to be taught, but no number higher than 12 to be employed in the questions or required in the answers. Easy problems on common objects or on the Tables specified.

Tables.—Money—12d. = 1s. 2 sixpences = 1s. 4 threepences = 1s. 2 halfpennies = 1d. 4 farthings = 1d.

Time—7 days = 1 week, and to learn the names of the days in order.

Length—12 inches = 1 foot. 3 feet = 1 yard. Children in this class may learn to count forwards to 100.

STANDARD I.

The numbers from 1 to 100.—The division of the hundred into tens as well as the composition of every number up to 100. Thus 45 should be analysed into 4 tens and 5 ones. Objects, diagrams, or number pictures to be used at first. Written arithmetic begins in Standard I.

The four simple operations, no number higher than 100 to be employed in the questions or required in the answers. Constant practice in the various combinations under twenty. Exact tens should be added, subtracted, etc., orally. Subtraction explained by the use of the notation box. Counting forwards and backward by intervals of 2, 3, 4, 5, and 10.

Multiplication and Division Tables to 100. The meaning of $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ by concrete examples. Oral addition of money under 1s. Shillings up to 40 to be expressed as pounds and shillings, and pence up to 40 as shillings and pence.

Easy problems in following tables to be taught concretely where possible:—

Tables.—Money—20s. = £. 10s. = $\frac{1}{2}$ a pound. 5s. = $\frac{1}{4}$ of a pound. Pence table to 40d.

Time—24 hours = 1 day. Twelve months (with names) = 1 year.

Length—22 yds. = 1 chain. 66 ft. = 1 chain. 6 ft. = 1 fathom.

STANDARD II.

The numbers from 1 to 1,000.—Clearly understood, including analysis and synthesis.

Concrete representation of 1,000 may be given by the use of a diagram or by Sonnenschein's apparatus.

Oral practice on four operations on simple numbers, either in abstract or in easy problems (exact tens and hundreds to be considered simple numbers).

Special attention to mental addition and subtraction of numbers of not more than 2 digits.

Multiplication of 2 digits by 1 digit.

Oral practice in money questions of not more than two denominations.

The written work of Standard I. to be taken orally.

Ordinary rules to be taught for slate working up to 1,000. Multipliers and divisors not to exceed 12. Slate addition of money in three lines and subtraction in easy sums—not exceeding £10 in questions and answers.

Notion of Fraction by concrete examples; numerators to be confined to unity and denominators not to be higher than 12.

Easy problems in the tables below:—

Tables.—Multiplication and division to 12 times 12.

Pence tables to 100—2s. 6d. = $\frac{1}{8}$ of £1. 2s. = $\frac{1}{10}$ of £1.

Time—60 seconds = 1 minute. 60 minutes = 1 hour. 365 or 366 days = 1 year. (To learn the meaning of 1·50., etc., on the clock.)

Weight—16ozs. = 1lb. 28lb. = 1qr. 4qrs. = 1cwt. 20 cwt. = 1 ton.

Capacity—2 pints = 1 qt. 4 qts. = 1 gal.

Length—5½ yds. = 1 rd. 4 rods = 1 chain. 100 links = 1 chain. 80 chains = 1 mile.

STANDARD III.

The numbers from 1 to 100,000.—Mental working of the sums of Standard II. or easier sums of the written arithmetic as specified below.

Mental calculations of prices of dozens, scores, and grosses of articles.

Prices involving easier aliquot parts of a sovereign and shilling to be calculated mentally (*e.g.*, 120 books at 2s. 6d. 36 pencils at 3d.).

Simple rules (money), divisors and multipliers not exceeding three figures; compound rules (money), divisors and multipliers not exceeding 99.

No number higher than 99,999 (and in money £99) to be employed in the question or required in the answer. Reduction will be taught.

Fractions—denominators to 12, numerators not confined to unity—by concrete examples. Three-fifths should be obtained by first getting one-fifth and then taking three times the result. The interest of the post office savings bank can be taught. Children should learn that 2½ per cent. = 6d. in the £.

Elementary lessons in finding areas, first those which can be actually ruled out in square inches, then those in which it is possible to show the area dealt with in the school room itself.

The children must learn practically the meaning of sq. in., sq. ft., sq. yd.

Tables.—Length—40 roods or poles = 1 furlong. 8 furlongs = 1 mile. 1,760yds. = 1 mile.

Surface—144 sq. inches = 1 sq. ft. 9 sq. ft. = 1 sq. yd.

Weight—14lbs. = 1 stone. 112lbs = 1 cwt. 200lbs. = 1 bag of flour.

STANDARD IV.

Numbers to Millions.—Mental arithmetic on the same lines as explained for Class III., such additions being made as will suit the written arithmetic below.

Ordinary sums in the simple and compound rules and reduction. Household accounts and ordinary invoices. Small bills of parcels.

Cubic contents of rectangular solids. The sums must deal with the objects the children see around them. Diagrams should be drawn by the teacher and also by the children.

Fractions—denominators to 24. Meanings of ·5, ·25, and ·75, and corresponding value in vulgar fractions. G.C.M. and L.C.M.

First ideas of percentages. Only exact hundreds will be dealt with, and the percentages used will be 10, 20, 25, 50, and 75. In addition the ordinary percentages used in trade discount (2½ and 5) will be learned and will be shown to correspond with 6d. and 1s. in the £.

Tables.—Surface—10 sq. chs. = 1 acre. 4,840 sq. yds. = 1 acre. 640 acres = 1 sq. mile.

Solidity—1,728 cub. in. = 1 cub. ft. 27 cub. ft. = 1 cub. yard.

Weight—2,240lbs. = 1 ton, but 2,000lbs. = 1 ton of flour. 1 cub. ft. of water weighs 1,000ozs. or 62½lbs.; a gallon of water weighs 10lbs.

Capacity—2 gallons = 1 peck; 8 gallons = 1 bushel; about 6¼ gallons of water = 1 cub. ft. or 100 gallons = 16 cub. ft.

STANDARD V.

Mental arithmetic as before.

The ordinary operations for adding, subtracting, multiplying, and dividing easy fractions.

The meaning of such decimals as are used in common life should be taught.

Simple practice, metric system, first four rules—money.

Questions on subjects occurring in actual life to be worked by first principles. (Unitary method.)

Mensuration of areas of ordinary life as (1.) rectangles, (2.) 4 sided figures with 2 sides parallel, (3.) triangles with given height.

To measure tanks rectangular or cylindrical with given diameter and depth (the area of a circle to be taken as 3 1-7th the square of the radius, and the circumference 3 1-7th times the diameter). These facts must be demonstrated experimentally as far as possible.

All sums in mensuration should be illustrated by diagrams to scale.

Simple percentages and ordinary trade discounts.

Simple interest. The rates may be confined to 2½, 3, 4, 4½, 5, 6, 8, and 10 per cent., and the period to years, half years, and quarters.

Tables.—All the ordinary Tables.

STANDARD VI.

Mental arithmetic as before.

Vulgar fractions and decimals (excluding recurring decimals).

Solution of problems.

Interest more fully studied, including compound.

In connection with decimals the process of decimalising money at sight should be taught, and also contracted multiplication and division. These processes should be applied to the calculation of prices and other applied questions.

The mensuration of common life to be fully studied, including Dams.

Square root to be begun by factors.

Money Tots: Not exceeding 10 lines.

Metric system.

Simple proportion.

STANDARD VII.

Mental as before.

Vulgar fractions and decimals (including recurring decimals).

Present worth and discount.

Profit and loss.

Investment of savings. Easy stocks and shares.

Averages and percentages.

Ratio and compound proportion.

Mensuration of areas and volumes.

Approximate calculations.

Problems embracing square root.

WRITING.

GENERAL PRINCIPLES.

This will be prepared by the drawing in the Infant classes, the straight lined letters made there and the curves gradually learned being utilised for various letters in turn.

Teachers who are not themselves able to write first-rate copies on the board with speed and accuracy, are advised to write on paper or card large specimens of each letter as perfectly as possible. These can be hung on the walls as models, or combined on the boards to make words. The blackboard, however, must always be used in a writing lesson to point out the methods of forming and joining letters, or the errors made by the children.

The upright style of writing is recommended: the copy books stocked by the Department should be used. If the Teachers prefer to set their own copies, books need not be used, but the children may write in blank books, all of which will be retained for the Inspector, like the copy books. Great care must be taken to ensure that the children copy good models; too often they are allowed to write a word so many times that they only copy their own writing, and deteriorate instead of improving as they go on. In a copy book it is often well to let a child begin at the bottom and work upwards. The size of writing in the different standards is optional, but large hand should be taught in the lower standards. The order in which the letters are taught will depend on the form of letters chosen. Care must be taken to see that the easy classes of letters formed in the same way are taken first, and that the more irregular letters are left till the end.

In transcription the greatest care should be taken to see that capitals and stops are copied, as well as that the spelling is quite correct. The dates of each lesson should appear both in the Copy Books and Transcription Books. Alterations will be taken into account by the Inspector; erasures will not be allowed. Teachers must guard against these.

INFANTS.—Infants will not be required to write until their last year in the Infant School, and then only the small letters in simple words will be required.

STANDARD I.—To write simple words with capital letters from the board, and to transcribe from print.

STANDARDS.—II., III., IV., V., VI., VII.

Copy Books or other exercises in Penmanship, including Transcription from print or the blackboard.

READING.

GENERAL PRINCIPLES.

Teachers are at liberty to choose their own methods, but the Primers are based on the Adelaide system, which is phonic. The Alphabet need not be taught. As soon as the children are able to read single words, they must be trained to attach a distinct idea to them. Similarly, in a sentence they must grasp the sense distinctly. Punctuation must be taught early. Lessons on word-building should be given throughout. The children must be made to understand what they read, and to read in such a way as to show that the meaning has been grasped; the teacher should frequently read as a pattern. Monotonous and sing-song reading must be strenously repressed. Local accent to be steadily combated. Special care taken to pronounce final consonants distinctly, as well as the aspirate. Teachers must bear in mind that their object is to teach children to read—not to read a particular book. The Inspectors may ask the children to read unprepared books, as well as those prepared. It is more desirable that children should be able to read with fluency a number of books of a certain standard than that they should be able to read one book with absolute accuracy throughout.

INFANTS.—I. Sounds and forms of simple letters and words. II. Primer (Victorian). III. First Reader (Victorian).

STANDARDS I., II., III.—At least two Readers, approved by the Department, should be taken in each standard.

STANDARDS IV., V., VI., VII.—The School Papers and at least one Reader, or a continuous story, biography, or book of travel approved by the Department must be taken.

SPELLING.

GENERAL PRINCIPLES.

Spelling should mainly be taught in connection with reading. It is taught by causing the children to look carefully at the words as they read, so that the eye becomes accustomed to the proper appearance; by transcription; by dictation; by word-building; and by learning words of exceptional difficulty by heart. After the reading lesson words may be spelt orally or written. During the lesson difficult words should be picked out and written on the board. The words should, when necessary, be divided into syllables and sounds. In writing on the board words pronounced the same but spelt differently and with different meanings, the teacher must be careful to write each in a sentence. To write down "their" and "there," or "pane" and "pain," without any connection, teaches nothing to the children as to the occasions on which to use each. Children may, however, orally compose sentences including the words written by the teacher on the board.

Dictation lessons should be prepared beforehand. The teacher should always endeavour to *prevent* the child from spelling the word wrongly. Children will be required to keep an exercise book for dictation and transcription only, which is to be shown to the Inspector at the annual inspection. These books may be corrected out of school. If the errors are such as the child at his stage of knowledge might have avoided, the teacher should simply underline them and call on the pupils to correct them; but where they arise from insufficiency of knowedge, the teacher should correct them and discuss them with the child.

In word-building in the upper classes valuable practice in English is given if the root of various words is shown from the first, with prefix, etc. From "like" can be drawn "likely," "likeness," "childlike," "dislike," etc.

In the Infant Schools word-building will be used for forming simple words out of the ordinary sounds associated with the letters. It should be noted that it is irregularity of structure, not the number of syllables, which makes a word difficult. From the earliest stages children should be taught to read long words of simple character by breaking them up into syllables.

STANDARDS I., II., III. should write easy dictation from the reading books in use in the Standards during the year.

STANDARDS IV., V., VI., VII. should write from dictation passages from any book of the same standard of difficulty as they are expected to read in their Standard.

DRAWING.

GENERAL PRINCIPLES.

FREE-ARM DRAWING.—Drawing will be taught in accordance with the Syllabus published by the Department of Science and Art, South Kensington, known as No. III. Alternative Illustrated Syllabus of Instruction in Drawing in Elementary Schools.

The slate slots in the desks will be found useful for holding mill-board or the other material used.

A leading feature in the Syllabus is the introduction of drawing at arm's length. Where there are facilities as regards room, etc., this will be best done by scholars standing in front of their slates or boards, which should be fixed in a nearly upright position. In schools where this cannot be arranged, the scholars should sit as far back as possible, leaning against the desk behind, with slate or board propped nearly upright on the desk and at arm's length from the scholar, who should work freely from the shoulder, never touching the slate or board with the wrist or more of the hand than the top joint of the little finger. The slate or board must not be turned about nor the position of the body shifted in order to draw curves or lines in various directions. These remarks do not, however, apply to brush-work or drawing with instruments.

The possible close connection of the present course of drawing with other modes of teaching in the school should not be lost sight of. For example, at many points a good teacher may find it possible to use this course as a basis for hand and eye training in other suitable material, while the introduction of each new form, *e.g.*, the egg form (Fig. 7, Standards I. and II.) may be suitably connected with object lessons or stories on familiar objects which suggest that form.

The forms produced, and their combinations, will naturally suggest decorative and natural shapes; and it should be the object of the teacher to develop this association of ideas.

The materials required will be—(1.) Brown paper, small blackboards or pieces of blackened millboard, with chalks and a damp sponge or rag; (2.) cartridge-paper and pencils; (3.) camel's hair brush, and one or more water colours.

Nothing in this Syllabus must be taken to imply that importance is not to be attached to accuracy and care in the execution of the work herein suggested.

The primary object of the Syllabus is stated to be to give control of the hand; and the first exercise, therefore, is to let the scholars work with free arm from the shoulder, sweeping round and round with slight pressure on the slate or board. Gradually, as control of the hand is acquired, the scholar will be able to draw the lines round and round in the same track. In this way, from beginning with indefinite forms, more or less definite forms will be arrived at, of which the ellipse (Fig. 1, page 17) may be taken as an example. It can be developed in two directions—(*a.*) the closed curve bounded by a single line (Fig. 4, page 17), and (*b.*) the mass or surface bounded by a curved line, but filled up (Fig. 4, page 17). Both these old forms should afterwards be produced with every variety of direction, size, combination of numbers (both of equal and unequal sizes), and conditions as to position. The combinations will suggest natural or simple decorative forms.

Similarly the egg shape (Fig. 7, page 18), will be treated in all varieties of position, size, and combinations, as in the case of the ellipse. The interest and variety of the combinations and resulting patterns will be increased by the use of coloured chalks or tints of colour.

The intention of the Syllabus is first of all to give the children great freedom in drawing; but throughout the whole Syllabus the necessity of beginning design and original work is never lost sight of. All the children, from their earliest efforts, are to be taught the simple forms which they have learnt to draw with freedom in varying patterns—they are to be inventive and not merely imitative. It is not sufficient that the teacher should draw a design on the board and that the children should copy it. It is intended that when the children can draw the ellipse, for example, they should be encouraged to place these ellipses in different patterns upon their slates or the blackboard, so that they can get an idea of the great variety that can be obtained by the use of the simplest elementary forms. The developments of design are shown in the illustrations given to the Syllabus, which are not intended as copies, but merely as guides to the teacher. The illustrations will show how, by repetition or arrangement, design can be deduced from the few simple forms learnt.

GEOMETRICAL DRAWING.—The objects of the syllabus being (1) to give full play to the spirit of investigation and inventiveness, and (2) to form habits of accuracy and neatness, the subject becomes an intellectual as well as a mechanical exercise.

So as to ensure true investigation, the children should, in the lower standards (I. and II.), draw the various figures with the Teacher, the construction being made line by line, and the results obtained generalised as far as possible.

Every construction (unless the Teacher has some particular purpose in view, as *e.g.*, to show the figures of different forms produced by varying one element) should be drawn to actual measurement, and the idea will then gradually grow upon the child as to what measurements are necessary to obtain figures of the same size. Technical terms, such as hypotenuse, isosceles, parallelogram may be avoided in the lower standards by periphrases.

The use of coloured chalks will be found an aid throughout, and, for Standards I.-IV., simple devices—paper-folding, superposition of cut-out figures, and the use of squared paper are necessary.

In the work of Standards V.-Ex. VII., it will be found that many problems require the drawing of a rough trial figure, which should be drawn free-hand, before the method of solution is evident.

A great deal of oral questioning should form part of almost every lesson.

The text-books should not be placed in the hands of the children.

INFANTS.

No definite syllabus of instruction is required for infants, but Teachers are advised to let them start with bold curves and lines, both free-arm and free-hand, and to encourage them in every way to reproduce forms which they see. Accuracy is not necessary in infants' classes, but freedom of execution and boldness.

STANDARD I.

(*a.*) *For Production and Combination of Curved Free-hand Forms.*—The ellipse and combinations, as indicated on page 17 of the Illustrated Syllabus.

(*b.*) *Straight Line Forms.*—The straight line in all varieties of length and direction—horizontal, vertical, etc.—and in combinations so as to produce squares and oblongs, as indicated on page 19 of the Illustrated Syllabus.

(c.) *Drawing from Memory.*—Such objects outside the School as a pillar post-box, a lamp-post, a scythe, or a spade.

Note.—Exercises of this kind, increasing in difficulty, should be continued throughout the Standards.

(d.) *Drawing with Instruments.*—All straight line forms given in the above Syllabus, with ruler.

Simple scales 1, 2, 3, etc. feet to the inch; drawing of right-angled and straight-lined surfaces of objects in the room to scale; drawing the same object to different scales.

The square and the right-angled isosceles triangle-analysis, division and combination; measurement of lengths of inches and half inches; division of lines into equal parts by measurement.

OPTIONAL.

(c.) *Brush-work.*—Elementary exercises, as indicated on page 19 of the Illustrated Syllabus, Figure 14.

STANDARD II.

(a.) *For Production and Combination of Curved Free-hand Forms.*—As before.

(b.) *Straight Line Forms.*—As before; and in combinations so as to produce triangles and suggestions of simple decorative and common forms, as indicated on page 19 of the Illustrated Syllabus.

(c.) *Drawing from Memory.*—As before.

(d.) *Drawing with Instruments.*—All straight line forms given in the above Syllabus, with ruler. Drawing perpendicular and parallel lines, with set square, through a given point. Drawing lines of given length.

Drawing to simple scales of straight-lined and right-angled figures from the blackboard; drawing plan of classroom to scale, showing desks, etc.; drawing plan of school-grounds to scale (school-buildings to appear as mere blocks).

Analysis and division of the rectangle, rhombus, and parallelogram; simple combinations and patterns. Measurement of lengths to $\frac{1}{4}''$.

(e.) *Brush-work.*—Elementary exercises, as indicated on page 19 of the Illustrated Syllabus, Figures 14 and 15.

STANDARD III.

(a.) *Production of Whole Forms and Analysis of Curved Forms.*—The free-hand work in these Standards carries somewhat further the combinations of whole forms produced in the previous Standards, and introduces the formation of the circle (Figure 1, page 20). The "ellipse form" and other ovals are analysed first into halves (Figure 2, page 20), and afterwards into quadrants (Figure 3, page 20), and these elements treated in the same way as the complete forms, being combined in various directions, numbers, and sizes, so as to produce decorative forms, such as shown in Figure 4, page 20 of this syllabus. These, when combined, give a large variety of natural and decorative forms.

(b.) *Drawing from large Diagrams and from simple Objects.*—Drawing of curved forms from large diagrams and from very simple objects, such as a preserve-jar, a flower-pot, etc., of sufficient size to be seen by the whole class, is introduced at this stage.

(c.) *Brush-work.*—The Elementary Brush-work form is produced by simply touching the paper with a brush full of colour held horizontally without moving the brush on the paper. Such touches are then repeated in all varieties of position and combination, like the free-hand forms given in Figures 14 and 15, on page 19, in Standards I. and II., and Figure 7, page 21, in Standard III., and suggestions of natural and decorative forms are easily obtained from these combinations in almost infinite number.

(d.) *Drawing with Instruments (foot-rule, set-square, and compasses).*—Angles and their measurement; the use of the protractor; the use of compasses; the use of the set-square and ruler for drawing perpendiculars and parallels; the area of rectangles.

Measurement to $\frac{1}{8}''$.

STANDARD IV.

(a.) *Production of Whole Forms and Analysis of Curved Forms.*—As before (Standard III.).

(b.) *Drawing from Large Diagrams and from Simple Objects.*—As before (Standard III.); and in addition the same exercise should be drawn from memory after the removal of the example.

(c.) *Brush-work.*—As before (Standard III.); to be followed by the production of simple forms with the brush similar to those suggested in Figure 7, page 21, in Standard III., and Figure 5, page 23, in Standard IV.

(d.) *Drawing with Instruments (foot-rule, set-square, and compasses).*—The experimental and geometrical study of triangles; bisection of lines and arcs and the erection of perpendiculars, with the compass and ruler.

Measurement correct to $\frac{1}{8}''$.

STANDARDS V. TO VII.

(a.) *Patterns and Ornament based upon Natural Forms.*—In the more advanced stages of the work, as shown in Figures 1, 2, and 4, pages 24 and 25, in Standard V., ornamental forms derived from the foregoing exercises may be combined into simple patterns and repeats, involving the use of brushwork and washes of colour. The natural forms of plants and animals may be broadly treated as motives of ornament and employed to fill spaces used in decoration, as in Figures 3 and 5, on pages 24 and 25, in Standard V., and Figures 1 and 2, on page 26, in Standards VI. and VII.

(b.) *Drawing of Simple Objects from the Flat and Round.*—In Standards VI. and VII. free-hand drawing, as in Standards III. and IV., should be taken, but from more difficult examples, flat and round. Various common objects, such as a box or desk, may be used as models; and large leaves and parts of plants or flowers may be drawn from in outline. Copying from the flat should also be carried further than in the earlier Standards. It need not be confined to the outline of ornament, but may include leaves, flowers, fruit, common objects, and simple renderings of insects, birds, and animal forms.

(c.) *Geometrical Construction as a Foundation for Design.*—Geometrical forms may be utilised and regarded as the foundation for ornamental arrangements of natural objects, animals, plants, and the like.

(d.) *Geometrical Drawing:*—

STANDARD V.—Construction of angles of given size with compasses; simple cases of the construction of triangles and quadrilaterals from sufficient data; construction of parallels to a given straight line; construction of parallelograms, construction of simple, regular, rectilineal figures; simple patterns. Measurement correct to $\frac{1}{10}''$.

STANDARD VI.—More difficult cases of the construction of triangles and quadrilaterals from sufficient data; parallel lines and the division of straight lines into a given number of parts; the construction of regular and rectilineal figures from sufficient data; patterns; scales and survey plans; areas of oblique parallelograms and and of triangles. Measurement to $\frac{1}{10}''$.

STANDARD VII.—More difficult cases of the construction of triangles and of regular and rectilineal figures from sufficient data. Patterns. More difficult scales. Areas, including the reduction of a rectilineal figure to a equivalent triangle, and the bisection of a parallelogram by a straight line drawn through any point. Measurement to $\frac{1}{10}''$.

[N.B.—Where provision is made for manual training in woodwork, the instruction in advanced scale-drawing and solid geometry should be continued in the workshop.]

ENGLISH.

GENERAL PRINCIPLES.

The object of instruction in English is to enable children to speak and write clearly, distinctly, and correctly, and to enlarge their vocabulary. Too much stress is generally laid on an acquaintance with a number of technical terms, which have little influence on the speech of the learner. Conversation lessons will enlarge the vocabulary, as well as to teach children to express themselves. The teacher will discuss with the pupils objects in school, home, or workshop; animals, domestic and wild; plants; geographical names, etc. He will discuss the form and use of objects, their colour, the habits of animals, etc.

Great care must be taken to exclude triviality in selecting pieces for recitation. It is easy to mistake childish for childlike things. In the higher classes pieces should be chosen from standard writers, and should be national and popular in their tone. As far as possible, complete poems must be learned, but scenes from plays, which are fairly complete, may be taken if the plot is explained. Dialogue is recommended, as it is both interesting and leads to good dramatic expression without theatrical forcing.

Analysis of sentences must not consist in taking up the words one by one and parsing them, but should be rather dealt with synthetically, *i.e.*, the simple sentence, noun, and verb should first be taken. Example—"The boy sings." Then the predicate may be completed: "The boy sings a song." Next some extension:

"The boy sings a song in the school room." Then would follow adjectives: "The best boy sings a beautiful song in the large school room." Then the personal pronoun and another sentence: "The boy sings, etc.; he is practising for a concert, etc."

Infants should learn by heart the words of one or two little songs, and a few simple recitations. They should begin to answer in sentences. Little conversation lessons should be given them to encourage them to express themselves readily.

STANDARD I.—Children must be taught to answer questions in complete sentences. This may be required at the teacher's discretion in any lesson, and should be insisted on in conversation lessons. They must be able to analyse simple sentences into subject and predicate. Conversation lessons should be continued. Children should narrate incidents in their own experience, tell stories they have heard, or describe pictures or objects placed before them; at first with the help of promptings and questions from their teacher, but they should gradually learn to express their own sensations and observations in simple, correct, and complete phrases, well pronounced and accented. Children must learn to recite with intelligence 20 lines of poetry, and explain its meaning. Teachers will be expected to take three pieces of 20 lines during the year, but the piece last learnt will be the one tested by the Inspector at his visits. If possible, a selection should be made from outside the Reading Book. The children should be told the meaning of a noun and verb, and learn to point them out.

STANDARD II.—Children must continue to practise the expression of personal narratives, and a correct elocution of these will be taught. Analysis as in Standard I. They will be taught adjectives and pronouns, and will learn the formation of the plural. They must be able to add suitable qualifying adjectives to given nouns. They should learn to recite, as above, 30 lines of poetry. Three pieces to be chosen as above.

STANDARD III.—Children must learn to reproduce orally the substance of a short story, and reproduce in their own words the sense of a sentence or piece they have read, or recount in good English something they have seen or heard. Analysis of sentences into subject and predicate, the latter to be divided, where necessary, into verb, object, and extension, and the distinction between verb and predicate to be clearly understood. They will be taught the three principal tenses (present, past, and future). They will analyse and form sentences containing given nouns, adjectives, and verbs; they will be expected to understand the agreement of a verb with its subject. Forty lines of poetry to be recited, or 30 lines of prose. Three pieces to be chosen as above.

STANDARD IV.—Children should write sentences to contain nouns or pronouns, adjectives, verbs, and adverbs, and be able to analyse a simple sentence. They should learn the gender of nouns and pronouns. They will continue to practise oral reproduction of pieces they have read or heard, and will describe any suitable object. Not less than 40 lines of poetry to be recited, and 10 lines of prose (passages from Scripture may be selected, but teachers must exercise great discretion, especially should there be Jewish children in the school), as above.

STANDARD V.—Children should continue to express themselves orally, giving an account of something they have seen, heard, or read of. They should be able to reproduce in writing the substance of a short story or a piece they have read. The main ideas of the story and their sequence should be specially noticed, and might be written on the blackboard before the lesson. The story should be told, not read, and the actual words varied by the teacher. These compositions should be corrected in class, and might sometimes be re-written, but the books with the original mistakes should be preserved and shown to the Inspector. They must be able to analyse more difficult simple sentences and easy complex sentences, also to parse fully nouns, verbs, and adjectives. Not less than 40 lines of poetry and 12 of prose to be recited (as above). Cases of nouns and pronouns should be known.

STANDARD VI.—Composition as in the previous standard. This may be thrown into the form of a letter, and the beginnings and endings of letters should be taught. Analysis of complex sentences, and parsing of words in a simple sentence. Meaning and use of common Latin prefixes and affixes. Lessons on the roots of words. Fifty lines of poetry and 12 of prose to be recited (as above).

STANDARD VII.—Written composition on any easy theme. Commercial correspondence. Analysis of complex and compound sentences, and parsing generally. Prefixes, affixes, and roots. Sixty lines of poetry and 20 of prose to be recited (as above).

Note.—Macmillan's New Series of Recitation Books are recommended, but teachers may choose any other pieces. The notes given are, of course, only of the more difficult words. The children must not learn these by heart, but must be prepared to explain in their own language the meaning of the words and passages annotated as well as those not mentioned.

GEOGRAPHY.

GENERAL PRINCIPLES.

No text books for the facts of Geography need be used by the children; the teacher will orally fill in the knowledge they obtain from topographical observation and study of the globe and map. Books of travel, etc., may be read to impart general interest. Leave unlearnt, if possible unmentioned, whatever in the way of names, and especially figures, cannot be remembered permanently. In height, sizes, etc., it will be sufficient to give the last, or even the last two figures in round numbers, and they should always be compared with others known to the children, as figures have not an absolute, but only a relative value.

The instruction will begin with the school and immediate neighbourhood, and with elementary knowledge of physical features, and will be gradually extended so as to give a general knowledge of the world.

Geography from the first must include some knowledge of climate and productions, as well as mere topography, but physical geography must precede historical and mathematical.

Teachers are advised to provide themselves, if possible, with a collection of pictures of places and people, but the latter should show national characteristics, and the former, as far as possible, peculiar physical or other features. The main streets of the various capitals have a general similarity which is not instructive as to their differences. Pictures of agricultural, mining, and manufacturing processes would also be valuable.

INFANTS.—First notions of a map to be given from a plan of the schoolroom, to be drawn on the blackboard to scale by the teacher from measurements actually taken by the children themselves. The board should at first be laid on the floor, so that the lines may correspond. The children must be taught to point out on the plan the position of desks, windows, chairs, etc., or to move a chair to different parts of the room as indicated on the plan.

STANDARD I.—Plan of the room and of common articles in the room to be measured and drawn to simple scale by the children. Marked rulers will be required. The scale should be varied from time to time. These plans can be drawn on paper. It is a good plan also to draw them in the playground on some level spot. The cardinal points of the compass are to be learned by observation of the sun, and noted both on the plan and in relation to neighbouring prominent buildings or other objects.

STANDARD II.—A plan of the playground, including an outline of the school, should be measured and drawn to simple scales by the children. The contours of the playground as well as of the buildings, fields, etc., should be shown. The children should also make a sketch plan from observation. They should measure, roughly, the roads to their homes, and be taught to note direction by the sun. The cardinal points to be always borne in mind. A knowledge of the neighbourhood within 10 miles of the school must be acquired. Teachers are advised to make maps from those supplied by the Lands Department, but to omit block boundaries and insert farms or houses, roads or tracks of importance, etc. The children must know whither the roads lead, what creeks, etc., are crossed within the 10 miles' radius, the principal buildings, the character of the country, and occupations of the people. Out-door lessons will be of great value, and if possible children should be encouraged to measure and bring to school a plan of their homes.

Simple geographical terms will be learnt by observation, *e.g.*, in various districts, road, railway, plain, hill, valley, creek, well, forest, meadow, lake, river (with right bank and left bank), sea, coast, bay, cape, island. A few shovelfuls of sand and some water will give fairly clear ideas of such terms as cannot be learned by observation. Definitions should not be learned till the children have clear ideas of the meaning of the thing defined. The children's own descriptions, if fairly accurate and intelligent, should be preferred to a book definition.

Elementary ideas of the sun and earth to be given. It will be sufficient to describe the earth as a globe travelling round a larger one, and to give some idea of the relative sizes.

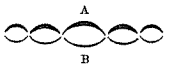
The diameter of the sun may be taken by the teacher as equal to 107 times that of the earth; but for the children some concrete examples, such as a bead and a football, should be taken.

STANDARD III.—More accurate knowledge of the physical features and products of the district and of West Australia. Physical maps of Western Australia to be drawn by the children from memory. Scale to be carefully explained. Length and breadth, etc., to be illustrated by comparison with distances known to the children, *e.g.*, the road to school, the height of a spire. The most important capes, rivers, islands, mountains, etc., to be named. Elementary ideas of the physical globe to be given, and the position of West Australia indicated. The names of oceans and continents to be taught, and the chief climatic zones indicated. Meridians and parallels will not be required, but the Tropic of Capricorn should be indicated on the maps. The names and position of oceans and continents should be taught, and the character of the chief climatic zones indicated. The general geography of Western Australia, including towns, railways, chief

products and industries, to be taught. The early explorations are to be touched upon, the principal trade routes are to be indicated, and the countries from which the chief imports are derived.

Meridians and parallels to be explained. These will be used in map-drawing, but as straight lines. A fuller explanation of geographical terms to be given. Day and night should be explained. A stick in playground stuck upright should be used to explain the time, etc. (*See* appended hints on finding time by the sun.)

Note.—In map drawing, to represent a mountain system, curves bulging outwards are recommended. The steeper (*a*) or gentler (*b*) bend of these curves, together with different thicknesses of line, to indicate the comparative height or steepness of the ascent. This can later be developed into more accurate contours.



Teachers are strongly advised, where possible, to teach paragraphs 1-7 (inclusive) of Mr. W. E. Cooke's Syllabus, published as a supplement to the *Circular* of November, 1902, which will be found at the end of this schedule.

STANDARD IV.—Physical maps of Australia and New Zealand to be drawn on paper by the children from memory. The general geography of Australasia, with memory maps of the States and New Zealand, including principal towns and railways, to be taught. Products and trade routes to be known. The meridian and parallel on which the school is should specially be known. Meridians and parallels to be taught and applied to map drawing. The moon to be described and the children made to observe the appearance of the new and full moon, noting the number of days from one full moon to the next. [Teachers are expected to teach Physiography on the lines of Mr. W. E. Cooke's Syllabus (paragraphs 28 to end), which will be found at the end of this schedule.]

STANDARD V.—Physical features of Europe, and more particularly of the British Isles. The general geography of Europe, including the British Isles—important names only to be learnt, and memory maps drawn. Products and commercial geography specially to be noticed. Some account to be given of the various races. The movement of the earth and the causes of the seasons to be explained, with special comparison of the English and Australian seasons. [Teachers are expected to teach Physiography on the lines of Mr. W. E. Cooke's Syllabus (paragraphs 15-20 inclusive), which will be found at the end of this schedule].

STANDARD VI.—The British Isles in detail and the British Empire in general to be studied. Memory maps to be drawn of South Africa, India, Canada, and Egypt. Maps of all countries taught to be roughly sketched. Some account of the various races of the Empire to be given. Special note to be taken of the producing and manufacturing centres and of the trade routes. The circulation of water on the earth by evaporation, dew, rainfall, glaciers, rivers, seas, changes of coast line produced by the action of water, tides and ocean currents to be taught. [Teachers are expected to teach Physiography on the lines of Mr. W. E. Cooke's Syllabus (paragraphs 8-14 inclusive), which will be found at the end of this schedule].

STANDARD VII.—General geography of the world. Memory maps of the continents. Important names only to be learned. Commercial centres and main areas of various kinds of production to be especially studied. The British Empire to be more particularly dealt with. Volcanoes, coral reefs, ocean beds, and springs. [Teachers are expected to teach Physiography on the lines of Mr. W. E. Cooke's Syllabus (paragraphs 21-27 inclusive), which will be found at the end of this schedule].

FINDING TIME BY THE SUN.

The following hints may be useful to teachers:—

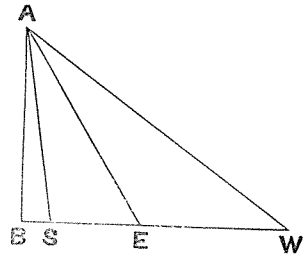
1. Let the teacher select a level piece of ground—if possible concrete, asphalt, etc.—and erect a round stick about 3ft. above the ground, and truly vertical. The level ground should extend in a semi-circle (West, South, East) of at least 4ft. 6in. radius for 3ft. stick. If a smaller piece only of concrete, etc., be handy, it might be preferable to use a shorter stick, rather than run into doubtful ground or sand.

2. On any clear day, at any time between 9 and 10 a.m., make a dot to indicate the shadow of the top of the stick. With a piece of string and a nail describe a semi-circle (towards the South), taking the bottom of the stick as centre and the dot as a point on the circumference.

3. In the afternoon, between 2 and 3 p.m. of the same day, watch the end of the shadow approach the circumference of this circle. Make a dot on the point where it crosses.

4. Connect dots 2 and 3 by a straight line. Take the middle point of this line, join it by a straight line to the bottom of the stick, and you have a meridian or "true South."

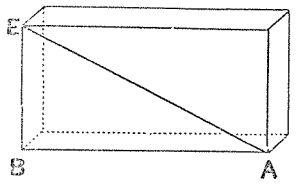
5. At the beginning of the year note how the shadow on the meridian lengthens day by day. Measure its length on 21st March. In case it should be cloudy on the 21st, measure on the 19th, 20th, or 22nd or 23rd; but try to get it on the 21st. Note how it still lengthens until it becomes stationary towards the middle of June. Measure its length about the 21st June. Explain that this is called the "winter solstice," because the sun apparently "stands still" for several days, as shown by the shadow. Note how it commences to shorten again. Measure on 21st September, when it ought to be the same length as on 21st March. Finally, note how it reaches its limit in the other direction ("summer solstice") on 21st December. Measure again



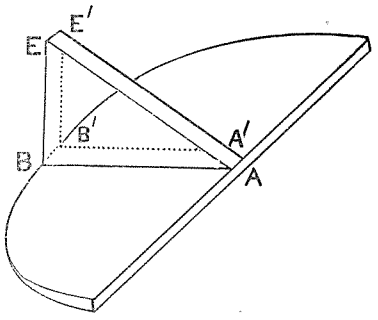
6. Lay out on a plan a straight line "AB" to represent the stick. Draw to scale, say ¼. "AB" would thus be 1ft. Draw "BW" at right angles to represent the meridian, and lay off the lengths "BS," "BE," "BW," to represent the lengths of the shadow on 21st December, 21st March (or 21st September), and 21st June. Connect "AS," "AE," "AW." It will be seen that "AE" bisects the angle "SAW." The angle "BAE" is called the *latitude* of the place. If possible, let the children measure it with a protractor, and then compare with the position of their locality on a map.

7. Perhaps one more thing may be noted. On 21st March and 21st September, note the shadow at sunset. It will make a perfect right angle with the meridian, or, in other words, the sun sets *due* West. Note that at any time between 21st March and 21st September the sun sets to the North of West, and at any time between 21st September and 21st March it sets to the South of West. Note also that it sets exactly six hours after crossing the meridian on either of the above dates. It may be inferred, or the children may see for themselves if not too sleepy, that it rises due East exactly six hours before crossing the meridian. In other words the day is exactly twelve hours long, or the days and nights are equal. This has given rise to that well-known word "Equinox."

8. Constructing a sun dial.—Take about 2ft. x 1ft. of inch planking.



Lay off the angle "BAE" just found, viz., the latitude of the place, and cut down "EB" square. Also cut "AE." Place the block "EAB" so that "AB" is exactly in the meridian, and "B" points South. Draw a semi-circle with "A" as centre and "AB" as radius.



Watch carefully until the block casts no shadow (except outside the semi-circle, along the meridian). Note the time by a clock. At the end of half-an-hour note where the shadow crosses the circumference. Make a dot. Repeat this every half-hour throughout the afternoon. Mark every alternate dot as follows:—I., II., III., IIII., V., VI., commencing with the second one. This completes the Eastern or afternoon half. For the morning or Western half either take the clock error from the preceding day, assuming the time of no shadow was noon, or else measure from B1 the same arcs as from B, and thus make the two halves symmetrical, the Western half being figured from "B," XI., X., IX., VIII., VII., VI. The

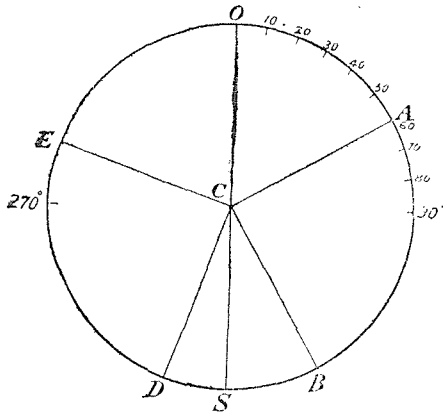
centre of the Eastern quadrant is A1, and of the Western "A." It is not, therefore, a perfect semi-circle, but two similar quadrants placed near one another.

The teacher should now explain to the pupils that the sun moves very irregularly, and if we took the time from the sun, no two days would be of exactly equal length. So we take the *average* length of a day throughout the year and set our clocks by that. The sun is therefore sometimes ahead of and sometimes behind our time, the greatest difference being 16 minutes. Moreover the sun comes to the meridian at one place before another situated farther West, and again, if we went by the sun, no two places would have the same time. So Parliament has determined that for convenience the whole State shall take the time that we would obtain in a place situated on the 120th degree of longitude.

Before we can make our sun dial agree with the clock, therefore, we must first apply a correction for the sun's irregular movement, and then another correction to reduce what we may term "local time" to the "standard time" agreed to by Parliament.

The Government Astronomer has kindly offered to make out tables for any school, so that pupils may take the time from their dials, apply the corrections, and see that they agree with their clocks or watches. This will give them confidence in their work.

1. *Angles on Blackboard.*—Draw a circle and divide it into quadrants. Sub-divide each into nine parts. Each part is 10°. Number these 0° to 360, starting O at the top, thus:

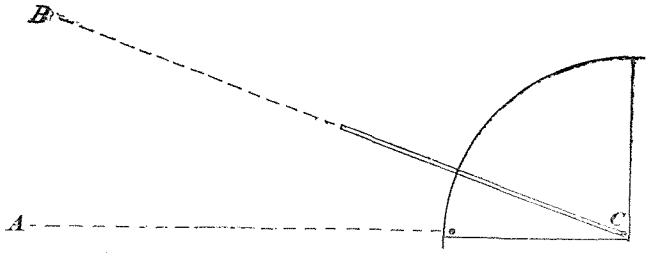


Rub out the figures after explaining their meaning, but leave the dots showing each tenth degree.

Take two thin pieces of wood, their length being equal to the length of the radius of the circle. Fix one piece along the line O C. Pivot the other piece at C by means of a pin, and point its loose end at various spots along the circumference. Make the pupils tell to the nearest tenth degree the angle between the two sticks, always counting from O towards the right, so that the degrees range up to 380°. In the figure, for instance, the angle O C A = 60°, O C B = 150°, O C D = 200°, etc.

Now rub out all the degree marks (or make a fresh circle) and again point the loose stick at various parts of the circle, getting the pupils to *estimate* the angles. This need be done roughly, but if a reply be obviously more than 30° in error it must be counted a mistake and rectified. The line C S, a continuation of O C, should be drawn, so that the whole diameter may be seen. In estimating the angle O C B teach the pupil to estimate S C B and substract this from 180°. To obtain O C D the angle S C D should be estimated and added to 180°. To obtain O C E, the acute angle O C E should be estimated and substracted from 360°, etc.

2. *Model Quadrant. Outside Exercise.*—This is a simple instrument for measuring angles less than 90°. The observer's eye now takes the place of the centre of the circle in the preceding exercise, and any two distant objects, such as a couple of telegraph poles, a tree, and the edge of a building, etc., represent the points of the sticks.



Let us call the distant objects A and B, and the observer's eye C, then the angle A C B is said to be the angle subtended at the observer between A and B, or more simply the angle between A and B. To obtain this angle close the left eye, place the right eye immediately over and almost touching the central pivot, turn the instrument so that the fixed pin comes in line with the left object; hold the instrument steady and move the pointer so that the pin at its end comes in line with the right object. Glance at both pins and see that they each cover their object, and then read the angle shown by the pointer on the edge of the circle. Practise this until any angle can be easily read correctly to a single degree. Measure both vertical and horizontal angles and practise estimating angles without the instrument and then measuring them. For this purpose it will be convenient to know that if the right arm be extended in front of the right eye and the left eye closed a hand span from the tip of thumb to tip of little finger is about 15°.

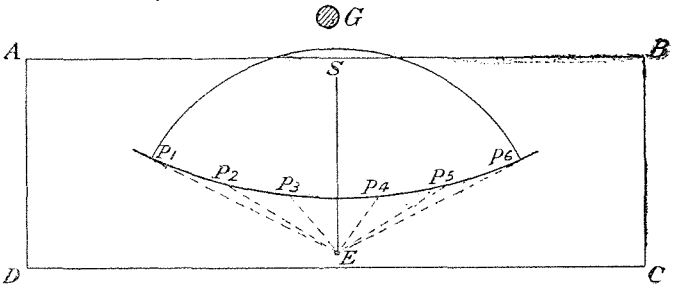
3. *Azimuth.*—Select a distant object, the more distant the better, on the horizon if possible, as a North point. This had better be somewhere near North, but exactness at this stage is not in the least necessary. Call this point N. Select another distant object as nearly as possible 180° from this as the South point, and call it S, *i.e.*, S, the observer, and N should be in a straight line. Now measure the angle between N and any object on the horizon, measuring always to the right, as in our first blackboard exercise. This angle is called the *azimuth* of the object. Become well acquainted with this term. Remember it is always the *horizontal* angle measured from the North point towards the right, and may be of any magnitude up to 360°. For example, the azimuth of the East point of the horizon is 90°; of the South point 180°; of the West point 270°; practise a number of azimuths. As the quadrant will measure angles only up to 90°, it will be necessary to proceed as in the last part of Section 1 for azimuths greater than 90°. Let the pupils practise estimating azimuths of all magnitudes without the quadrant, and then checking their estimate by actual measurement.

4. *Vertical.*—The point in the sky directly overhead is called the *zenith*. Suppose we wish to obtain the azimuth of an object not on the horizon, *e.g.*, a near chimney top. We must imagine a line drawn from the zenith through the object down to the horizon. This line is called a *vertical*; and the azimuth of this object is the azimuth of the point where this vertical strikes the horizon. Practise measuring azimuths of elevated points. This is important.

5. The *altitude* of an object is the angle between the object and the point where a vertical through it cuts the horizon. The altitude of a near telegraph pole, for instance, is not the angle between the top and the *bottom* of the pole, but between the top and the point where the pole (supposed vertical) appears to cut the horizon; or, in other words, between the top and a point on the pole directly opposite the eye. This is an important distinction, and the difference between the angle subtended by the whole pole and its true altitude should be carefully observed. Measure a number of altitudes.

6. *Practice with Model Altaizmuth.*—This instrument is specially designed to measure altitudes and azimuths with great ease. It should be so adjusted that the pointer of the horizontal circle indicates 0° when the telescope tube is directed to the North point of the horizon, and the pointer of the vertical circle should indicate 0° when the telescope tube is level, or directed to any point of the true horizon. When these two adjustments have been made, it is only necessary to point the tube at any object, and its altitude and azimuth can be directly read upon the vertical and horizontal circles respectively. Practice upon various objects, especially upon the sun. For this purpose the tube should be reversed so that the eye end points to the sun and the cross wire to the observer. Now hold the hand or a piece of white card about an inch beyond the cross and move the tube until a round spot of light is seen upon the card with the cross exactly bisecting it. With a little practice this can be done with considerable accuracy.

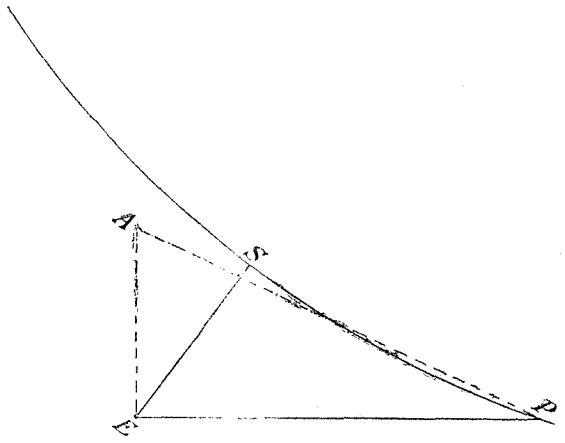
7. *Laying down a Meridian.*—It will now be necessary to lay down our North and South points with greater accuracy than heretofore. We appear to be situated upon a plane bounded by a circle called the *horizon*, and surrounded by a hemisphere called the sky, on the surface of which the sun appears to describe a semi-circle every day. If we can find exactly the middle point of the sun's path and draw a vertical through it to the horizon we shall have true North. We can do this very easily by the following method:—



A, B, C, D represents a flat board about 2ft. by 1ft. At the point E a round-pointed stick such as a lead pencil is placed. This must be truly square with the board in every direction, so that when the board is level the stick shall be exactly vertical. The board should now be placed on the ground close to and just about North of the bottom of the pole of the altazimuth instrument (which is shown at G) and made as level as possible. As the sun moves across the sky the shadow of the pencil will move across the board, and its point will describe some such a curve as PPPPPP. Observations should be commenced as early as possible in the morning, say, at 9 a.m., and continued until about 3·30 p.m. It will be necessary for somebody to be in attendance about once in every half-hour, and to make a dot with a pencil at the spot where the tip of the shadow comes. These points must afterwards be joined together to form the curve shown. Now, without moving the board, take away the upright pencil or stick and plug up the hole thus left with a small round plug. Place one point of a pair of compasses in the centre of this plug and draw a circle, the larger the better, to cut the shadow curve in the two points P_1 P_6. Join P_1 E and P_6 E and bisect the angle P_1 E P_6 by the straight line E S. This line exactly bisects the (shadow of the) sun's path, and is therefore true North and South. Place one pin vertically at E and another at S and sight along the line both ways to two points as distant as possible. Use these for the future as N. and S. points from which to measure azimuths; or, perhaps better, leave the board untouched until next day, re-insert the pencil properly squared, and watch the shadow just before noon. At the instant when the shadow lies evenly along this N. and S. line (E S) set the altazimuth on the sun and sweep down both ways to the horizon; the points in the centre of the field of view will be the N. and S. points respectively.

8. *Terrestrial and Celestial Meridians.*—This line, which runs due North and South and exactly bisects the sun's diurnal path, is called the *meridian* (signifying "middle of the day"). When used on earth it is called the *terrestrial* meridian. When used in the sky it is called the *celestial* meridian. In the latter case it is of course an imaginary line or rather circle, passing from the North point through the zenith to the South point. The altitude of the sun when it crosses this imaginary line is called its "meridian altitude."

9. *Laying down sun's apparent daily path upon model sky.*—We are now ready to draw the sun's apparent path upon the model sky. This model is supposed to represent the horizon plane and the celestial globe or sky. The observer is supposed to be situated at the centre of the plane. Measure the sun's altitude and azimuth on any one day about every half-hour, or even every hour will do. If the observations can be taken from sunrise to sunset so much the better, but anyhow they ought to extend from 9 a.m. till sunset. These measures can be made either with the altazimuth, which is, of course, the easier method, or by means of the shadow of the pencil, as follows:—



Let S P be the curve traced by the tip of the pencil shadow, as before; E the centre of the hole wherein the pencil stands, and E S the meridian line. Then when the shadow is at P the sun is in the direction of P E, or rather vertically over this line. Its azimuth is therefore the angle S E P. To obtain its altitude draw a straight line E A perpendicular to E P, and equal in length to that portion of the pencil which projects above the board. The angle A P E will then be the sun's altitude. Measure the azimuth and altitude both by this method and by means of the altazimuth, and see that the results agree.

From this time forward the sun's meridian altitude must be observed about once a week regularly, and especially about June 22, December 22, and on March 21 and September 23, if possible. The results of these observations must be preserved and will be utilised later on.

Let us suppose that we have thus obtained the sun's altitude and azimuth at every hour or half-hour from at least 9 a.m. till sunset. We must now transfer these positions on to our model sky. The azimuths are marked all round the horizon, and the altitudes can be measured by means of the brass scale. Always remember that in measuring off lines on the surface of the hemisphere they really represent the *angles* subtended at the observer's eye in the centre of the hemisphere. *This point is very important.* The pupil *must* acquire the habit of thinking of celestial measurements as angles, not lines.

Suppose the position of the sun is 315° in azimuth and 30° in altitude. Place the outside corner of the brass scale at azimuth 315°, the top, of course, just reaching the zenith, and make a dot with a soft pencil at the point 30° altitude. This dot will represent the sun's place in the sky for that particular observation. Repeat this for every pair of measures throughout the day, and finally connect the dots with a sweep of the pencil, making as even a curve as possible. This is the sun's path in the sky for that particular day.

10. *Finding the centre of this circular path.*—I want you now to find a point on the sky which is the centre of this circle. It is obvious that it will be somewhere on the meridian, for this, as we have seen, divides our sky into halves. I will tell you where the exact point is situated, to save time. It is on the meridian, at an altitude, measured from the South point of the horizon, equal to the latitude of the place of observation. For Perth this is 32°. Do not, however, introduce this word or idea of latitude to the pupil yet, but simply lay down the point and let him convince himself by means of a pair of compasses that it is the centre of the sun's path, and that no other point on the sky is.

11. *Moon and Stars.*—I must strongly plead here for one good evening's work of at least three or four hours, the longer the better. The work will not be continuous, but is almost essential to a complete grasp of the subject. Commence as soon as a single star becomes visible. Select about six stars, one of which should be alpha Crucis, the star at the foot of the Southern Cross, which is always visible. Try to spread the others over the sky as far as possible, but be sure they are sufficiently conspicuous to avoid all fear of mistake. Never mind their names. Call them Nos. 1 to 6, but be sure to remember which is which during the period over which the observations extend. Choose a clear night when the moon is between the first quarter and full. Observe with the altazimuth instrument and take the altitude and azimuth of each star in succession and also of the moon. Do this about once in every half-hour for every star, being careful to place the star as nearly as possible in the centre of the field of view. Enter the results in the following form:—

No. 1.		No. 2.		No. 3.		Moon.	
az.	alt.	az.	alt.	az.	alt.	az.	alt.
°	°	°	°	°	°	′	°
92	30	128	29	211	40	10	77
88	35	126	32	210	37	350	77
83	45	124	40	209	32	314	73
etc.		etc.		etc.		etc.	

12. *Finding the South Celestial Pole. Star paths.*—Plot all these positions down on the model sky and thus obtain a representation of part of the daily path of each of these stars. Note that each of these paths is a circle parallel to that of the sun's motion, and that the same point already found to be the centre of the sun's path is also the centre of each one of these circles. This point is called the *South Celestial Pole.* Place one point of a pair of compasses in it and continue each of the star circles as far as they will go. I think that the pupil will now realise that each star makes one complete circle every day. Note these circles carefully. Any star near the pole will never reach the horizon. The whole of the circular path can be described upon the sky. It will therefore be always visible at night and all night long. Such a star is alpha Crucis for all places South of latitude 27½°. A star a little farther away from the pole will rise about S.S.E. and sweep up in a slanting direction, passing the meridian nearly overhead. A star which passes exactly through the zenith will be found to rise almost S.E. and set almost S.W. But note that each of these paths so far mentioned is more than half a complete circle, and therefore each of these stars will be above the horizon for more than half a day, or 12 hours. Turn now to a star a long way away from the pole, down towards the Northern part of the horizon. It can be seen that its visible path is less than half a circle, and therefore it will remain above the horizon for less than 12 hours.

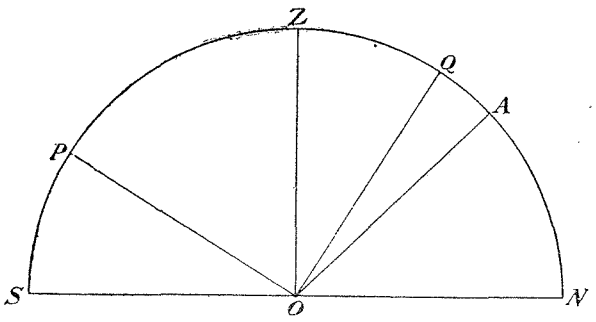
13. *The Celestial Equator and Declination.*—Measure 90° with the scale from the pole among the meridian. Call the point thus reached Q. Open a compass, place one point on the pole and the other on Q, and draw as much of a circle as possible. It will be found to meet the horizon at the East and West points (call these E. and W.). The circle E Q W is called the celestial *equator.* It is exactly half a circle, and any heavenly body which happens to make its track along this will remain above the horizon exactly 12 hours. Any object North of this will be visible *less,* and any object South will be visible *more* than 12 hours. Measure by scale the distance along the meridian of the sun's

track (which you have just laid down) from the equator. This distance is called the sun's *declination*, North or South, and the track of any heavenly body is called a *parallel* of declination. Measure the declination of each star. Always measure declinations directly away from or towards the pole. (Along the meridian is generally the most convenient, but test the measures in other parts also.)

Trace an imaginary equator in the real sky. How far North of the zenith does it cross the meridian? Measure on the model and prove that this distance must be exactly equal to the altitude of the pole (32° for Perth). What is the altitude of this point? Pick out this spot as nearly as possible in the real sky, and sweep the eye from due East up to this spot and round to due West. This is the equator. Any object (sun, moon, star) North of this line has a North declination and is above the horizon less than 12 hours a day. Any object South of this has a South declination and is above the horizon more than 12 hours a day.

14. *Résumé*.—Let us now collect the information, especially with respect to the meridian. Note first that our meridian only refers to the particular spot on which we stand, and to any place directly North or South of it, so that when we talk about the sun being on the meridian we mean on the meridian of the place where we are observing.

The celestial meridian is an imaginary semi-circle passing through the North and South points of the horizon and the observer's zenith.



In the accompanying figure S Z N is the meridian and O the observer. S and N are the South and North points of the horizon. Z is the zenith. P is the pole, the centre of all star tracks or parallels of declination. (Remember now the caution with respect to lines and angles in paragraph 9.) The angle S O P is the altitude of the pole (32° at Perth). Q is where the equator crosses the meridian. The angle P O Q is always a right angle. If A is the point where the sun crosses the meridian the angle A O N is the sun's meridian altitude, and A O Q is its declination (North in this case).

The angle Z O Q is always the same as the altitude of the pole (S O P). Let the pupil be quite sure of this. The angle S O Z equals P O Q, both being right angles. Take from each the common angle P O Z. Then S O P equals Z O Q.

The angle Q O N is obtained by subtracting the angle Z O Q (the altitude of the pole) from 90°, and the declination of the sun is the difference between this angle and its altitude. If the sun's altitude is greater than Q O N the declination is South, and, if less, North. Practice turning altitudes into declination and *vice versâ*. What is the declination of a star which passes through the zenith?

15. *Determining the altitude of the Pole. Solstice and equinox.*—It can easily be seen that the sun's path can be drawn if we know its meridian altitude, since it always moves in a circle with the pole as centre. Observations of its meridian altitude are supposed to have been accumulating since paragraph 9. Its path will be found to change gradually, being farthest North about the middle of June and farthest South about the middle of December. The tracks for these dates will be found to be at equal distances on each side of the equator, and the difference between will always be about 47°. This gives us a means of measuring the altitude of the equator with considerable accuracy, for it is exactly half way between the greatest and least meridian altitudes of the sun. But as the December observation will probably be found inconvenient, or will necessitate a long interval of waiting, the pupil may perhaps be allowed to take this quantity of 47° as an already well-established fact. He can, therefore, add 23½° to the altitude determined about June 22, and this will give the altitude of the equator. Subtract this from 90° and we get the altitude of the pole. The sun's altitude will be found to vary scarcely at all between the middle and end of June, so that it will be as well to make several measurements of this angle and to do so with both the altazimuth and the shadow.

The time of year (June 22 and December 22) when the sun reaches its greatest declination, and appears to remain in the same place for several days, is called the *solstice*, winter or summer respectively. The time of year (March 21 and September 23) when the sun is on the celestial equator, and the lengths of day and night are therefore equal, and is called the *equinox* (vernal or autumnal).

16. *Sun's annual movement.*—We have seen (11) that every star moves in a circle round the pole, and that some stars never set below the horizon at all. Why do we not see them during the daytime? Of course because the sun's light is so overpowering. But we must not forget that they are there and that the sky is just as full of stars in the daytime as at night, each star swinging for ever round and round the pole. Now when the sun's position with respect to these stars is measured by means of instruments specially designed for the purpose, it is found that the sun is steadily moving Eastward amongst the stars, taking exactly a year to complete one revolution. The pupil must take this to some extent upon trust, but *should be made to thoroughly realise the fact*. The process can be approximately seen as follows:—On any clear evening, as soon as stars first become visible, note the position of some conspicuous star in the West. Any star will do; but be sure it can be identified again. Look again in a week's time, and it will be found to have moved perceptibly nearer to the sun. Keep observing this occasionally, and very soon the star will have approached the sun so that it is no longer visible. This process will be found to be constantly going on, the Western stars always getting nearer to the sunset glow night after night until they can no longer be seen. This must not be confused with the diurnal movement we have been studying. It is really an apparent movement of the sun *Eastward among the stars*, and is distinct from the general diurnal movement, in which both sun and stars participate.

17. *The Earth Rotates on its Axis.*—We are now ready to take an important forward step. The distance of the sun from the earth has been found to be enormous, and the distance of the nearest fixed star so great as to be quite inconceivable. Is it at all likely that the sun and stars *really* move round the pole once a day, as they seem to do? When you are in a railway train the trees, poles, and houses *seem* to be flying past, but you know that really it is the train that is moving, and in the opposite direction. In particular, if you arrive at a station just as another train alongside is ready to start, it is sometimes almost impossible to tell whether your own or the other train is really in motion. So instead of imagining that we are at rest and the heavenly bodies rushing past, let us imagine that we are turning round, whilst they are stationary. Run a long steel pin through the model sky. It must, of course, pass through the centre of the sphere where we are supposed to be observing, and it must point towards that spot round which every celestial body seems to rotate; that is, it must pass through the pole of our model sky. This steel pin we shall call the *axis*. Let it project a few inches beyond the model in both directions, and support the two ends so that the model can be rotated. Place it in such a position that the horizon is horizonal and the meridian agrees with the real meridian. The axis will then be pointing to the pole in the real sky. Take a sharp lead pencil, direct the blunt end to the real sun, and the sharp, which should press lightly upon the model sky, towards the centre of the sphere (where the observer is supposed to be). Now rotate the model, and it will be found that if the pencil is held rigidly directed towards the sun, its point will trace out on the model sky the same track as we get from actual measurement of the sun's apparent path. Next, point the pencil at any other spot of the sky where we might imagine a star to be, and again rotate the model. The point will be found to describe exactly the path which we have already found the star appears to follow. This should be done repeatedly until the pupil thoroughly grasps how a rotating earth will explain the apparent diurnal movements of the heavenly bodies.

18. *The Earth moves round the Sun once a Year.*—We have seen that, in addition to the diurnal movement of the sun which it shares with the stars, it also appears to revolve round the earth once a year, passing one constellation after another. This can easily be shown to be explicable by considering the earth to move round the sun. For this purpose the models are not required. Place a boy in the centre of the room to represent the sun. Call this boy S, and let another boy, E, represent the earth. Imagine the walls of the room to be covered with stars. Now, let E move in a circle round S, and he will find that a straight line continued through S will pass in succession through one constellation after another; or, in other words, that S will appear to move round amongst the stars, making one complete revolution in the same time that E does.

It will thus be seen that the diurnal and annual revolution of the sun can be explained by assuming that the earth rotates once a day on an axis which points always in the same direction in space, and that it revolves round the sun once a year. There are other reasons, which cannot be given in this course, which convince us that this is the true explanation of the apparent movements of the heavenly bodies; but all we can hope for at this stage is that the pupil may see that this theory affords a rational explanation of the phenomena.

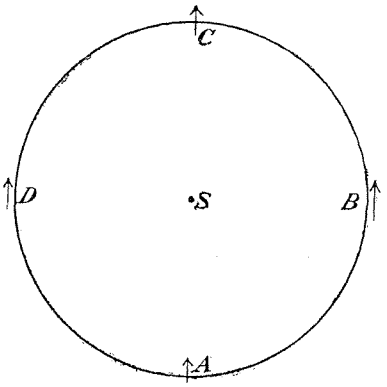
19. *Seasons—Ecliptic.*—We have now to find an explanation of the apparent movement of the sun which produces the change in our seasons from winter to summer. The *immediate* causes are evident:—

1st. The sun reaches a much greater altitude in December than in June, and it rays are more nearly perpendicular and therefore hotter.

2nd. Owing to its more Southern declination, the sun remains much longer above the horizon in December, and so pours more heat upon the earth. Let the student again convince himself of this fact by reference to the model sky.

The change from winter to summer is therefore entirely due to the change of the sun's altitude or declination. But why does the sun change its declination in this manner? A little careful manipulation of the model will show that this is the result of the earth's annual revolution round the sun.

Attach one end of a piece of thread about a yard in length to the centre of the hemisphere, and let the thread pass out through the meridian slit. Mount the model on its stand so that the earth's axis is inclined at an angle of 23½° to the vertical. Place the stand upon a flat table. We shall shortly commence to move the model round an imaginary sun placed in the centre of the table, but it will first be necessary to caution the pupil that the plane of the table is not now supposed to represent the horizontal plane. It, or rather a plane parallel to it and passing through the centre of the model, represents the plane on which the earth moves in its journey round the sun. This is called the plane of the *ecliptic*. We know that the earth's axis makes an angle of 32° (at Perth) with the horizontal plane, and we can see from an inspection of the model that it is doing so, but so far we have no means of knowing the angle it makes with the ecliptic. As a matter of fact, we shall see that the angle at which it is now set will exactly explain the observed changes in the sun's altitude, and no other angle will do so. The plane of the ecliptic, for the purpose of this exercise, is assumed to be an imaginary plane parallel to the surface of the table, and about 7 inches (the height of the observer in the middle of the hemisphere) above it. Therefore we must place our imaginary sun at this same height above the table, turn our sky on its own axis so that the meridian faces the sun, and stretch tightly the thread from the observer to the sun. The place where it crosses the meridian will thus represent the sun's meridian altitude.



Let A, B, C, D represent the observer's path round the sun S, and let the arrows indicate the direction in which the earth's axis is pointing. Be sure to keep the earth's axis pointing in the same direction throughout. Place the model at B, rotate it so that the meridian faces the sun, and stretch the thread tightly. It will be found to cut the meridian on the equator. This corresponds to the position of the earth on March 21. Try the experiment of tilting the axis more or less than 23½°, but keep it always in the direction of the arrow. It will be found that in this particular position with respect to the sun the thread will always pass out at the equator, no matter what the inclination may be. [A word of caution is perhaps necessary. The observer and the sun must always be at the same height above the table, *i.e.*, the thread must always be parallel to the table, as otherwise it will not be lying in the plane of the ecliptic. The particular position mentioned here, when the inclination of the earth's axis appears to be immaterial, is when this thread is at right angles to the direction of the arrows.]

Next move the model to C, and stretch the thread towards the sun as before. It will be found to cross the meridian about 23½° North of the equator, or the sun will appear to be in 23½° North declination. This represents the apparent position of the sun on June 22. Repeat the experiment of altering the tilt of the earth's axis. It will be found that, in this position, for every degree by which we alter this tilt we also alter the sun's declination by a degree, nd that if we place the earth's axis vertical the sun will be in the quator. Our own observations have shown us that the sun's eclination is 23½° on June 22, therefore we can now see that we have been correct in taking this angle of 23½° as the true direction which the earth's axis makes with the plane of the ecliptic.

Move the model to D. It will now be found that the thread crosses the meridian at the equator. This represents the earth's position on September 23. Finally, move the model to A. The sun will now be found to be 23½° South of the equator on the model sky, almost in the zenith. This represents the position of affairs on December 22.

These four positions—A, B, C, D—are the most noteworthy, but the model should also be placed in other parts of the orbit, and the exercise continued until the pupils see clearly for themselves how the annual movement of the earth round the sun, combined with an inclination of the earth's axis of 66½° to the plane of the ecliptic, accounts for the sun's movement in declination which produces the seasons.

20. *Hottest time of year not at the solstice.*—It may perhaps be asked why, if the sun reaches its greatest altitude in December, the hottest time of the year is about the end of January. Suppose a boy receives a variable weekly income, say 3d. the first week, then in succession 4d., 5d., 6d., 7d., 6d., 5d., 4d., 3d. Suppose he spends 1d. the first week, 2d. the next, then 3d., 4d., 5d., 5d., 5d., 4d., and puts by his savings. These latter will gradually mount up and continue to increase *as long as he receives more than he spends.* So that although his income reaches a maximum on the fifth week, his savings keep on increasing until the seventh, and then commence to decrease because he spends more than he receives. Just so is it with the earth. *Everything* in the universe is constantly giving off, or *radiating*, heat, and is at the same time receiving some of the heat which is being given off by other things. The heat which the earth receives from the sun is called *insolation.* As long as this is in excess of the earth's radiation the temperature will increase, *no matter whether the insolation itself is increasing or decreasing.* In our case the insolation reaches a maximum about the latter half of December, but it is not until about the end of January that the radiation catches up and balances it. Therefore up to this time the temperature will on the whole increase. For a similar reason the hottest time in the day is not until the early afternoon. Similarly the lowest temperature is reached in July, and not in June, as might at first be expected.

21. *The earth is a sphere.*—We have so far considered the movements of sun and stars with respect to the few miles of apparently flat earth upon which we happen to be situated. But now we have to ask ourselves "What is the general shape of the whole earth?" Supposing there were no hills or trees in the way, could we see Coolgardie from Perth? (Or other local question.) Of course we could not, you say. But why not? It cannot be on account of the distance, for that is only 325 miles, whereas we can easily see the moon when it is in the same direction and at a distance of 250,000 miles. If the earth were really flat, as it at first appears to be, we ought to be able to see a large object such as a town three or four hundred miles away quite easily, especially with the aid of a telescope. How far away then is our horizon? That depends. If we were to stand in the middle of a treeless and hill-less plain we could only see for a distance of about 2½ miles. If we were to climb up to a height of 100 feet we could see for a distance of about 12 miles. And we should find that the higher we climbed the farther could we see. This would not be the case if the earth were flat, therefore it must be curved. And we should also find that from every view point the horizon is circular. This curve, therefore, must be that of a spherical shape.

Again, the following will be a splendid object lesson and thoroughly appreciated by the pupils: Watch a ship in full sail, or a steamer, sail away from port. After a time the hull will gradually disappear from sight, whilst the sails and masts will be easily visible, especially if a telescope be available. Then the bottom portions of these will vanish, and finally the tops of the masts. No better demonstration than this of the earth's curvature is required.

Once again, if the earth were a flat plain the sun would be visible from every place as long as it was above the plane. The moment it went below it would be invisible. That is to say, it would set at the same instant, whether seen from Adelaide, Coolgardie, or Perth. But we know quite well that if a telegraph operator in Coolgardie were to signal Perth the moment the sun were seen to sink below the horizon at Coolgardie, the observer in Perth would find it still well up, and it would not set in Perth for another twenty minutes.

22. *Visible or sensible and rational horizons.*—We have various reasons, therefore (and there are others), for believing that the earth is a *sphere* or ball, and we have already found out that it spins round once a day upon an axis which is always directed to the same point in space, known as the celestial pole. We have also just seen that our horizon is a variable affair, depending upon our height. It also depends upon the presence or absence of hills, etc. The most distant circle of the earth which we can see at any time is called our *visible* or *sensible* horizon. For general astronomical purposes, however, we take a plane through the earth's centre parallel to our visible horizon. This is called the *rational* horizon. It can be easily illustrated by our model sky

Let us now represent half of the spherical earth, and let the pin which formerly represented the celestial zenith represent our particular locality, then the wooden horizon becomes our rational, where it was formerly our sensible horizon. It ought to be pointed out that the altitude of the pole and in fact all our previous measurements will remain just the same when we imagine ourselves transferred to the earth's centre and use the rational instead of the sensible horizon.

23. *Terrestrial Definitions.*—Let us take the model sphere and study it a little. If you imagine the sphere to be cut through *anywhere* by a plane surface you will get a circle. If the plane passes through the centre of the sphere the circle is called a *great circle.* If it does not pass through the centre the circle is called a *small circle.* This is a very important distinction. As a rule, only one great circle can be drawn through any two points on the surface (unless these points be at the opposite extremities of a diameter, such as the poles), but any number of small circles can be drawn between the same two points. The great circles on a sphere correspond to straight lines on a plane, and give the shortest distance between two points. Referring for a moment to our model sky, the meridian, horizon, and equator are great circles, as the planes in which they lie pass through the centre of the sphere; but the diurnal tracks of sun, moon, and stars are all small circles.

Coming back to the model earth or sphere, we find a pin through the centre upon which the sphere revolves. It must be carefully pointed out that we use this pin only for convenience, and that the axis of the real earth is only an imaginary line round which it revolves, just as in an ordinary spinning top. The two immovable points of the earth, at either end of the axis, are called the *terrestrial poles,* and the axis itself points to the celestial poles, one of which we have already found in the sky, and the other is below our northern horizon, but can be seen by people in Europe. Exactly half way between the two poles is a great circle, called the *terrestrial equator;* and if the model be placed upon a stand in such a position that the axis points to the celestial pole, it will be noticed that the plane of the terrestrial equator, if continued in the sky, traces out the celestial equator. It was stated just now that as a general rule only one great circle could be drawn through any two points on the surface of a sphere. If these two points, however, are at opposite extremities of a diameter of the sphere we can draw any number we please. Such are the two poles. Let us start by drawing one such great circle from pole to pole, cutting the equator in two points which will be exactly 180° from each other. Starting from one of these points, divide the equator into 360°, making a dot at every tenth degree, and draw a great circle through the poles and through each of these dots. These great circles are called *meridians.* Notice that a meridian can be drawn through *any* point on the sphere, but we only draw a few so as to avoid confusion.

Divide any of these meridians, from pole to pole, into 180°, and make a dot at every tenth degree. Put one point of a pair of compasses upon the nearest pole and draw a circle through each of the dots just made. These circles will all be parallel to each other and to the equator. They are called *parallels of latitude.*

Choose any one of the meridians as a *prime meridian.* Then the distance (in degrees) of any other meridian from this is called the *longitude.* The longitude of the first line to the East of the prime meridian is 10° E., and to the West 10° W.; of the second line 20° E., and 20° W. respectively, and so on up to 180°, which can be called 180° E. or 180° W. By knowing the longitude of any place, therefore, we can partly fix its position; we can say that it is somewhere on a certain meridian. If we wish to state exactly where the place is situated we must have some way of indicating how far from either the pole or the equator it is along the meridian. We choose the equator for our measuring point and call the number of degrees away from the equator the *latitude* of the place, North or South according as it is measured towards the North or South pole.

The pupil should now be exercised in dotting down places on the globe from given longitudes and latitudes.

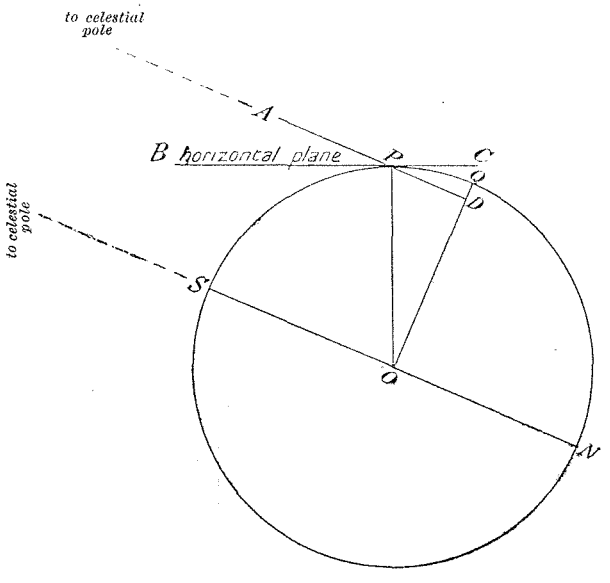
24. *Determination of Longitude.*—It is easy enough to plot down any locality upon the globe when we know its longitude and latitude, but how can we find those quantities?

Let us commence with longitude. You have seen that we may take *any* meridian for our prime meridian, from which differences of longitude are to be measured. As a matter of fact we take the meridian which passes through the Greenwich Observatory, near London, as our prime meridian. Take any distant object to represent the sun and rotate our model globe on its axis until the prime meridian comes opposite this object. The sun will now appear to be crossing the meridian to anybody in Greenwich. As the earth rotates each meridian in turn will come opposite the sun. It takes just 24 hours to make one complete revolution, and during this time 360° of longitude will have passed the sun. Therefore in one hour after the prime meridian comes opposite the sun the meridian of 15° West longitude will be opposite. In two hours the meridian of 30° West, and so on. Suppose that just as the sun crosses the meridian of Greenwich a signal is sent to New York. An observer at New York makes a note of the time, and exactly 4h. 54m. afterwards finds that the sun crosses his meridian. This gives us a proportion sum to determine the longitude. If 1h. difference in the time of the sun crossing the meridian corresponds to 15° of longitude, what longitude will 4h. 54m. equal? The answer is 73½°, and therefore New York is in longitude 73½° W.

The sun crosses the meridian at places East of Greenwich *before* it crosses the prime meridian, and so the signal must be sent from the Eastern station to Greenwich. For example, suppose we wished to obtain the longitude of Perth and could get a cable or telegraph line direct between the Perth and Greenwich Observatories. An observer at Perth would send a signal to Greenwich the moment the sun appeared to cross his meridian. The earth would go on rotating, and exactly 7h. 43m. 22s. afterwards the meridian of Greenwich would come opposite the sun, or the sun would apparently cross the meridian of the Greenwich observer. This, worked out as before, shows that Perth is on the meridian of 115° 50′ E. longitude.

In actual practice astronomers use a number of stars instead of the sun, and they cannot send a signal direct through such a great distance as that between Perth and Greenwich, so they measure in shorter lengths, just as one might measure a chain with a two-foot rule.

25. *Determination of Latitude.*—Fix the model globe in such a position that its axis points to the celestial pole. Take the model sky, withdraw the axis, and in its place insert a short rod which projects a few inches, just to indicate the direction in which the axis points. Place the flat base so that its centre rests upon the equator. The base is now parallel to the earth's axis, and the pole of the model sky is therefore pointing 32° too high. Move the flat base round the sphere towards the South terrestrial pole, and as you do so you will find the pole of the model sky gradually moving down towards its proper place until the centre of the model horizon rests upon the globe at latitude 32°. The axis of the model sky is now parallel to the terrestrial axis and points to the celestial pole. In other words, *the latitude of the observer is the same as the altitude of the pole above the horizon.* No amount of explanation will make this important fact so clear as a few minutes' manipulation of the two models, but perhaps the following illustration will assist. The pupil will probably be prepared to take for granted that the horizontal plane is tangent to the sphere, and therefore perpendicular to the line joining the observer's position to the centre of the earth. Let the circle represent a section of the earth through the observer, P, and the two poles, S and N, in other words the observer's terrestrial meridian, and let O be the earth's centre, B C the horizontal plane at P, and P A the direction of the celestial pole, P A is therefore parallel to the N S. Draw O D Q perpendicular to S O N, Q is therefore a point on the terrestrial equator.



The angles C P D and D P O together equal a right angle. So also do the angles D O P and D P O, therefore D P C equals D O P. But D P C equals A P B, therefore A P B equals D O P. Now the angle A P B is the elevation of the pole above the horizon, and the angle P O D is the observer's latitude. Therefore the latitude of the observer is the same as the altitude of the pole above the horizon.

From this it would appear that the farther South we go the greater becomes the altitude of the pole, and this is exactly what we find. At Albany, for instance, the altitude of the pole is 35° instead of 32° as in Perth; whilst on the other hand at Geraldton it is not quite 29°. At a place on the equator the pole would be on the horizon. There would in fact be two poles, one at the South point and the other at the North point of the horizon. Farther North we should lose sight altogether of the South

celestial pole and the stars in its immediate neighbourhood, and the stars and sun would all seem to describe circles round another point in the sky known as the North celestial pole.

26. *Size and shape of the Earth.*—We have now seen how from astronomical observations the longitude and latitude of any place upon the earth can be obtained, and we shall soon see how this enables us to ascertain the size of the earth. If we find two places upon the equator exactly a degree of longitude apart, and measure the distance between them, it turns out to be just over 69 miles. Multiplying this by 360, the number of degrees all round the equator, we find that the circumference of the earth is 24,903 miles. Dividing this by 3·14159 we get 3,953 miles for the earth's diameter, measured through the equator.

By measuring a degree of latitude it is found that the length is not always the same in different places, and so we arrive at the conclusion that the earth is not quite spherical. From a number of observations it has been found that the earth's diameter, measured from pole to pole, is 13½ miles less than that measured through the equator, or that the shape of the earth is that of a sphere which has been very slightly flattened at the poles.

27. *General Summary.*—In concluding this branch of the subject it will be as well to deal with the earth as a whole, and see how its movements appear to people situated in different latitudes. For this purpose we can once more use our model sky. We have discovered two very important facts—

1st. The sun, during the course of a year, changes from a declination of 23½° N. to 23½° S. and back again.

2nd. The altitude of the pole is equal to the latitude of the place of observation.

Let us imagine we are on the equator. The pole will then be at the South point of the horizon. (The North pole will also be situated at the North point of the horizon.) You will remember that in order to draw the celestial equator we must place one point of the compasses on the pole, and the other point on the E. or W. point of the horizon (in other words we must have a radius of 90°), and then draw a semicircle. Doing this with the pole on the horizon, we shall find that the equator passes directly through the zenith. This will represent the diurnal path of the sun on March 21 and September 23, the time of the equinox. Measure 23½° on each side of the equator. This will give the extreme range of the sun's path, and will represent its position at the solstices. With the compasses draw the diurnal paths. Notice that each of these paths is exactly half a circle, and so is any diurnal path of the sun or of any star. At the equator, therefore, the sun (and in fact every celestial object) is above the horizon for exactly 12 hours on every day throughout the year. The sun's meridian altitude changes from 66½° above the North horizon to 66½° above the South horizon. On the whole, therefore, the sun's heat changes very little from one season to another, and there is a hot and fairly equable temperature the whole year round.

Next take a place in latitude 23½° S. The altitude of the pole will be 23½° above the South horizon. Draw the equator and mark off the solstices 23½° on each side of it. The summer solstice will just reach the zenith, and the winter one will be at a meridian altitude of 43°. The length of the sun's path in December will be greater than a semi-circle, and in winter less. There will, therefore, be a distinct difference in the seasons, but not so pronounced as in Perth.

Take a few more cases, gradually working South. It will be found that the farther South we go the lower becomes the sun's altitude both in winter and summer, and therefore the colder becomes the climate generally. It will also be noticed that the greater becomes the difference between the lengths of the summer and winter days. It does not follow at all that because the sun's meridian altitude in December is less in latitude 60° than in Perth that therefore the length of time it is above the horizon is less. The day will be found to have increased to 18½ hours.

Now try latitude 66½° S. At the summer solstice the sun will sweep round the pole in a complete circle and will therefore be visible for the whole 24 hours. At the winter solstice it will just touch the North point of the horizon, and will therefore be invisible.

At 70° S. the sun will remain always visible for many days in midsummer, in fact from the time it reaches 20° S. declination, past the solstice, until it again reaches 20° S. declination, going North. In midwinter it will be invisible for an equal length of time.

At the terrestrial pole itself the celestial pole will be directly overhead, and the equator will coincide with the horizon. From March 21 till September 23 the sun will be invisible. On the latter date it will appear on the horizon and travel all round it, gradually working up in a spiral until it runs round, always parallel to the horizon, at an altitude of 23½°, higher than which it can never rise. Then day by day is will sink lower until it runs all round the horizon on March 21, and then disappears for six months.

We have now seen how and why the seasons vary in different latitudes. Instead of travelling South from the equator we might have gone North, when an exactly similar series of changes would have been noticed. It only remains to add that special names have been given to those parallels of latitude where noteworthy changes occur. In latitude 23½°, for instance, the sun just reaches the zenith at the solstice, but never advances beyond it. These parallels of latitude, North and South are called *tropics*, the northern one being the *Tropic of Cancer*, and the southern one the *Tropic of Capricorn*. The portion of the earth between the two tropics is called the *Torrid Zone*, or is more frequently spoken of as the "Tropics." Another noteworthy parallel of latitude is 66½°, just where the sun at the summer solstice first remains above the horizon for an entire day. The Northern parallel of 66½° is called the *Arctic Circle*, and the Southern the *Antarctic Circle*. The polar regions of the earth, included within these circles, are called the *Frigid Zones*. Those portions of the earth between the Frigid and the Torrid Zones are called the *Temperate Zones*.

THE MOON.

28. *Observations of Moon's Phases.* — The moon should be observed during one lunation, or at least from new till a little past the full. It should be looked for as soon as possible after the almanac states that it will be new. It ought to be visible low down in the West shortly after sunset within two days of the new, and will then appear as a very fine crescent. Next evening it will be a trifle thicker and farther away from the sun. The beautiful phenomenon of the "old moon in the young moon's arms" will now probably be visible. That is, not only will you be able to see the bright young crescent, but the whole round of the moon will be faintly visible. About five days from the time when the crescent was first visible the moon will be half full. This is called its *first quarter*. It will in this phase pass the meridian about sunset, and set about midnight, so it must have been moving eastward away from the sun all this time. Watch it night after night pass star after star, so as to be quite certain that it is really moving round the earth to the eastward amongst the stars. By the time it has reached the full it will be just opposite the sun, rising as the sun sets. It has therefore moved through nearly half a circle since we first saw it as a fine crescent. It will now commence to diminish in size, still moving round amongst the stars, until in about a week after the full it will once more be half-moon shaped. It is now said to be in its *third quarter*, and will rise about midnight. It will still continue to diminish, becoming crescent-shaped once again, rising later and later every morning and moving steadily round amongst the stars, until it is lost in the sun's rays. In a few more days it will be seen as a crescent in the early evening, and commence to go through the same performance once more. The time taken for it to make one complete revolution round the earth, starting from the sun and coming back to it, is nearly 30 days.

29. *Reasons for these Changes.*—We see, therefore, that the phase depends in some way upon the situation of the moon with respect to the sun. The nearer it appears to be to that luminary the less of its surface is visible. The phenomena can easily be explained by means of a ball of any kind. Paint one half black and the other white (or take an orange and half peel it). This ball is supposed to represent the moon, one half of which is always illuminated by the sun's rays, and is therefore the only portion which is visible. Take any distant object to represent the sun, then, of course, the white half of the ball must always face that object. The observer's head will represent the earth. Place the moon in a straight line between the earth and the sun, with the white part facing the sun. None of the visible portion can now be seen by the earth. This corresponds to new moon. Commence to move the moon round the earth, keeping the white part always facing the sun. When the moon and sun are separated by about 15° a tiny crescent of white can be seen. This represents the first appearance of the young moon in the evening sky. In this position a great deal of sunlight will be reflected from the earth to the dark portion of the moon, sufficient to feebly illuminate it; and this gives rise to the phenomena just spoken of as "the old moon in the young moon's arms." In other words, when the moon is nearly "new" to us, the earth is nearly "full" to the moon. By the time the sun and moon subtend a right angle one half of the white part can be seen. The moon is now in her first quarter. As it moves farther round an increasing portion of the bright part can be seen, until, when directly opposite, the whole circle becomes visible. The moon is now "full." Continuing to move it round, the bright part begins to diminish, reaching half-moon stage, or third quarter, when two-thirds of its journey has been accomplished, and then passing through the crescent (or rather decrescent) stage to invisibility. The reason for the terms "first" and "third" quarters when the moon is half full is now obvious. This shape is attained when the moon has completed one quarter and three quarters, respectively, of its monthly journey. Between the first and third quarter the bulging shape of the moon is known as *gibbous*.

30. *Eclipse of Moon.*—As a general rule the moon is not *exactly* in the plane of the ecliptic, or the plane in which the earth travels round the sun. Sometimes it is a trifle above, sometimes below this plane. But if it happens to be right on this plane or very close to it when at the full, the earth will shut off the sun's light from it for an hour or two and it will become invisible. Looking at it in another way, we may say that the moon passes

into the earth's shadow. Every object exposed to sunlight casts a shadow, and, of course, the earth throws one behind it into space. As a rule this shadow has nothing to fall upon, but when the moon gets right in the way the shadow falls upon the moon, which is then said to be *eclipsed*. The shape of the edge of the earth's shadow, as seen when the moon is either going into or emerging from it, is always circular, and as a sphere is the only shape which will *always* cast a circular shadow, this observation furnishes yet one more proof of the earth's rotundity.

HISTORY.

History should be taught orally to the children. Young children will understand the history of their own country more readily than that of others, but they will understand also the history of early races, and will especially be taught from the Bible narratives where there are direct stories of primitive civilisation. Among the objects of history teaching must be included the furnishing of distinct pictures of human life and types of human conduct at different periods of the world's history among different races. Without some knowledge of History the characters of the different peoples of the earth cannot be understood, nor the relative stages of civilisation achieved be brought before the children. The man who is ignorant of History is uneducated, for History references will be frequently met with throughout his life in all literature and in daily talk. The special purpose of English History is to show the growth of our race, to trace its freedom, its character, its success, its failure. The teaching of History will lead also to the teaching of civic life. From a knowledge of the Empire and of the neighbours of the Empire should grow a juster knowledge of international relations; from a knowledge of political constitution should spring a comprehension of the responsibilities of citizenship. Teachers must utilise current events for showing children history in the making, and for the higher classes newspaper classes are of great value, a "current events" board with extracts and pictures being a most useful adjunct to a school. History may be taught to the lower classes purely from conversation lessons, but a time should be set apart for this subject in each standard. In Standards I. and II. stories of early races or heroic deeds in the world's history should be taken. For example, stories of heroes of the Bible, stories of heroes of Greece and Rome, stories of the biographies of early Englishmen, or such stories of action as appear in the book of Golden Deeds, by Miss C. M. Young.

In Standard III. some history of the early foundation of this State should be taken in conjunction with the above.

In Standard IV. the teacher should aim at giving a more general knowledge of the Australasian States.

Standard V.—General English History.

Standard VI.—History of the British Colonial Empire.

Standard VII.—General history of the world, with special reference to the nations most in contact with Australia, *e.g.*, Germans, Italians, Indians, Chinese, and Americans.

Books will be mentioned from time to time for the guidance of teachers. They should draw up a syllabus and submit it to the Inspector. History readers may be taken in the schools, but should be amplified by oral instruction by the teacher. Overloading of detail, however, must be avoided. In English History, for example, the dates of the accession of kings are unimportant. A few important constitutional or military events should have their dates attached to them; but, speaking generally, the aim of the teacher should be rather to select an epoch and make the children learn all the important events of the years within that epoch.

KINDERGARTEN—VARIED OCCUPATIONS.

MANUAL WORK (with Drawing).

Young children exhibit a love of movement and an eager desire of questioning. These must be trained, not repressed. Kindergarten training aims at the harmonious development of the child's nature, and its games, stories, and occupations stimulate the mind, while strengthening sense perception and bodily activity.

In the Infant classes, drawing, paper folding, sticklaying, building, etc., will teach the children accuracy of eye and usefulness of finger. These might be developed and extended in the upper classes. Where possible, the use of tools on wood should be taught to boys in the Fifth Standard and upwards. Other useful occupations for training hand and eye would be clay modelling in connection with the drawing and cardboard cutting and modelling.

Caning chairs, brush making, basket making, and netting are all easily taught to children, and are useful occupations. They utilise the fingers and stimulate the creative faculty, though they have not the same educative value as the clay work or carpentry classes.

The production of merely pretty objects should be avoided. Woodcarving may be taken, but it is not recommended, design being better taught by drawing and the use of tools in the elementary carpentry.

Wherever possible, the teachers should give some mannal work to the boys, to correspond with one at least of the needlework lessons of the girls.

OBJECT LESSONS.

The intention of an object lesson is to make the children observe some object, form their own ideas, and express them. They must be used in the infant classes and lower standards to enable the children to understand some of the qualities underlying the things which they see most commonly, but of which they form no real conception. In the higher standards they should become lessons in elementary science, but still retain the experimental character, so that the child himself is trained to observe phenomena and reason from his own observation. They must not be mere information lessons about objects, though these are very valuable, and should also be given. Teachers must submit to the Inspectors a list both of object lessons and information lessons given during the year. The actual object must always be used in the lesson, if possible, but a good picture may sometimes take its place. A thorough examination of a few objects trains the children's observations better than a superficial treatment of many. The child must compare and contrast the object with others. Teachers should, as far as possible, illustrate details by drawing on the blackboard. The children might make simple drawings of the form they observe when possible on their slates or paper. Clay modelling would still be more valuable. To train the observation of the child, his attention should be directed to the different parts of the object in an orderly manner, and their relation to the whole explained to him. The object should then be again treated as a whole. After the children have been trained to observe, they must learn to express clearly the result of their observations.

A list of suitable lessons might destroy the teacher's initiative; but any of the following would be good. Teachers must choose their own subjects:—

LESSONS SPECIALLY ADAPTED FOR TOWN SCHOOLS.

The School Door—Its materials, shape, construction.

Glass—Uses, manufacture, etc.

Drinking Water—How obtained, simple properties of water shown.

River—Boats, barges, etc.

Bricks—Sizes to be measured by children, shape to be drawn, manufacture, arrangement in 14in. or 9in. wall may be shown with wooden bricks.

Wood—For building, for lining, for burning; any local wood, *e.g.*, jarrah, sandalwood.

Corrugated Iron—Its uses, how made.

Kerosene—How obtained, properties, uses, dangers.

Gas—Pipes, works, etc.

Roadmaking and Paving—Common stones used.

Railways—The line, rolling-stock, the railway men.

Horse—Hide, teeth, hoofs, tail, mane.

Cat—(Compare with dog)—eyes, rough, dry tongue, pads and claws, teeth, method of holding prey, drinking, fur, whiskers, tail.

Mouse—(Compare with rat)—teeth, paws, tail, whiskers, eyes, ears.

Plant—*e.g.*, grown in school.

Shops—Their contents, *e.g.*, oranges, bananas, tea, sugar, currants, etc., etc.

The Baker—Flour, paste, bread, biscuits.

The Newspaper.

The Milkman.

The Postman—Addressing and posting letters—the stamp.

The Policeman.

The Omnibus.

Foods—Tea, coffee, potatoes, meat, etc.

The Garden and its contents.

Ventilation.

Sunrise, Noon, and Sunset—Note the different objects over which the sun rises or sets each month, varying height above horizon at noon, length of shadow.

Cork—Uses, qualities; illustrated by experiment.

COUNTRY SCHOOLS.

The Land—Bush and plough land, soil, level or sloping; difference between sand and mud; hills, rivers.

The Sky—Clouds of three kinds ("heaps," "beds," and "feathers").

Wind—(Note and keep record of the direction of wind for several days)—warm and cold, rainy, and dry winds.

Rain—Drops on dust form little balls, heavy rain tearing up roads.

Thunder and Lightning.

The Moon—Note the changes; draw the shape from week to week.

Snakes—Shape, covering, how they move, jaws, fangs.

Trees—Evergreen or deciduous (leaves might be pressed and their shapes drawn round by children); the gum, jam, fruit trees, etc.

Poison plants.

Birds—Wild parrots, turkeys, wagtails, crows, swallows, etc.; feathers, wings, beak, feet, motions, nests, eggs, food; fowls, ducks, etc.

Animals—Kangaroos, iguanas, horses, sheep, dogs.

Flowers—Those obtained locally in different seasons.

The Cow—Compared with sheep and goat, food, teeth, chewing, tail, hoof, horns, the dairy, butter and cheese making.

Parasites—As mistletoe.

The Farm—Plough, drill, reaping machines, grass, corn, root crops, vines, oranges, shooting seeds and flying seeds.

Bees and Beekeeping.

Butterfly—Colours, beauty, history.

Farmers' Pests—Insects, beetles, cockroaches, ants—their legs, wings, segments, mouth, breathing apparatus, etc.

Frogs.

Experiments should be made, *e.g.*, to illustrate plant growth, grow an onion in a bottle of water and note appearance of root and stem (a model in clay might be made at various stages of the growth), contrast with carrot; make simple experiments to show the effect of light on (1) leaves and (2) roots; celery—blanching; simple manuring of plants; how plants help or hinder each other's growth.

Simple experiments in displacement of water, its pressure and that of air, squirt-pump system.

Comparison and contrast should be made, teeth and their uses in man, cat, cow, horse, snake; hair, fur, and wool in the dog, the opossum, and the sheep; the beaks of ducks, fowls, pelicans, magpies; the porous nature of sponge, chalk, blotting paper; things that melt—butter, tallow, sealing wax, lead, iron; things that stretch—a football, an elastic band.

In the higher classes the experiments will, of course, be more difficult, *e.g.*, the combination of oxygen and hydrogen, filtration and distillation of water, its density compared with mercury. Crystals can be formed by hanging a thread in water in which powdered alum has been dissolved. Notions of the thermometer may be given. Measurements by eye and by rule; weight—by hand and in scales, should be carefully taught. Machines may be explained—the bicycle, the sewing machine, the threshing machine.

Teachers would find some simple book of experiments very useful, *e.g.*, "J. A. Bower's Simple Experiments for Science-Teaching," published by the S.P.C.K.

DRILL.

GENERAL PRINCIPLES.

Drill requires absolute accuracy and great smartness to be instructive. The lessons should be frequent and short. Any lessons of a quarter of an hour or over should be taken in the playground, care being taken to shelter the children from the sun. It is very useful to devote a few minutes between other lessons to extension exercises in the desks.

For cadets in Standards IV., V., VI., and VII. the special drill book put out by the Department will be used: for schools where there are no cadets Chesterton's Exercises will be used in addition to certain sections of the Education Department Manual.

Standard.	Education Department Manual.	Chesterton's Manual of Physical Exercises.		
I.	Sections 2, 3, 4, 5, 6, 10, 11, 12	I.	Head movements...	Pract. 1, 2, 3
		II.	Trunk movements	„ 1, 2, 3
		III.	Arm-raising and swinging	„ 1, 2, 3
		IV.	Arm-bending and stretching	„ 1
		V.	Leg and hip movements	„ 1
II.	Sections 7, 8, 9, 13, 14, 15, 16, 17, 18, 19, 20	I.	Same as for Std. I.	
		II.	Commencing positions	
		III.	Arm-raising and swinging	Pract. 4
		IV.	Arm-bending and stretching	„ 2
		V.	Leg and hip movements	„ 2
		VI.	Trunk and arm movements	„ 1, 2
		VII.	Shoulder movement	„ 1, 2
III.	Sections 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34	I.	Same as for Std. III.	
		II.	Arm-raising and swinging	Pract. 5, 6
		III.	Arm-bending and stretching	„ 3
		IV.	Trunk and arm movements	„ 3, 4
		V.	Shoulder movement	„ 5
		VI.	Leg, hip, and arm movements	„ 1, 2
		VII.	Lunging movement	„ 1
IV. and V. (Girls.)	Sections 31, 36, 37, 38, 39, and 42	I.	Same as for Std. III.	
		II.	Leg and hip and arm movements	Pract. 3
		III.	Lunging movement	„ 2, 3
		IV.	Side-lunging with arm movements	„ 1, 2
		V.	Shoulder movements	„ 3, 4
		VI.	Marching with feet raising	
		VII.	Marching with knee raising	
		VIII.	Balance movement	„ 1, 2, 3, 4
VI. and VII. (Girls.)	Sections 31, 36, 37, 38, 39, and 42	I.	Same as for Stds. IV. and V.	
		II.	Side-lunging with arm movements	Pract. 3, 4
		III.	Direct lunging with arm movements	„ 1, 2
		IV.	Shoulder movement	„ 6, 7, 8
		V.	Combined exercises	
		VI.	Wand exercises	
		VII.	Club exercises	
		VIII.	Figure marching	
IV. V. VI. VII. Boys.	(1.) Company Drill (2). Rifle Exercises (3.) Firing Exercises (4.) Ceremonial Drill *Physical Drill.* (1.) Leg Exercises (2.) Free Gymnastics (3.) Physical Drill with arms			

MUSIC.

1. For purposes of Examination in large schools the Standards will be grouped as under:—

Division 1.—Infants.
Division 2.—Standards I. and II.
Division 3.—Standards III. and IV.
Division 4.—Standards V. and upwards.

In small schools (under 100 average attendance) the following grouping will be taken:—

Division 1.—Infants and Standard I.
Division 2.—Standards II. and III.
Division 3.—Standards IV. and upwards.

2. The music tests will not be applied to individual children.

3. If the Inspector should notice that one or two voices are unduly leading the singing, he may silence such voices for the time.

4. Teachers will be allowed to start, but not to join in the singing, except when adding a bass or independent part to a song test.

5. Either Tonic Sol-fa or Staff Notation may be taken.

6. Breathing exercises must be given to the children in the schools.

STAFF NOTATION.

Division 1.

1. To sing, as pointed out by the Examiner, the notes of the key-chord of C (Do, Mi, Sol, Do) in any easy order, using the Sol-fa syllables.

2. To sing an easy School song or Action song (three songs to be prepared).

Division 2.

1. To sing, as pointed out by the Examiner, using the Sol-fa syllables, the ascending and descending notes of the scale of C, the notes of the key-chord of C in any order, and also small groups of consecutive notes of the scale of C, as written on the blackboard by the Examiner.

2. Time-test. To sing on one sound, to the syllable la or doh, an exercise in 2-4 or 4-4 time, which shall include minims and crotchets.

3. To sing in unison a School song (five songs to be prepared).

Division 3.

1. To sing, as in Division 2, a series of notes in the key of C, introducing F sharp and B flat.

2. Time-test. To sing on one sound an exercise in 4-4 or 3-4 time, containing semibreves, minims, crotchets, quavers.

3. Ear-test. To imitate (not name) a simple phrase of not more than four notes, using the syllable la after hearing the Examiner sing it twice to the syllable la (or play).

4. Song-test. To sing in unison a School song (five songs to be prepared).

Division 4.

1. To sing, as in previous Divisions, any single Diatonic passage in the key of G (one sharp) and F (one flat), D (two sharps), B flat (two flats).

2. Time-test. To sing, on one sound, a series of notes and rests in 2-2, 4-4, 3-2, 3-4 times, which may include dotted minims.

3. Ear-test. To repeat and name any three consecutive notes of the scale of C, after hearing the Examiner sing it to the syllable la (or play). The test should commence on some note of the key-chord.

4. Song-test. To sing, in two or more parts, a School song five songs to be prepared).

TONIC SOL-FA METHOD AND NOTATION.

Division 1.

1. To sing from the modulator, the tones of a doh chord, in any easy order, using the sol-fa syllables.

2. To sing an easy School song or Action song (three songs to be prepared).

Division 2.

1. To sol-fa from the modulator in any key—the key-tone and chord being given; the tones of the doh chord, in any order, and the other tones of the scale in stepwise succession.

2. Time test—To sing on one tone to the syllable la or doh an exercise, including one-pulse and two-pulse tones, in two-pulse or four-pulse measure.

3. To sing in unison a School song (five songs to be prepared).

Division 3.

1. To sol-fa from the modulator, in any key, simple passages in the major diatonic scale, including fe and ta in stepwise progression; also, to sol-fa at sight a written or printed exercise, including the notes of the doh chord in any order, and any other notes of the major diatonic scale in stepwise progression.

2. Time test—To sing on one sound an exercise in three-pulse or four-pulse measure, containing one-pulse notes, half-pulse notes, and whole-pulse rests on the non-accented pulses of the measure.

3. Ear test—To imitate (not name) a simple phrase of not more than four notes, using the syllable la, after hearing the Examiner sing it twice to the syllable la (or play).

4. To sing in unison a School song (five songs to be prepared).

Division 4.

1. To sol-fa any simple diatonic passage in the major key.

2. Time test—To sing on one tone, a series of notes in two-pulse, three-pulse, or four-pulse measure, including pulse and a-half notes.

3. To imitate to la, and afterwards name any three consecutive tones of the scale, after hearing the Examiner sing it to the syllable la (or play). The test should commence on some tone of the doh chord.

4. To sing a School song in two or more parts (five songs to be prepared).

NEEDLEWORK.

REQUIREMENTS.

Infants—Class II.—Needle and Position drill. Infants—Class III.—Hemming in two colours.

STANDARD I.—Needlework (Girls)—Hemming, Seaming, and Felling. To work a pillow-case or work-bag.

STANDARD II.—Needlework (Girls)—Same as Standard I., *and gathering*. To work a pillow-case or chemise.

STANDARD III.—Needlework (Girls)—Stitching, Sewing on Strings, Herring-bone Stitch.

STANDARD IV.—Needlework (Girls)—Same as Standard III., with the addition of Buttonholes. To set in a flannel patch. Any suitable garment showing the work of this Standard.

STANDARD V.—Needlework (Girls)—The work of the former Standards and Sewing on Buttons, Patching in calico, print and flannel. Cutting out.

STANDARD VI.—Darning Stocking-web material (thin places and holes) and a hedge-tear darn on linen. Any suitable garment. Cutting out.

STANDARD VII.—Cutting out and fixing work. To set in a gusset. Any suitable garment.

Note.—The minimum time to be devoted to Needlework is three hours per week.

NEEDLEWORK EXAMINATION SCHEDULE.

	Exercises.	Material required.
Infants Class 3.	To hem a piece of calico 3 inches long in two colours of cotton (one side only).	A piece of calico 3 inches long.
Standard I.	To fix and work a sew and fell seam of 3 inches	Two pieces of calico 3 inches by 2½ inches.
Standard II.	*a.* To fix and work a sew and fell seam of 3 inches.	*a.* Two pieces of calico 3 inches by 2½ inches.
	b. To gather and stroke a piece of calico 5 inches by 2½ inches.	*b.* One piece of calico 5 inches by 2½ inches.
Standard III.	*a.* To make a band and fix it for gathers, and work not less than 2 inches, and sew on to a string.	*a.* One piece of calico 3 inches square, and a piece of tape 2 inches long.
	b. To fix and work a sew and fell seam of 3 inches, turn down and fix for hemming the four sides of the material.	*b.* Two pieces of calico 3 inches by 2½ inches.
	c. To work 3 inches of herring-bone.	*c.* One piece of flannel.

NEEDLEWORK EXAMINATION SCHEDULE—*continued.*

	Exercises.	Material required.
Standard IV.	*a.* To gather and stroke down 5 inches and fix into a band of 2½ inches and set in 1½ inches.	*a.* A piece of calico 5 inches by 2½ inches, and a piece 3 inches square.
	b. To work a button-hole.	*b.* A piece of calico 3 inches by 2½ inches.
	c. Set in a flannel patch.	*c.* A piece of flannel, 4 inches square, and another piece of same 2 inches square.
Standard V.	*a.* To put in a flannel, a print, or a calico patch 2 inches square.	*a.* A piece of flannel, of print, and of calico, each 4 inches square, and another piece of same 2 inches square.
	b. To double down as for a band, and on this cut and work a button-hole, and sew on a button (not pierced).	*b.* A piece of calico 5 inches square, and a linen button (not pierced).
	c. To cut out in paper a pinafore (two sizes) by some simple scale of proportion.	*c.* Tissue paper.
Standard VI.	*a.* To darn an irregular space, about 1 inch square, on stocking material.	*a.* A piece of stocking web 3 inches square.
	b. To darn on linen a hedge-tear darn, half-an-inch each way.	*b.* A piece of linen 4 inches square.
	c. To cut out in paper a pair of drawers and a chemise.	*c.* Supply of tissue paper.
Standard VII.	*a.* Set in a gusset.	*a.* A piece of calico 5 inches by 3 inches, and a piece 1½ inches square.
	b. To cut out in paper a night-dress and a slip-bodice.	*b.* Supply of tissue paper.

Notes.—1. Each girl who has been four months or more on the School Register must show a finished garment suitable for her standard, except in Standards III. and V. Such garment must have been worked since the date of the last Annual Inspection. It may be of any size the Teacher chooses, provided it is not too small to be of practical use for a child or an adult. The work on the garment should be only stitches learnt in the School, and no trimmings are allowed unless they have been worked by the children themselves. Elaborate work is not required, and can be added by the children at home after the inspection if necessary.

2. Garments must be presented for inspection in the same condition as when completed by the scholars.

3. Suitable needles, cotton, thimbles, and scissors should be in readiness for distribution, together with the other material mentioned in the table of exercises.

4. Coloured cottons must be used in all Standards at the Annual Inspection.

5. Each girl may be required to work one or more of the exercises specified in Schedule III. at the Annual Inspection without the slightest aid or advice from the Teacher, either in fixing, sewing, or cutting out. In Infants' Classes the hem required from Class 3 may be previously fixed by the Teacher.

6. In the Upper Standards (VII. and Ex.-VII.) girls may be employed in cutting out and fixing garments for the lower Standards. When so employed they will not be required to work a garment themselves.

7. In Standards III. and V., where garments are not required, every girl will be required to work specimens on the day of the annual visit of the Inspector.

SCHEDULE II.

EX-SEVENTH STANDARD.

1. Children who have successfully passed the Seventh Standard and remain at school, must continue and extend the work they have done in that class in—

Arithmetic.

English, especially composition.

Drawing—Geometrical. More difficult problems in areas including the bisection of triangles and quadrilaterals by lines drawn through points in their sides and the trisection of triangles; the tangency of a straight line and a circle; the tangency of two circles; diagonal scales; area of a polygon and a circle; the volume of simple solids; simple approximations; measurement correct to $\frac{1}{10}''$.

Elements of Agriculture, for boys.

History, with special reference to the constitutional history of our own times.

Geography.—Historical Geography will be more fully taught—special knowledge of the United States and India. Physiography should be taken on general lines.

And at least two specific subjects in addition.

In lieu of the above, teachers are at liberty, by permission of the Department, to take the subjects for the Junior Examination of the Adelaide University, as laid down by that University from year to year.

SCHEDULE III.

SPECIFIC SUBJECTS.

1. Notice of intention to teach these subjects must be given to the Department at the beginning of each School year; such notice must state the subjects chosen and the probable number of pupils.

2. Children in Standard VI. may take one specific subject, and those in Standard VII. not more than two. The leave of the Department must be given before they are taken.

3. No scholars can be examined for two successive years in the same stage of the same subject, except by permission of an Inspector.

As a rule no scholar, after being examined in one subject, may be presented in another until he has passed both stages of the first.

FIRST STAGE.

Algebra.—Notation, Addition, Subtraction, Multiplication, Division.

Euclid.—Euclid, Book I. to Prop. 26 inclusive.

Mensuration.—Triangles and parallelograms.

Latin.—Grammar to the end of regular verbs, with simple exercises in translation.

Mechanics.—Matter in three states; solids, liquids, and gases. The mechanical properties peculiar to each state. Matter is porous, compressible, elastic. Measurement as practised by the mechanic. Measures of length, time, velocity, and sound.

French.—Teachers are at liberty to submit any scheme for teaching French for the approval of the Department. No particular text-book will be insisted upon, but work will be required equivalent to pages 1-40 in Henri Bué's First French Book, with the addition of the Four Regular Conjugations.

Animal Physiology.—The build of the human body. Names and position of the internal organs. The properties of muscles.

Botany.—Characters of the root, stem, leaves, and parts of the flower, illustrated by specimens of common flowering plant.

Chemistry.—Elementary and compound matter. Illustrations of combination decomposition in such bodies as hydrochloric acid, water, oxide of mercury, and rust of iron.

Domestic Economy (Girls).—Food: its composition, nutritive value, and preparation. Clothing and washing.

Shorthand.—Pitman's Teacher.

SECOND STAGE.

Algebra.—The same, with G.C.M., L.C.M., and very simple equations, involving one unknown quantity.

Euclid.—Euclid Book I.

Mensuration.—The same and the circle.

Latin.—Irregular verbs and first rules of Syntax. Translation of simple sentences of English (three or four words) into Latin. Knowledge of Delectus or other first Latin reading-book.

Mechanics.—Matter in motion. The weight of a body, its inertia and momentum. Measure of force and work.

French.—Teachers are at liberty to submit any scheme for the approval of the Department, as in the first stage. The work will be required to be equivalent to pages 40–135 of Henri Bué's First French Book.

Animal Physiology.—The organs and functions of alimentation, circulation, and respiration. The use and abuse of foods and drinks.

Botany.—Structure of wood, bark, and pith, cells and vessels. Food of plants, and manner in which a plant grows. Functions of the root, leaves, and different parts of the flower.

Chemistry.—Preparation and properties of the common gases, such as hydrogen, oxygen, nitrogen, and chlorine. The chemical character and constituents of pure air and pure water, and the nature of the impurities sometimes found in both. Effects of plants and animals on air.

Domestic Economy (Girls).—Food: its functions. The dwelling: warming, cleaning, and ventilation. Rules for health: the management of a sick-room.

Shorthand.—Pitman's "Manual."

SCHEDULE IV.

GROUPING OF STANDARDS.

Teachers of schools, where several classes are taught by one teacher, may group the Standards with the permission of the Department. The following suggestions are made:—

Each subject may be subdivided as may be required. The Inspector's approval in writing must be obtained.

Scripture.—Standards may be grouped, so that the Infant Standards I. and II. are taken together, and Standards III. to VII. may be taken together. For moral lessons, the Standards may be grouped in the same way. Courses in this and the following subjects will, as a rule, take the work of the lower Standards named, as laid down in Schedule I. for the first year, the next Standard being taken for all children in the second year, and so on—it being understood the children will pass together through the same amount of work in the same number of years, as if the classes were divided as in Schedule I.

Writing and Arithmetic.—These subjects cannot well be re-arranged.

Reading.—Standards might be grouped as follows:—I. and II., III. and IV., V., VI., and VII. Two books are to be used in each case. One book more suitable for the lower class and the other for the higher. In the case of History Readers, it is obvious that History may be begun without much difficulty for the three upper Standards with any one of the three Readers, the next in order being taken for the second year, and the other for the third.

Spelling.—Same grouping as Reading.

Drawing.—Groups will be easy to arrange on the same principle as the above.

English.—Standards I. and II. can easily take the same. Analysis, Recitation, and Composition. There will be no difficulty in teaching the small amount of Accidence required to each Standard. III. and IV. and V., VI. and VII. can also be grouped in the same way.

Geography.—The chief outlines of the scheme of Schedule I. must be observed. Standards I. and II. are readily grouped together, dealing with topography. Standards III. and IV. deal with the Physical Globe and Australia more particularly. Standards V., VI., and VII. deal with General Geography, and there is no such great reason for retaining the order of lessons as laid down in Schedule I., as long as the work is covered in the course of three years. Where two or more Standards are grouped together for map-drawing, an equally high degree of efficiency in the lower Standard in each group will not be required.

Kindergarten and Manual Training.—This can easily be grouped by the Teacher.

Object Lessons.—It is not desirable to take the whole School together for these lessons, but the Infants' and lower Standards may well be taken together, and the observation of some of the objects of common life surrounding them, while the higher Standards should observe phenomena.

Drill is easily grouped.

Music.—There is in Schedule I. an arrangement for small Schools.

Needlework will not require grouping.

APPENDIX I.

MONITORS' EXAMINATIONS.

SUBJECTS OF STUDY.

HALF-TIME MONITORS.

Possible Marks.		
40	*Reading and Recitation*	Any advanced reader, with a knowledge of Meanings of Words in the passage read. Special care must be taken with the articulation and grouping of words.
40	*Writing*	Text, Half-text, and Small Hand.
40	*Spelling*	Dictation Exercise. In addition, deductions will be made for errors in worked papers.
80	*Arithmetic*	Notation and Numeration. All Arithmetical Tables, Weights and Measures in common use. Simple and Compound Rules, Vulgar and Decimal Fractions, Simple Proportion and Practice, Mensuration of Areas and Volumes.
80	*English*	To parse and analyse any ordinary single or complex sentence. Prefixes, Affixes, and Common Roots. A short theme or essay.
80	*Geography*	General Geography of the World. Memory Maps of the Continents. Important names only to be learned. Commercial centres and main areas of various kinds of production to be especially studied. The British Empire to be more particularly dealt with. The solar system, the moon, tides.
80	*Drawing*	Freehand on paper and Freearm on blackboard and paper. Pressland's Geometrical Drawing to page 61. Hamilton and Kettle's First Geometry to page 80.
80	*History*	English History: Outlines to end of 16th century. The early Australian explorers.
100	*School Management*	To serve a probation without pay of at least one month in a W.A. State School, and to be favourably reported on by an Inspector or Head Teacher.
80	*Needlework (Females)*	Hemming, stitching, felling, stitching and sewing on strings, herring-bone stitch for canvas or flannel. Patching in flannel. The following completed garment: Child's chemise.
40	*Drill*	... ...
40	*Music*	To answer questions on the work specified, Divisions 1, 2, 3, 4, in Schedule I. Knowledge of either Staff Notation or Tonic Sol-fa.
40	*Euclid (compulsory for Males, optional for Females)*	Text Book: Hall and Steven's Euclid. Euclid 1-4-6, 8, 13-30, 32-41, 43. Deductions on the theorems done.

Note.—A line or an angle may be divided into any number of equal parts, and a line may be drawn from any point in any assigned direction and of any assigned length, and any figure may be duplicated or placed in any position.

Proof of 1, 24 by 20 preferred.

Theorems to be included—

(I.) Two right angled triangles are congruent if they have their hypotenuses and one side, or one angle equal.

(II.) The locus of points equidistant from two given points is the perpendicular bisector of the line joining the given points.

(III.) The locus of points equidistant from two given intersecting straight lines if the pair of bisectors of the angles contained by those lines.

Playfair's Axiom is preferred to Euclid's 12th Axiom.

The concurrency of lines in a triangle should be studied.

FULL-TIME MONITORS.

Possible Marks.		
40	*Reading and Recitation*	Any Standard Author, with a knowledge of Meanings of Words in the passage read. Special care must be taken with the articulation and grouping of words. To repeat at least 100 consecutive lines of Poetry, with a knowledge of the Meanings and Allusions.
40	*Writing*	Specimens of Penmanship.
40	*Spelling*	More Advanced Dictation Exercise. In addition, deductions will be made for errors in worked papers.
80	*Arithmetic*	More Advanced Exercises in the course of Half-time Monitors, and in addition Simple and Compound Interest, Profit and Loss, Stocks and Shares, Averages and Percentages, Square Root. Metric system.
80	*English*	Accidence of all the Parts of Speech, Parsing Analysing, Derivations, Composition. An English Standard Book to be notified by the Department each year in the *Circular*.
80	*Geography*	Australasia and the United Kingdom in detail, Europe and Asia generally. Memory Maps of above. Physical Geography, Ocean Currents, Trade Winds, Circulation of water by evaporation, dew, rainfall, glaciers, rivers, seas, changes of coast line produced by the action of water, hot springs, earthquakes, and volcanoes. Physiography to be taken on general lines.
80	*Drawing*	Drawing on blackboard or paper. Simple Objects in any position. Freearm on blackboard and paper. Model, square, and square prism. Geometrical Drawing. Pressland, the whole book; and Hamilton and Kettle's First Geometry to page 80.
80	*History*	"Story of the British Empire" (E. Salmon), or other book prescribed.
100	*School Management*	To teach before an Inspector. Special Subjects of Study: Reading, Grammar, Geography, the principals of Arithmetic (first four rules). To answer questions on "How to secure Order, Attention, and Discipline," Rewards and Punishment. Notes of Lessons.
80	*Needlework (Females)*	Gathering. Setting-in, buttonholes, sewing on buttons, the running of a tuck, setting in gussets. Darning: Plain, as for thin places, and a hole in stocking-web material. Patching in calico and flannel. Completed garments: Child's drawers and pinafore.
40	*Drill*	Section 2-20 (inclusive) Education Department's Manual— I. Commencing position. II. Head movements, Practices 1-3. III. Arm raising and swinging, Practices 1-4. IV. Arm bending and stretching, Practices 1 and 2. V. Trunk movements, Practices 1-3. VI. Leg and hip movements, Practices 1-3. VII. Trunk and arm movements, Practices 1 and 2. VIII. Shoulder movements, Practices 1 and 2. (Chesterton's Physical Exercises.)
40	*Music*	The first and second year's Course in Nelson's Music for Public Teachers. Knowledge of either Staff Notation or Tonic Sol-fa.

FULL-TIME MONITORS—*continued.*

Possible Marks.		
40	*Euclid*	Same as half-time and in addition
	(Compulsory for Males, optional for Females)	Euclid I.—47 and 48. III., 3, 7-9, 14, and 15, 20-22, 26-29, 31, and 32. Instead of III., 16, 18, and 19, the following theorem should be done:—The tangent at any point of a circle and the radius to the point of contact are at right angles to one another. Cor.—One, and only one, tangent can be drawn at any point of a circle. Instead of III., 17:—From a point without a circle two equal tangents can be drawn to the circumference, and only two. Deductions on the above theorems.
40	*Algebra (compulsory for Males, optional for Females)*	Elementary Algebra by C. Smith, page 1-71.

APPENDIX II.

SUBJECTS OF EXAMINATION FOR TEACHERS' CERTIFICATES.

NOTE.—*The following subjects will be considered as "failing" subjects throughout the Examinations for Teachers' Certificates:—Reading, Writing, Spelling, Arithmetic, English, Geography, Drawing, and School Management; in each of which subjects 60 per cent. of the possible marks must be gained.*

Candidates for the "C" and "B" Certificates failing in not more than one of the failing subjects, and in not more than one of the non-failing subjects, may be allowed a supplementary examination in the following December in those subjects in which they have failed, provided they obtain at the original examination,—

(*a.*) Sixty-six per cent. of the aggregate number of marks.

(*b.*) Thirty per cent. of marks in each of the subjects in which they have failed.

If the candidate fail to obtain 60 per cent. of marks in each of the subjects taken at the supplementary examination, the whole of the subjects for the "C" and "B" Certificates respectively must be taken again.

FOR A "C" CERTIFICATE.

Possible Marks		
100	*Reading*	Any standard author in Prose or Poetry, with a knowledge of meanings of words in the passage read. Special care must be taken with the articulation and grouping of words.
100	*Writing* *Spelling*	Specimens of penmanship. Dictation exercise of at least 20 lines. In addition, deductions will be made for errors in worked papers.
200	*Arithmetic*	More advanced exercises in the course for full-time monitors and, in addition, discount, cube root, approximate calculations.
100	*English*	Accidence, Parsing, Analysis, Prefixes, Affixes, Derivations, Composition, and Paraphrasing, English Literature–Stopford Brooke, and a standard work, as specified from time to time in the *Circular*.
100	*Geography*	The British Empire particularly, the World generally. Memory Maps of above, Physical Geography.
100	*History*	Outlines of the World's History, Mediæval and Modern (Edgar Sanderson's book, from Section 4 to end, may be used as a text, but teachers should amplify their knowledge of the facts mentioned).
200	*School Management*	To give a lesson before an Inspector; to answer question on the registers in Western Australian Schools; to answer questions in Organisation, Classification, Discipline, and Instruction (Collard and Crooke).

FOR A "C" CERTIFICATE—*continued.*

Possible Marks.		
100	*Needlework (Females)*	The whole course as laid down for monitors, and, in addition, Whip Stitch, setting a frill, darning (plain) on coarse linen, patching in print, cutting out a child's chemise, drawers, and petticoat. Completed garments:—Slip boddice, shirt, or night-dress.
50	*Drill*	I. Sections 2-42, inclusive, Education Department's Manual—
	II.	1. Arm raising and swinging, Practices 1-6. 2. Arm bending and stretching, Practices 1-3. 3. Trunk and arm movement, Practices 1-4. 4. Leg, hip, and arm, Practices 1-3. 5. Lunging, Practices 1-3. 6. Shoulder, Practices 1-4. 7. Side lunging, Practices 1-2. (Chesterton's Physical Exercises.)
	III.	The Theory of Physical Education: Chesterton's Theory of Physical Education.
	IV.	Male Teachers will be examined, in addition, in "Company Drill," "Rifle Drill," and "Physical Drill with Arms."
50	*Music*	Nelson's Book for Pupil Teachers. Knowledge of either Staff Notation or Tonic Sol-fa.
100	*Drawing*	Freehand on paper, Freearm on black-board and paper. Model Drawing — Cube, Square, and Hexagonal Prisms, Cylinder, Cone, with combinations of not more than two of these models. Geometrical Drawing. Pressland's Geometrical Drawing (whole). Hamilton and Kettle's First Geometry to page 80.
50	*Euclid (compulsory for Males, optional for Females)*	Euclid I.—47 and 48. III.—3, 7-9, 14 and 15, 20-22, 26-29, 31 and 32. Instead of III., 16, 18, and 19, the following theorem should be done:—The tangent at any point of a circle, and the radius to the point of contact are at right angles to one another. Cor.—One, and only one, tangent can be drawn at any point of a circle. Instead of III., 17:—From a point without a circle two equal tangents can be drawn to the circumference, and only two. Deductions on the above theorems.
50	*Algebra (compulsory for Males, optional for Females)*	Elementary Algebra by C. Smith, pages 1-71.

FOR A "B" CERTIFICATE.

100	*Reading*	Any standard author in Prose and Poetry.
100	*Writing*	Specimens of Copy-lines.
	Spelling	Any Exercise.
200	*Arithmetic*	Ratio and Proportion. Vulgar Fractions, Decimals, including the metric system, Practice, Interest, Present Worth and Discount, Profit and Loss, Averages and Percentages, Partnership, Stocks and Shares, Square and Cube Root, Chain Rule, Scales of Notation, Mensuration of Surfaces, and of Rectangular, Cylindrical, Pyramidal, and Prismoidal Solids.

FOR A "B" CERTIFICATE—*continued.*

Possible Marks.		
200	*English*	Parsing, Analysis of Sentences, Accidence of all the Parts of Speech, Paraphrasing and Composition, Affixes, Prefixes, Derivatives.
100	*Geography*	Australasia, Europe, Asia, Africa, and America generally. The British Empire particularly. Physical Geography.
100	*History*	Greene's History of English People. Seeley's Expansion of England, or other books prescribed by the Department from time to time.
100	*Drawing*	Advanced Exercises in Freehand and Freearm, Blackboard Drawing. Geometry.
100	*Needlework (Females)*	The Course as prescribed for the Four Classes of Pupil Teachers.
100	*English Literature*	"Primer of English Literature," by Stopford Brooke. Goldsmith's "Deserted Village," and Thackeray's "Esmond," or other books as may be laid down from time to time.
200	*School Management*	Fitch's Lectures on Teaching; to take charge of a School in the presence of an Inspector; the Education Acts and Regulations; the Registers used in W.A. Schools.
100	*Domestic Economy (Females)*	Domestic Economy for Teachers, 4/6. (T. Nelson & Son.)
100	*Music*	Knowledge of Staff Notation and Tonic Sol-fa. Staff Notation: the elements of the Theory of Music, by Robert Sutton. Tonic Sol-fa Notation: Curwen's Standard Course to Step IV., inclusive.
100	*Drill*	I. Sections 2-42, inclusive, Education Department's Manual—
	II.	1. Balance movements, Practices 1-4. 2. Side lunging with arm movement, Practices 1-4. 3. Direct lunging with arm movement, Practices 1-2. 4. Shoulder movements, Practices 1-8. 5. Part III. (Exercises when on the march.) 6. Part V. (Swimming exercises.) (Chesterton's Physical Exercises.)
	III.	The Theory of Physical Education; Chesterton's Theory of Physical Education.
	IV.	Male teachers will be required to take in addition "Company Drill," "Rifle Drill," "Firing Exercises," and "Physical Drill," as laid down in the Educational Department's Manual.
100	*Euclid (compulsory for Males, optional for Females)*	Same course as for Half and Full Time Monitors, and in addition II. 1-7, 12-13. Proof of II., 4-7, by algebraical notation is allowed. III. 35-37. Deductions on Books, I.-II.
100	*Algebra and Mensuration (compulsory for Males, optional for Females)*	Algebra to Quadratic Equations, including Surds, and Mensuration of Surfaces and Solids.

ADDITIONAL SUBJECTS.

(Only one may be taken.)

Possible Marks.		
150	*Latin*	Grammar and Composition, *e.g.*, from Abbot's in Latina or Arnold's Latin Prose (Bradley) to Ex. 40, and Cæsar "De Bello Gallico," Books I. to IV.
150	*French*	Grammar, Composition, and Translation from Victor Hugo's "Hernani."
150	*German*	Grammar, Composition, and Translation, Dr. A. L. Meissner's "Public School German Grammar," Hauff's "Das Wirtshaus im Spessart."
150	*Science*	Any one of the following:— (*a.*) *Animal Physiology*—Elementary Lessons Physiology—Huxley. (*b.*) *Inorganic Chemistry*—Inorganic Chemistry for Beginners, by Roscoe-Lunt. (*c.*) *Physiography* — Elementary Physiography—Thornton. (*d.*) *Physics*—Lessons in Elementary Physics — Balfour Stewart. (*e.*) *Geology*—Geikie's Class Book of Geology. (*f.*) *Agriculture* — Fream's Elements of Agriculture, Parts I. and II.

NOTE.—*Female Teachers may take Euclid and Agelbra, and Mensuration as above, counting them as their one additional subject, in which case 75 marks will be given for each paper.*

FOR AN "A" CERTIFICATE.

This Examination may be taken in two parts, at the option of the Teacher. The passing of a Teacher in Part I. will not entitle him to the "A" Certificate, either temporarily or otherwise. When the Examination is taken in two parts the Teacher must pass the whole of Part I. before proceeding to Part II. To entitle a Teacher to a pass—

1. In Part I., 60 per cent. of the total marks must be obtained, also 60 per cent. in each individual subject, except Euclid and General Information, in which 40 per cent. at least must be gained.
2. In Part II., a Teacher must obtain 60 per cent. of the total marks, and 40 per cent. in each individual subject.

The attention of Teachers is directed to Regulation 53, which states the conditions under which a Teacher is allowed to sit for the "A" Certificate.

PART I.

Possible Marks.		
250	*Arithmetic*	The whole theory and practice of Arithmetic and Mensuration. To answer questions on methods of teaching Arithmetic, including contracted processes. Books recommended—Sonnenschein and Nesbitt's New Science and Art Arithmetic, Perry's Practical Mathematics.
200	*Geography*	Physical and general geography of the world. To answer questions, on methods of teaching. Book recommended—Geikie's Teaching of Geography.
200	*English*	As specified for "B."
250	*School Management and Psychology*	Quick's Essays on Educational Reformers. Psychology for Teachers—Professor Lloyd Morgan (Ed. Arnold). To answer questions on Time Tables and Organisation—to take charge of a school in the presence of an Inspector.
200	*Drawing*	Advanced exercises in Freehand-Freearm, and Model. Blackboard Illustration, Elementary Designing.

FOR AN "A" CERTIFICATE—*continued.*

Possible Marks.		
150	*Euclid Males*	I., II., and III. (as for "B" Certificate). IV., VI.—1-8, 19, 20, 33, and A. and D. Algebraic proofs of necessary theorems of Book V. are allowed. Chapter X. (Pressland). Deductions on the theorems of Books I. to VI.
150	*Needlework (Females)*	E. Rosevear's Text Book.
150	*General Information*	Questions will be set on subjects of every-day life.
200	*History*	The History of Europe (Mrs. Wilmot Buxton or other book prescribed), History of the Colonies—José.

PART II.

(A.)

100	*Music*	Staff Notation and Tonic Sol-fa. Suggested Text Books—Sutton's Elements, O. J. Simpson's Singing. Class Book—Nelson's Music for Pupil Teachers, Curwen's Standard Course to Step VI., inclusive.
200	*Physiography*	Huxley's Physiography—Lockyer's Astronomy.
200	*English Literature and Composition*	Shaw's Students' History of English Literature (John Murray), Shakespeare's Hamlet, Bacon's Essays, Milton's Lycidas, Keats's St. Agnes Eve, or other books prescribed. To answer questions on composition and write short essays.
150	*Algebra (Males)*	C. Smith.
	Trigonometry (Males)	Locke's Elementary Trigonometry.
150	*Domestic Economy and Sanitation (Females)*	Elementary Hygiene (Newsholme).

ADDITIONAL SUBJECTS.

Any two of the following:—

200	*German*	Grammar, Composition, Translation, Storm's Immensee, Schiller's Wilhelm Tell.
200	*Latin*	Grammar, Composition, Livy, Book XXII.; Virgil's Georgics, Book IV.; Horace's Odes, Book I., or other similar books as may from time to time be prescribed.
200	*French*	Grammar, Composition and Translation, Moliere's Medécin malgré lui, and Balzac's Eugénie Grandet, or other similar books.
200	*Science*	Any two of the following will be counted as one subject:— (*a.*) *Animal Physiology*—Huxley. (*b.*) *Inorganic Chemistry*—Ira D. Remsen. (*c.*) *Physics*—Balfour Stewart. (*d.*) *Geology*—Geikie. (*e.*) *Agriculture* — Fream (including Part III.). (*f.*) *Logic* — Jevon's Advanced Book. (*g.*) *Euclid*—As in Part I., for males. (*h.*) *Algebra and Trigonometry*—As in Part II., for males.

NOTE.—(*g.*) and (*h.*) are for females only.

APPENDIX III.

TRAINING COLLEGE ENTRANCE EXAMINATION.

SUBJECTS OF STUDY.

Reading and Recitation.—A passage from any Standard Author selected by the candidate, with a knowledge of the meanings of words and phrases. A passage from any other Author selected by the Examiner. Recitation of 50 consecutive lines of Poetry.

Writing.—Specimens of Penmanship.

Spelling.—Dictation Exercise. Deductions will be made for errors in Spelling in any Examination Paper.

Arithmetic.—The course prescribed for the Examination for Candidates for Half-Time Monitors, and in addition Simple and Compound Interest.

English.—Contents of Morris's Primer of English Grammar.

Geography.—Chief Physical Features of the Globe. Geography of Australasia in detail, and of Europe generally. Memory Maps of the Continents and Australia. Elementary Physical Geography: Day and Night, the Seasons, Winds and Ocean Currents, Rain and Rainfall, Dew.

Latin.—The 5 Declensions and Simple Exercises, *e.g., Via Latina*, pp. 1-33.

Drawing.—Freehand Drawing on paper; Simple Objects in any Position. Freearm Drawing on blackboard or paper.

History.—"Story of the Empire" (E. Salmon), or other book prescribed in the *Circular*.

School Management.—To be thoroughly acquainted with the general principles of the Subjects of Instruction, as laid down in pp. 75-100 of the Regulations. To serve at least four months with or without pay, and to be reported on as efficient.

Needlework.—Stitches, gathering, setting-in, buttonholes (rounded and bridged ends), patching in calico, darning in Stocking-web Materials. Garment: Child's nightgown, complete.

Music.—First year's course in Nelson.

Geometry.—A first Geometry Book (Hamilton & Kettle) (Arnold's Mathemetical Series, 1s.) The whole. Geometrical Drawing—Bi-section of lines and arcs and Erection of perpendiculars. construction of angles, triangles, and quadrilaterals, parallel straight lines, and parallelograms. Division of straight lines into equal parts. Use of protractor, set square, square and compass, *e.g.*, Pressland's Geometrical Drawing (Rivington's), pp. 1-29.

NOTE.—*Entries for examinations covered by Appendices IV. to VII., received after the prescribed date of closing will, as a rule, be refused. Under special circumstances they may be received, but a fine may be inflicted, at the discretion of the Minister.*

APPENDIX IV.

SECONDARY SCHOOL SCHOLARSHIPS.

1. Three Scholarships of the value of £50 each per annum, tenable for three years, are annually offered for boys and girls attending Government or other efficient primary schools.

2. Candidates for these Scholarships must—

(*a.*) Be over eleven and not more than thirteen years of age on the 1st October of the year in which the examination for the Scholarships is held.

(*b.*) Have attended one or more of the Government or other efficient primary schools of the State continuously for at least two years immediately preceding the above-named 1st October, and have made not less than three hundred half-day attendances (unless prevented by illness) in such school or schools during their last year.

(*c.*) Produce a certificate of industry and good conduct from the head teacher of the last school attended.

3. The Scholarships are awarded upon a competitive examination conducted by the Education Department.

4. No candidate is eligible for a Scholarship who fails to obtain a minimum of two-thirds of the maximum number of marks.

5. Application for admission to the Scholarship examination must be made on the prescribed form to the Education Department on or before the 1st October of each year.

6. The conditions upon which the Scholarships are tenable are:—

(*a.*) That the successful scholar shall, at the commencement of the first term following the award of the Scholarship, become a pupil at a school in which higher education, as approved by the Minister, is given. The Minister may require that the school be inspected.

(*b.*) That he shall continue to attend such school, and must, at the end of each term, obtain from the authorities of the school, and forward to the Education Department, a certificate stating that his conduct and attendance have been satisfactory. If an unfavourable report is received, or if at any time his conduct be disorderly or immoral, the Scholarship and the advantages connected therewith shall, with the consent of the Governor, thereupon cease and determine.

(*c.*) It will be expected that at the end of each year the Scholarship holder's school examination papers should be sent to the Department for perusal. At the end of the second year some University examination must be taken.

7. The schools of higher education at which these Scholarships are tenable cannot themselves send any candidates for the Scholarships, which are, as stated above, offered for scholars attending primary schools.

8. The subjects of examination will be:—Arithmetic (200 marks); English (100 marks); History (100 marks); Geography (100 marks); Dictation and Writing (100 marks); Reading (50 marks); and Drawing (100 marks).

The examination will be on the course as laid down for Standard V. in the Regulations for the curriculum of the Government Schools.

9. Under special circumstances arrangements might be made for examining candidates locally, but the examination will, as a rule, be held in Perth, and candidates will be expected to attend there.

APPENDIX. V.

ELEMENTARY SCHOOL BURSARIES.

1. Bursaries of the value of Ten pounds each, tenable for one year only, will be annually offered to boys and girls attending the Government or other efficient Schools of the State, provided that the average fee laid down for the school does not exceed one shilling per week.

2. Candidates for these Bursaries must—

(*a.*) Have attended one or more of the Government or other efficient Schools continuously for at least two years immediately preceding, and have made not less than three hundred half-day attendances in such schools during their last year.

(*b.*) Procure a Certificate of Industry and Good Conduct from the head teacher of the last school attended.

(*c.*) Be not more than *fifteen* years of age on the day of examination.

3. The Bursaries are awarded upon a competitive examination.

4. No candidate is eligible for a Bursary who fails to obtain ⅔ (two-thirds) of the *maximum* number of marks.

5. An examination of candidates will be held twice a year. The examination will be held in Perth, and should it be found expedient, for the convenience of candidates residing in the distant parts of the State, the Minister may arrange for examinations being also held in "local centres."

6. Application for admission to the Bursary Examination must reach the Department by such date as may be notified in *Government Gazette* or *Education Circular*.

7. Half the payment will be made at the expiry of six months after the examination, and the remainder on the completion of a year, if the following conditions have been fulfilled:—

(*a.*) That the holder of the Bursary shall have attended a Government or other efficient School regularly, making at least three-quarters of the possible attendances for the six months in question.

(*b.*) That he shall produce a certificate of good conduct from the teacher.

Note.—The parents of the successful candidates shall have the right to choose the Government or other efficient schools in which their children shall be educated during the 12 months of holding the Bursary.

8. The examination will be on the subjects of instruction laid down for the Seventh Standard.

9. Candidates must compete at the next examination held after they have passed the Seventh Standard, or, in the case of Schools other than Government, such equivalent examination as may have been held.

By this rule all the children from the Government Schools in the Metropolitan district are required to compete at the March examination, and candidates from other than Government Schools in Perth will also be required to sit at this examination and will not be eligible for the examination in September.

10. Should an individual examination not have been held by an Inspector in the School, the Department may require the Inspector to revise, and, if necessary, re-examine such children as are stated to have passed the Seventh Standard at the previous Teacher's Annual examination, or (in the case of efficient Schools other than Government Schools) such equivalent examination as may have been held. Where a candidate attends an efficient School other than a Government one, the Department may require an Inspector to report upon, and, if necessary, examine such children as are stated to have passed the Seventh Standard or an equivalent examination.

APPENDIX VI.

GOVERNMENT UNIVERSITY EXHIBITION.

1. An Exhibition to be held at any recognised University in the British Empire shall be open for competition to any boy under the age of 19 years on the 1st day of November in the year in which the examination is held, whose parents or either of them shall be *bonâ fide* residents in the State of Western Australia, and who himself shall have been a resident therein for a period of three years at least previous to the holding of the examination provided for by these rules.

2. The said Exhibition shall be tenable for a period of three years, and shall be of the value of £150 for each of the said three years.

3. All competitors for the said Exhibition shall pass an examination to be held at such place and by such examiner or examiners as may be appointed by the Education Department.

4. The said examination shall be held and the said Exhibition awarded annually, and until other arrangements are made shall be so awarded on the combined results of the senior and higher public examinations of the Adelaide University. The aggregate marks obtained by candidates shall be taken, but no marks shall count for any subject unless 45 per cent. of the maximum obtainable for that subject shall have been obtained.

5. Every competitor shall give to the Education Department not less than six weeks' notice of his intention to compete at such examination, such notice to be computed from the date of the examination as may be fixed from time to time, and notified in the *Government Gazette*, and, together with such notice, shall forward to the Education Department (*a*) a certificate of birth, and (*b*) two certificates attesting the good character and repute of such competitor. Of these two latter, one shall be given and signed by the Headmaster of such competitor's school, and the other by the clergyman, priest, or minister of the religious denomination to which such competitor shall belong, and of the district in which such competitor shall be residing, or by the Resident Magistrate of that district.

6. The Exhibition shall be held subject to the following conditions, namely:—

(*a.*) The holder shall, within twelve months after the date of the notice in the *Government Gazette* of the award of the Exhibition, gain admission to a recognised University of the British Empire.

(*b.*) He shall begin residence at the University to which he may have been admitted as soon after such admission as the Regulations of such University shall allow.

7. The holder of the Exhibition shall be entitled to receive the said sum of £150, by half-yearly instalments, so long as he continues in residence at such University, subject to the production of such certificates or other evidence as the Education Department may from time to time direct.

8. The Education Department may from time to time, with the approval of the Governor, revoke, add to, or amend these rules.

APPENDIX VII.

GOVERNMENT EXHIBITIONS.

REGULATIONS.

The Exhibitions will be divided into Senior and Junior Classes.

Five Senior Exhibitions of the value of £25 each, will be offered for candidates of either sex who have not reached the age of 18; and Five Junior Exhibitions of the value of £15 each, tenable for one year, will be offered for candidates of either sex between the ages of 14 and 16 years.

The course of examination for seniors and juniors will be, respectively, that laid down for the Senior and Junior Adelaide University Examinations, or equivalent examinations conducted by examiners appointed by the Education Department. Candidates for the Senior Exhibitions may also take any subject or subjects in the Adelaide Higher Public Examination, and the marks received (subject to the provision in the following clause) will be added to the marks obtained in the Senior Examination.

The exhibitions will be awarded on the aggregate marks obtained, but no marks will be counted for any subject in which the candidate fails to secure at least 45 per cent. of the maximum attainable.

Candidates must not be less than 14 nor more than 18 years of age on the first day of November in the year in which the examination is held, and must have resided in the State for two years on the first day of the month in which the examination is held.

The examination will be held in Perth, and will commence about ember.

A preliminary examination will be held by the Department, in the previous month, in the following subjects:—

English,
English Composition,
Arithmetic,
Dictation.

The Department will pay the fees for the first ten junior candidates and for the first six senior candidates who pass the preliminary examination. In the case of candidates who have previously passed the Junior Adelaide Examination, the fees may, at the discretion of the Minister, be paid without their attending the Department's preliminary examination.

Candidates who qualify will be required to produce birth certificates, or satisfactory proof of age, before the exhibition or certificate is issued.

Applications for admission to the examinations must be made on the prescribed forms, which may be obtained from the Education Department. Applications will not be received after the 15th September.

Payment for the Senior Exhibition will be made within one month from the publication of the results of the Examination in the *Government Gazette*.

Payment for the Junior Exhibition will be made in two moieties at the end of each six months, the first payment to be made on the expiry of six months from the date of the award, as notified in the *Government Gazette*; such payments to be subject to the provision that the holder of the exhibition shall have been in regular attendance at school, and shall produce a certificate from his or her head teacher testifying to such regular attendance. Regular attendance implies that the holder of the exhibition shall have made at least three-quarters of the possible attendances.

FIRST AID IN ACCIDENTS.

The object of the following paragraphs is not to supersede the doctor. They are intended to give information which will enable anyone to apply the proper treatment at once, in the case of an accident, before the doctor comes.

N.B.—Let there be in every home and school a place known to every member of the household (but out of the way of the children) where are kept ready for immediate use a pair of scissors, three or four large needles (threaded), a few prepared roller bandages, small rolls of old clean linen and flannel, some lint, adhesive plaster, oil silk, wadding, turpentine, olive oil, and small bottle of a cheap disinfectant solution.

HOW TO APPLY A BANDAGE. THE TRIANGULAR BANDAGE.

This bandage, known as the "Esmarch" bandage, is a triangular piece of linen or calico, made by taking a piece of either of these materials, 37 inches square, and cutting it diagonally into halves. Of the three borders of the bandage the longer is called the lower, and the others the side borders. Of the three corners, the upper one opposite the lower border may be named the point, the two others the ends.

When not in use it should be folded perpendicularly down the centre, placing the two ends together. Then the ends and the point should be brought to the centre of the lower border or base of the perpendicular line, thus forming a square. This should be folded in half, and again twice, until it assumes the form of a small packet 6½ by 3½ inches.

For use it is folded broad or narrow. Having spread out the bandage, commence by carrying the point down to the lower border; when it is required broad, fold it lengthways in two, and when narrow into three.

The bandage is fastened either by pinning the ends together, or by tying them into a reef knot.

Before applying bandages, all blood and dirt should be removed from about the wound, either by wiping with some soft material, or by sponging with cold water, should it be available. The hair should also be cut away from the wound, if time and circumstances will permit. Next soak a piece of lint in cold water, double it, and place it over the wound, and bandage as hereinafter described.

Wound of the Scalp.—Fold the lower border lengthways to form a plait like a hem 1½in. wide, place the middle of the bandage on the head so that the plait lies crossways before the forehead, the point hanging downwards over the nape of the neck. Carry the two ends backwards above the ears, cross at the back of the head on the nape of the neck, bring forward and tie on the forehead. Then stretch the point downwards, and turn it up over the back of the head, and fasten it on the top with a pin.

Fractured Jaw.—Fold the bandage narrow, place the centre under and slightly over the chin, carry the ends upwards, one at each side, passing one end over the top of the head until it meets the other above the ear, twist it behind this and take it across the forehead and the other end behind the head and tie over the opposite ear.

Wound of the Eyes or Side of the Face.—Fold the bandage narrow, place the centre over the injured part, and tie over the opposite side.

Wound of Shoulder.—Lay the centre of the bandage on the top of the arm with the point up the side of the neck, and the lower border lying on the middle of the upper arm. Carry the two ends round the arm, and crossing them on its inner side, bring them back and tie on the outside. Take a second bandage, fold it, and make a smaller arm sling of it; then draw the point of the shoulder bandage under the sling, fold it back on itself and fasten with a pin on the top of the arm.

Wound of the Upper Arm.—Place the centre of the broad-folded bandage on the front of the limb, carry the ends round to the opposite side, cross them, bring them back, and knot them together. Next take a second broad-folded bandage, throw one end over the shoulder on the wounded side, carry it round the neck so as to be visible at the opposite side; then bend the arm carefully and carry the wrist across the middle of the bandage hanging down in front of the chest. This done, take the lower end over the shoulder on the sound side and knot the two ends together at the nape of the neck. This is called the smaller arm sling.

Wound of the Forearm.—Dress and bandage the wound as in the last case. Then take a second bandage, throw one end over the shoulder at the sound side, and carry it round the back of the neck so as to be visible at the opposite side, where it is to be held fast, place the point behind the elbow of the injured arm and draw down the end in front of the patient. Next bend the arm carefully and place it across the chest on the middle of the cloth. Then take the lower end upwards over the shoulder on the wounded side, and knot to the other end of the nape of the neck. This done, draw the point forward round the elbow, and fasten it with a pin. This is called the larger arm sling.

Wound on the Chest.—Place the middle of the bandage on the chest with the point over the shoulder, carrying the two ends round the chest and knot at the back. Next draw the point over the shoulder downwards and tie or pin it to one of the ends.

Wound of the Hand.—Take a bandage, spread it out, and lay the wrist on the lower border with the fingers towards the point. Next turn the point over the fingers and carry it over the wrist. This done, take the ends round the wrist, fixing the point, cross them, carry them back again, and knot together. Take a second bandage and support the forearm in the larger sling as above.

Wound of the Hip.—Fold one bandage narrow, and tie it round the body as a waist belt above the hips. Lay the centre of a bandage on the wound with the point upwards, pass the ends round the upper part of the thigh, cross and carry it to the front and knot them together, next pass the point under the waist belt and fasten it with a pin.

Wound of the Foot.—Take a bandage, spread it out, and place the sole of the foot on its centre, with the toes in the direction of the point. Draw the point upwards over the toes and instep of the foot; then take the ends forward above the ankles, and cross in front of the leg, carry them downwards under the sole of the foot, and knot them together above the ankle.

To secure Fractures.—Surgical or improvised splints may be adjusted to a broken limb by taking two triangular bandages, folded broad or narrow according to circumstances, and tying them securely one above and the other below the fracture. As many more bandages can be added as may be considered necessary to secure the limb.

Fractured Collar Bone.—Place a pad in arm-pit on injured side, and suspend the arm in a large arm sling, then fix the arm to the side with a small narrow bandage passing round the chest and fastened under the sound arm.

The triangular bandage may be applied in many other ways; but the above directions are quite sufficient to indicate its different uses.

BLEEDING FROM THE NOSE.

Apply cold water or iced compresses to the nose, neck, or forehead. If alone, compress the nostril with the opposite hand, and raise the arm of the same side high above the head. If these means fail, inject alum in powder or solution into the cavity.

BROKEN BONES.

When a bone is broken it is said to be fractured, and fractures are usually described as of four kinds, but it will be sufficient at present to refer to only two of these.

1st. *The Simple.*—Where the bone is simply broken without any injury to the skin or other part. This is the commonest form of fracture.

2nd. *The Compound.*—Where the bone is broken, the skin is injured, and a wound in the flesh communicates with the fracture. Compound fractures are much more dangerous than simple ones, because the skin is injured, muscles are bruised, air enters, inflammation is set up, suppuration follows; and weeks, months, and even years may elapse before recovery takes place.

SIGNS OF FRACTURE.

1. *Deformity.*—Alteration in shape; general appearance distorted; the limb lying in an unnatural position, bent or shortened. (Note.—It is always wise to compare the injured limb with the sound one on the opposite side.)

2. Inability to use the limb; loss of power.

3. Increased or abnormal mobility, unusual degree of movement at the seat of fracture in the shaft of the bone.

4. *Crepitus.*—A grating sound produced by rubbing the broken ends of the bone against each other.

5. Shortening of the limb. (This by gentle expansion can be remedied; the bones can be easily replaced, and the limb regain its natural shape.)

6. Pain.

7. Swelling.

TREATMENT.

We endeavour to obtain the union of a broken bone by—

First.—Striving to get the parts accurately together in their natural position. This is called "setting a fracture," and is usually effected by supporting the broken limb above the fracture, and then grasping and gently pulling and extending the lower portion until the limb is lengthened and the broken bones drawn into place.

Second.—Endeavouring to keep the parts accurately together. This is done by appliances called "splints," which may vary according to the bone broken, but which command perfect rest for the injured limb. Splints have frequently to be extemporised, and then thin boards, laths, pasteboard, mats, umbrellas, etc., or branches, bark, straw, bits of fencing, or coat sleeves or stockings stuffed with hay or grass may be used. Splints require to be padded, and pads should be thick yet soft, and somewhat longer and wider than the splints they line. They may be made of hair, wool, tow, or wadding, or extemporised of hay, grass, moss, straw, or pieces of clothing. Bandages are required to keep the splints in position, and for temporary use, handkerchiefs, towels, garters, straps, or twine will do. There is a risk from tight bandaging. Bandages may have been adjusted immediately upon receipt of the injury and before swelling had supervened. When this latter occurs, of course the bandages are immediately tightened, the circulation is interfered with, and mortification may follow; in fact, the parts are strangled. So for a day or two after the accident the injured limb should be watched; and if the fingers or toes get blue, or numb, or cold, the bandages must be immediately loosened.

Fractures of the leg are always much more serious than similar injuries of the arm, on account of the utter helplessness of the patient, on account of the difficulty of transport, and on account of the risk of what is only a simple fracture becoming, through ignorance or carelessness, a compound one. The dangers of this have already been shown. Every effort, then, should be made to secure the safety of the limb. A broken leg if laid out comfortably on a pillow can take no harm until the arrival of the surgeon. There is no urgency whatever about setting a broken bone. Better leave it alone until skilful aid arrives than injure it further by careless and meddlesome interference.

SPECIAL FRACTURES.

FRACTURE OF THE SKULL.

Causes.—Blows or falls.

Signs.—Not always very apparent. In fracture of the roof of the skull the break may be felt and often seen, for the injury is frequently compound.

Treatment (Temporary).—If a scalp wound exists, cleanse it removing blood, dirt, etc. Cut the hair around it, or, better still, shave the part. Lay a piece of double lint over the wound and apply a bandage. Then place the patient on his back with his head slightly raised on a pillow, and wait for the doctor.

FRACTURE OF THE LOWER JAW.

Causes.—Direct violence; falls or blows upon the chin.

Signs.—Line of teeth irregular, face distorted, speech impaired, chewing often impossible, mobility, crepitus, pain, salivation.

Treatment (Temporary).—Raise the lower jaw, and fix it to the upper by a bandage passing under the chin and over the head.

FRACTURE OF THE CLAVICLE OR SHOULDER BONE.

Causes.—Direct, as blows upon the shoulder; indirect, as falls upon the hand; muscular, from sudden and violent efforts.

Signs.—Displacement; an irregularity can usually be seen and almost invariably felt; the shoulder drops, the arm is useless, and the pain is often severe.

Treatment (Temporary).—The principle is to support the arm, and to keep the shoulder out from the chest. Place a firm pad in the arm-pit, bind the elbow to the side with a broad bandage, and support the forearm in a sling.

FRACTURE OF RIBS.

Causes.—Blows or falls, driving the broken ends of the bones in; pressure, crushing, caving-in of earth, etc., driving the broken ends of the bones out.

Signs.—Pain and difficulty in breathing, stitch in side, tenderness on pressure, crepitus.

Treatment (Temporary).—The principle is to fix the parts firmly by rolling a broad flannel bandage or binder round the chest, and fastening, so that respiratory movements are sustained, but not stopped.

FRACTURE OF THE HUMERUS OR UPPER ARM.

Causes.—Direct violence; blows or falls on the hand or elbow.

Signs.—Deformity; shortening; loss of power; crepitus; pain; mobility at seat of fracture.

Treatment (Temporary).—Splints must be applied—two or more. If two, then put one inside, and the other outside; if three, put the additional one behind; if four, let the last be added in front. These splints should extend from the shoulder to the elbow, but they should not be too wide—they ought not to touch each other. They may be extemporised of anything handy. A couple of bandages are necessary to keep the splints in position, and then the arm requires to be slung. A trellis flower-pot cover makes an excellent splint for fractures of the arm.

FRACTURE OF THE FOREARM.

(*a.*) Olecranon or knob at back of elbow, commonly known as the "funny bone"—

Causes.—Falls on the elbow, the arm being fixed.

Signs.—Deformity; gap between the fragments; the upper part is dragged up by the strong triceps muscle; immediate loss of power to extend the forearm; pain.

Treatment (Temporary).—Apply a long straight splint in front of the limb from near the shoulder to the wrist.

(*b.*) Of both bones, or of the shaft of one—

Causes.—Direct violence; blows, or falls.

Signs.—Deformity; alteration in shape, unusually bent; loss of power; mobility; crepitus; pain.

Treatment (Temporary).—Bend the elbow at right angles, keeping the thumb pointing up; apply two splints, one on the inside of the forearm from the bend of the elbow to the hand, and one outside from the elbow to the wrist. See that they are well padded, then sling the forearm.

(*c.*) Fracture of the lower end of the forearm, or Colles' fracture—

Causes.—Falls on the palm of the hand.

Signs.—Deformity, marked; the back of the wrist is humped up and a depression exists on the other side; helplessness; mobility; crepitus, great pain.

Treatment (Temporary).—Lay a board or splint in the loop of a broad sling, and let the limb be rested and supported on it.

FRACTURE OF THE BONES OF THE HAND.

This is best treated by binding and confining the hand and fingers over a firm ball of lint-covered tow. The ball should be sufficiently large to fill the palm.

FRACTURE OF BONES OF THE FINGERS.

This is usually treated by bandaging the broken finger to a well-padded slip of wood, which controls the knuckle joint by passing well into the palm of the hand.

FRACTURE OF THE FEMUR OR THIGH BONE.

Causes.—Direct violence; blows, falls.

Signs.—The usual signs of fracture, generally very easily recognised; eversion of the foot.

Treatment (Temporary).—Lay the patient on his back; rip up the outer seam of the trouser; cut off the boot—never attempt to pull it off; apply a first dressing, lint and bandage, to any wound which may exist; extend the limb, straighten it, and endeavour to get the bones in apposition; fix a long splint—a broom handle—on the outside of the limb from the arm-pit to the ankle; fix a short splint to the inside of the leg; let these be padded or protected; apply fastenings or bandages, one above the ankle, another below the knee, two round the thigh, and one round the trunk; tie both feet together, and then remove on a shutter or stretcher.

FRACTURE OF THE RATELLA OR KNEECAP.

Causes.—Direct violence, blows, falls, or kicks; muscular action, A violent effort to prevent the body falling backwards, the knee at the time being slightly bent, is sufficient to produce the injury; and when the patient falls, the fall is the result of the fracture and not, as is often supposed, the cause of it.

Signs.—If the fracture is vertical, the signs are often obscure; but if transverse its recognition is usually easy; deformity, the fragments separate, and there is a wide gap between them; loss of power, inability to use or stand upon the limb, swelling, often sudden and excessive.

Treatment (Temporary.)—If necessary, apply fomentations, as in the case of a severe sprain, and then lay the limb upon an inclined splint and apply a figure of eight bandage round the joint, and, pressing upon the fragments, endeavour to keep them in as close a position as possible.

FRACTURE OF THE BONES OF THE LEG.

Causes.—Direct violence; blows, falls, crushes.

Signs.—When both bones are broken, the injury is easily recognised, for all the usual signs of fracture will be present. When the *tibia* or shin bone only is broken, there is not much difficulty in detecting; but when the *tibula* or small bone only is broken, there may be great difficulty in discovering it, for the strong *tibia* acts like a firm splint and prevents displacement.

Treatment (Temporary.)—The same treatment will suit any of the fractures. Apply two splints, one on the inside and the other on the outside of the limb, and, if possible, let these be long enough to fix the knee and the ankle joints; or spread out a coat or jacket and lay the limb on it, then roll up each side until it becomes a thick pad on each side of the leg, and secure it with handkerchiefs; or use battens or the straw casings of brandy bottles, or the trellis flower-pot cover, or any of the numerous things which may be used as extemporised splints. When the appliances have been adjusted, tie the injured leg with handkerchiefs or bandages to its sound fellow, and then lay the two limbs on a broad, flat board, and fasten them to it.

BRUISES AND SPRAINS.

If a bruise can be treated at once, apply ice or vinegar and water, and keep the part at perfect rest. Should time have elapsed, and swelling continue, apply relays of hot fomentations, still keeping the part at rest. In later stages, warmth and very gentle friction, with flannel bandaging. Sprains require perfect rest and support. Immediate plunging in cold water may prevent swelling, but warm applications are necessary to remove it, with bandaging for support. A day's absolute rest at time of accident is worth a month's rest afterwards; therefore, never neglect a sprain.

BURNS AND SCALD.

Carefully remove or cut off clothing, and avoid breaking any blisters. If injury be slight, and no wound exist, immerse part in cold water or a strong lukewarm solution of washing soda. If severe, cover at once with flour, or olive oil and lime water in equal quantities, and wrap carefully in cotton-wool or wadding, so as to keep out all air. Leave the dressing on as long as possible. When a dress catches fire, lie flat on the ground and roll over. Bystanders should stifle the flames with water, clothing, or whatever is at hand.

CHOKING.

When the food becomes fixed in the throat, so as to prevent breathing, it is almost always in the mouth of the windpipe—the first opening in the throat immediately behind the tongue. In these cases the mouth should be opened to the widest extent, and, in the case of children, kept open by inserting a piece of wood between the front teeth, sufficiently tight to prevent biting. The two forefingers of any person should then be introduced, one into each side of the mouth, and pushed over the tongue till they come in contact with the substance causing the obstruction. The points of the finger or fingers should then be got under it, and the substance extracted. It will assist the operation if the tongue is grasped by another person in the folds of a towel, and held out of the mouth as far as possible. There is nothing to prevent any intelligent person adopting this simple expedient, the mouth of the windpipe being more easily reached than is generally supposed.

CUTS AND WOUNDS.

Wash the wound thoroughly with cold water, see that the bleeding ceases, put the edges of the wound together, and put on strips of plaster or cold water rags. To stop bleeding in all cases raise the limb and apply pressure directly over the wound either by finger or rolled-up handkerchief. If the bleeding be bright scarlet and in spurts, tighten a bandage round the limb on the side nearest the heart. If dark, and in a stream, tighten the bandage round the limb on the side away from the heart. An elastic gas tube, pair of braces, or garters form good bandages. Apply whilst the limb is raised up. Wounds of the head should be cleared of hair by cutting or shaving.

FAINTING.

When persons are found insensible, with face and lips pale and pulse weak, they should be laid flat on the back; water should be dashed on the back; smelling salts or pepper applied to the nose, and as soon as they can swallow, small quantities of wine or spirits and water should be given.

FITS.

When persons are found insensible, with livid face and lips, the veins of the head and neck distended, or the eyes protruding, and great efforts are made to breathe, they should be propped up in a sitting posture, the neck and shoulders should be stripped of clothes, and the head kept cool. Stimulants should be avoided.

FOREIGN BODIES IN THE EAR.

Don't meddle unless the foreign body be close at hand and can be easily seen. You may do much mischief.

FOREIGN BODIES IN THE EYE.

Don't rub. Bathe the eye well, and, if lime or mortar be present, use weak vinegar and water. If still in the upper lid, turn the lid over a pencil by pulling the eye-lashes upwards, and brush it off gently with handkerchief or camel's hair brush. After all, drop some oil between the lids, and keep the eye closed.

POISONING.

Produce vomiting by mustard or salt and water, or soap and warm water. If pain and purging, give two teaspoonsful of chalk, whiting, or magnesia in a tumbler of milk and water. If sleepy, keep awake by walking about, and strong coffee.

SNAKE BITES.

The symptoms brought on by the bite of a venomous snake vary with the amount of poison introduced into the system. The general symptoms are:—Great anxiety, depression, and prostration, feeble and intermitting pulse, profuse cold sweats, vomiting, hurried respiration, indistinct speech, dilation of the pupil of the eye, drowsiness, and, finally, in fatal cases, unconsciousness and convulsions.

Supposing that a limb has been bitten, place a cord around it at once, a few inches above the wound—that is, between the wound and the heart; then pass a stick between the limb and the cord, and twist it round several times, till the utmost degree of tension is produced. Two or three other cords should be applied above the first, two or three inches apart. Freely incise or cut out the wounded part, suck the wound for a few minutes (the mouth or lips of the person sucking should be free from sores, cracks, or abrasions) and then touch every part with a hot iron, or strong carbolic or nitric acid. Give internally ammonia and water, in the following quantities:—

Dose	1 year old	...	...	...	2 drops
„	2 „	...	...	...	3 „
„	3 „	...	...	...	4 „
„	4 „	...	...	...	6 „
„	5 „	...	...	...	6 „
„	6 „	...	...	...	6 „
„	7 to 10 years	...	...	...	8 „
„	10 to 14 „	...	...	...	10 „
„	14 to 20 „	...	...	...	12 „
„	20 to 60 „	...	Full dose		25 „

The ammonia should be freely diluted with water, so that the patient may have no difficulty in swallowing the medicine, and should be given every quarter of an hour, for two or three hours. As a substitute for ammonia equal parts of hot brandy and water, or any other alcoholic spirit that may be convenient, may be given at similar intervals and in moderate doses, proportioned to the age of the patient.

The cords may be relaxed in half an hour if none of the symptoms above-mentioned appear; if they have appeared, the cords must be kept in position until the patient has recovered.

The practice of making the patient walk about with the view of rousing him should not be followed; the patient is to be kept quiet and comfortably warm.

When the wound is on a part of the body that cannot be ligatured, it must be incised, part of the skin and underlying tissues taken away all round, and the hot iron or acid applied as in the former case.

STINGS OF INSECTS.

Apply at once liquid ammonia, or soda and water, or the "blue bag."

SUFFOCATION.

Fresh air at once; clear the throat; loosen everything round the chest; dash cold water; apply smelling salts. Continue as in drowning.

SUNSTROKE.

Sunstroke is caused by overheating of the blood. It is not necessary to be exposed to the direct rays of the sun to have sunstroke. An attack may even come on during the night.

To prevent sunstroke the body should be loosely clothed, and the head and the back of the neck protected with some white material. The diet should be simple; too much animal food should not be eaten during the hot weather, and all alcoholic drinks should be avoided.

When sunstroke has occurred, lay the patient in the coolest place procurable, remove his clothing, and douche him all over, but especially over the head and spine, with cold water. The bowels should be well moved with an enema if practicable. Spirits or stimulants should not be given.

NOTE.—This treatment must be continued until consciousness returns and never abates.

RESTORING THE APPARENTLY DROWNED.

Directions for Restoring the Apparently Drowned.

I.—DR. MARSHALL HALL'S METHOD.

Send immediately for medical assistance, blankets, and dry clothing, but proceed to treat the patient instantly on the spot, in the open air, with the face downward, whether on shore or afloat; exposing the face, neck, and chest to the wind, except in severe weather, and removing all tight clothing from the neck and chest, especially the braces.

The points to be aimed at are—first and immediately, the restoration of breathing; and secondly, after breathing is restored, the promotion of warmth and circulation.

The efforts to restore breathing must be commenced immediately, and energetically, and persevered in for one or two hours, or until a medical man has pronounced that life is extinct. Efforts to promote warmth and circulation, beyond removing the wet clothes and drying the skin, must not be made until the first appearance of natural breathing; for if circulation or the blood be induced before breathing has re-commenced, the restoration to life will be endangered.

II.—TO RESTORE BREATHING.

To Clear the Throat.— Place the patient on the floor or ground with the face downwards, and one of the arms under the forehead, in which position all fluids will more readily escape by the mouth, and the tongue itself will fall forward, leaving the entrance into the windpipe free. Assist this operation by wiping and cleansing the mouth.

If satisfactory breathing commences, use the treatment described below to promote warmth. If there be only slight breathing—or no breathing--or if the breathing fail, then—

To Excite Breathing.—Turn the patient well and instantly on the side, supporting the head, and—

Excite the nostrils with snuff, hartshorn, and smelling salts, or tickle the throat with a feather, etc., if they are at hand. Rub

the chest and face warm, and dash cold water, or cold and hot water alternately, on them. If there be no success, lose not a moment, but instantly--

To Imitate Breathing.—Replace the patient on the face, raising and supporting the chest well on a folded coat or other article of dress.

Turn the body very gently on the side, and a little beyond, and then briskly on the side, back again, repeating these measures cautiously, efficiently, and perseveringly about 15 times in the minute, or once every four or five seconds, occasionally varying the side.

[*By placing the patient on the chest, the weight of the body forces the air out; when turned on the side, this pressure is removed, and air enters the chest.*]

On each occasion that the body is replaced on the face, make uniform but sufficient pressure with brisk movement on the back between and below the shoulder-blades or bones on each side, removing the pressure immediately before turning the body on the side.

During the whole of the operations let one person attend solely to the movements of the head and of the arm placed under it.

[*The first measure increases the Expiration—the second commences Inspiration.*]

***The result is respiration or natural breathing—and, if not too late, Life.

Whilst the above operations are being proceeded with, dry the hands and feet, and as soon as dry clothing or blankets can be procured, strip the body and cover or gradually reclothe it, but taking care not to interfere with the efforts to restore breathing.

The foregoing two illustrations show the position of the body during the employment of Dr. Marshall Hall's method of inducing respiration.

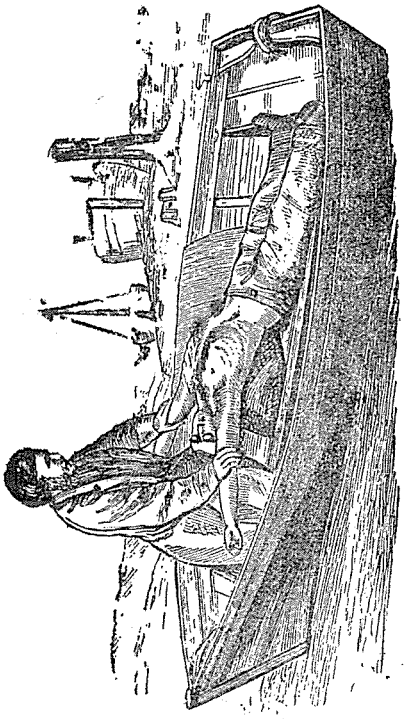
III.—DR. SYLVESTOR'S METHOD.

Should these efforts not prove successful in the course of from two to five minutes, proceed to imitate breathing by Dr. Sylvester's methods, as follows:—

Place the patient on the back on a flat surface, inclined a little upwards from the feet; raise and support the head and shoulders on a small firm cushion or folded article of dress placed under the shoulder-blades.

Draw forward the patient's tongue, and keep it projecting beyond the lips; an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or by raising the lower jaw the teeth may be made to retain the tongue in that position. Remove all tight clothing from about the neck and chest, especially the braces.

To Imitate the Movements of Breathing.—Standing at the patient's head, grasp the arms just above the elbows, and draw the arms gently and steadily upwards above the head, and keep them



stretched upwards for two seconds. (*By this means air is drawn into the lungs.*) Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest. (*By this means air is pressed out of the lungs.*)

[Repeat these measures alternately, deliberately, and perseveringly, about 15 times in a minute, until a spontaneous effort

to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to induce circulation and warmth.]

IV.—TREATMENT AFTER NATURAL BREATHING HAS BEEN RESTORED.

To promote Warmth and Circulation.—Commence rubbing the limbs upwards, with a firm grasping pressure and energy, using handkerchiefs, flannels, etc. (*By this measure the blood is propelled along the veins towards the heart.*)

The friction must be continued under the blanket or over the dry clothing.

Promote the warmth of the body by the application of hot flannels, bottles, or bladders of hot water, heated bricks, etc., to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet.

If the patient has been carried to a house after respiration has been restored, be careful to let the air play freely about the room.

On the restoration of life, a teaspoonful of warm water should be given; and then, if the power of swallowing have returned, small quantities of wine, warm brandy and water, or coffee should be administered. The patient should be kept in bed, and a disposition to sleep encouraged.

GENERAL OBSERVATIONS.

The above treatment should be persevered in for some hours, as it is an erroneous opinion that recovery is impossible because life does not soon make its appearance, persons having been restored after many hours.

APPEARANCES WHICH GENERALLY ACCOMPANY DEATH.

Breathing and the heart's action cease entirely; the eye-lids are generally half closed; the pupils dilated; the tongue approaches to the under edges of the lips, and these, as well as the nostrils, are covered with a frothy mucus; coldness and pallor of surface increase.

CAUTIONS.

Prevent unnecessary crowding of persons round the body, especially if in an apartment.

Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

Under no circumstances hold the body up by the feet.

On no account place the body in a warm bath, unless under medical direction, and even then it should only be employed as a momentary excitant.

The foregoing two illustrations show the position of the body during the employment of Dr. Sylvester's method of inducing respiration.

The following instructions will be found valuable in cases where the rescuer has to swim to the assistance of those who are in danger of drowning:—

INSTRUCTIONS FOR SAVING DROWNING PERSONS BY SWIMMING TO THEIR RELIEF.

First.—When you approach a person drowning in the water assure him, in a loud and firm voice, that he is safe.

Second.—Before jumping in to save him, divest yourself as far and as quickly as possible of all clothes; tear them off if necessary.

Third.—On swimming to a person in the sea, if he be struggling, do not seize him then, but keep off for a few seconds, till he gets quiet, which will be after he gets a mouthful or two; for it is sheer madness to take hold of a man when he is struggling in the water, and if you do you run a great risk.

Fourth.—Then get close to him, and take fast hold of the hair of his head, turn him as quickly as possible on to his back, give him a sudden pull, and this will cause him to float; then throw yourself on your back also, and swim for the shore, both hands having hold of his hair, you on your back and he also on his, and of course his back to your stomach. In this way you will get sooner and safer ashore than by any other means, and you can easily thus swim with two or three persons; the writer has often, as an experiment, done it with four, and gone with them 40 or 50 yards into the sea. One great advantage of this methed is that it enables you to keep your head up, and also to hold the person's head up your are trying to save. It is of primary importance that you take fast hold of the hair and throw both the person and yourself on your backs. After many experiments, I find this vastly preferable to all other methods. You can, in this manner, float nearly as long as you please, or until a boat or other help can be obtained.

Fifth.—I believe there is no such thing as a death-*grasp*, at least it must be unusual, for I have seen many persons drowned, and have never witnessed it. As soon as a drowning man begins to get feeble, and to loose his recollection, he gradually slackens his hold until he quits altogether. No apprehension need therefore be felt on that head when attempting to rescue a drowning person.

Sixth.—After a person has sunk to the bottom, if the water be smooth, the exact position where the body lies may be known by the air-bubbles which will occasionally rise to the surface, allowance being, of course, made for the motion of the water, if in a tide-way or stream, which will have carried the bubbles out of a perpendicular course in rising to the surface. A body may be often regained from the bottom before too late for recovery by diving for it in the direction indicated by these bubbles.

Seventh.—On rescuing a person by diving to the bottom, the hair of the head should be seized by one hand only, and the other used, in conjunction with the feet, in raising yourself and the drowning person to the surface.

Eighth.—If in the sea, it may sometimes be a great error to try to get to land. If there be a strong "outsetting" tide, and you are swimming either by yourself or having hold of a person who cannot swim, then get on to your back and float till help comes. Many a man exhauses himself by stemming the billows for the shore on a back-going tide, and sinks in the effort, when, if he had floated, a boat or other aid might have been obtained.

Ninth.—These instructions apply alike to all circumstances, whether the roughest sea or smooth water.—*Journal of Royal National Lifeboat Institution, London.*

Preventatively also, it is well to know how those who can swim may best avoid the danger of drowning during their bathing. The following hints will be found of value:—

IMPORTANT TO BATHERS.

Avoid bathing within two hours after a meal.

Avoid bathing when exhausted by fatigue or from any other cause.

Avoid bathing when the body is cooling after perspiration.

Avoid bathing altogether in the open air if, after having been a short time in the water, there is a sense of chilliness, with numbness in the hands and feet; but

Bathe when the body is warm, provided no time is lost in getting into the water.

Avoid chilling the body by sitting or standing undressed on the banks or in boats after having been in the water.

Avoid remaining too long in the water—leave the water immediately there is the slightest feeling of chilliness.

The vigorous and strong may bathe early in the morning on an empty stomach.

The young and those who are weak had better bathe two or three hours after a meal—the best time for such is from two or three hours after breakfast.

Those who are subject to attacks of giddiness or faintness, and those who suffer from palpitation and other sense of discomfort at the heart, should not bathe without first consulting their medical adviser.

APPENDIX VIII.

BUILDING RULES.

(A.)—PLANNING AND ACCOMMODATION.

1. Schools to be planned so that the children may be seated in the best manner for being taught.

2. The arrangement of doors, windows, and fire-places, and the width and length of the class-rooms, to be studied in this connection.

3. Schools (subject to the extent of site permitting) to be one storey in height, and planned on the corridor system (with special view to facility of extension), in accordance with these rules; and, in case of additions, so that the least possible disturbance to the portions already built, or in occupation, may be occasioned.

(B.)—WALLS, FLOORS, AND ROOFS.

1. In all rooms used for teaching the ceilings to be level at the wall plate, and to be 14ft. clear height from floor.

2. A damp-proof course to be provided in all brick and stone buildings.

3. Brick walls to be built with a cavity where exposed to driving rain, and to be plastered inside, having a cement dado, 5ft. high, trowelled to a glass face.

4. The inside jambs of all windows to be plastered, so as to avoid the use of projecting wood architraves, nosings, etc., which accumulate dust.

5. The dado to be painted chocolate brown, and the walls above buff; the ceilings to be left white.

6. The floors of all rooms used for teaching to be of wood. Where the buildings are of brick and stone, the floors of entrances, halls, corridors, cloak-rooms, and lavatories to be of cement, asphalt, tiles, wood blocks, or ordinary flooring, on concrete.

7. The spaces between the roofs and ceilings to be well ventilated; gables to be used accordingly in preference to hips wherever possible.

8. All spaces under wooden floors to be well ventilated.

(C.)—ENTRANCES.

1. Separate entrances to be provided for:—

(1.) Boys,

(2.) Girls and Infants;

and, in more advanced stages,—

(3.) For Infants only (separate from Girls' entrance).

2. All exterior doors to swing outwards only, and all class-room doors to swing inwards.

3. Escape doors to be provided, if deemed necessary in any special case, for use only in the event of panic or fire.

4. External porches to be provided where necessary for protection of entrance from sun or weather.

(D.)—CLOAK ROOMS AND LAVATORIES.

1. Heights of lavatory benches to be:—For Infants, 1ft. 11in., and for older children, 2ft. 2in., with one basin or jet for about every 20 children. (For wastes, etc., in connection with basins, *see* Sanitation.)

2. Hat pegs to be spaced 15in. apart, in three tiers, set quincunx, at heights of 2ft. 3in., 3ft., and 3ft. 9in., respectively, for Infants; and 3ft., 4ft., and 5ft. respectively, for older children.

(E.)—CLASS-ROOMS.

1. Class-rooms to be calculated at not less than 11 square feet of floor space for each child.

2. The standard size of class-room to be:—For 50 children, 26ft. by 22ft., or 24ft. by 24ft.; and for infants' rooms (in the mixed schools), 35ft. by 22ft.

3. Class-rooms to be on the same floor level as the corridors, and to have movable steps, four in number, and each 3in. in height, to enable dual desks to be graded.

3A. Grading not to be introduced in schools provided for less than 50 children.

4. Class-rooms to be planned so that they may be cleared quickly and without disturbance to other parts of the school.

5. Map-rails, with hooks, to be fixed at a height of 10ft. 6in. all round the walls.

6. A blackboard, 4ft. deep and 2ft. 6in. from floor, to be fixed along the whole length of wall opposite the desks.

7. A good-sized cupboard for stock to be provided to each room.

8. Class-room doors to have glass upper panels.

9. Every class-room to have an open fireplace.

(F.)—HALLS.

Where central halls are not provided, grading may be omitted in one of the class-rooms. In such cases two of the class-rooms should be capable of being thrown into one for the purposes of assembly, examination, etc., by means of a wide opening in the dividing wall, fitted with revolving shutters.

(G.)—TEACHERS' ROOM.

In the larger schools (for 175 to 325 scholars), and in all Infants' Schools, a Teacher's room to be provided, the dimensions varying from 12ft. by 10ft. to 17ft. by 10ft.

(H.)—VERANDAHS.

1. Where protection against weather or sun is necessary, a verandah of sufficient extent, and not less than 10ft. in width, to be provided.

2. These verandahs to have a gravel floor; to be provided with wooden seats, and to serve as shelter sheds for each sex.

(I.)—WINDOWS.

1. Every part of the school building to be amply lighted.

2. The minimum area of glass in a class-room of the 26ft. by 22ft. size, to be 60 square feet.

3. All main windows in rooms used for teaching to be planned generally on the South or East sides only; and, as far as possible, on the left side of the children's seats or benches.

(1.) The cills to be 5 feet from the floor, the windows and fanlight reaching to the ceiling.

(2.) Each fanlight to be hung on centres, the windows to have double hung lifting sashes.

(3.) The windows to be arranged so that the first jamb is at 2ft. 6in. from the wall at the back of the children.

(4.) Each class-room to have three or four windows within its length.

(5.) Where verandahs are necessary on account of a North or West aspect, special provision to be made against obstruction to the lighting of the class-room.

(6.) Spring-blinds hung at the transoms to be provided where necessary.

(J.)—VENTILATION.

1. Fresh air to be admitted into all rooms by approved patent fresh-air inlets, three in number to each infants' room, and two to each class-room.

2. All doors from corridors to class-rooms to be provided with hinged fanlight to secure thorough circulation.

3. Outlets for foul air to be provided in the walls at ceiling height, and in the ceilings by bell-mouthed gratings (one for each 4,000 cubic feet), each leading into a separate tube, carried above the ridge of roof, and fitted with an exhaust cowl.

4. To secure a thorough circulation of air between the roofs and ceilings (of much importance under the Australian climatic conditions) louvres to be provided in all gable ends.

5. Where class-rooms have more than one external wall, small windows (hinged at top to open outwards) at the ceiling level to be provided for purposes of additional cross ventilation.

(K.)—SANITATION.

1. In the absence of any water-carried system of sewerage, earth-closets with pans to be used where a sanitary authority exists; in other cases the pit system must be employed.

2. In the former case, the latrine blocks for the two sexes to be placed back to back, with a cleansing passage between for access to the pans; and to be as far from the school building as circumstances will permit, and against the directions of the prevailing winds.

3. In each closet only one seat to be allowed: to be 2 feet 6 inches wide for boys and girls, and 2 feet wide for infants, with dividing screens 5 feet high. A door, without a bolt and the height of the screen, to be provided to each closet, kept up 18 inches above the floor to enable the teacher to see whether the closet is occupied.

4. The height of the seat from floor will depend on the depth of the pan; broad steps to be provided adapted to the varying height of seats that may be required. Under side of seat to be provided with guide rails for bucket.

5. The following table gives approximately the number of closets to be provided:—

For Mixed Schools.

		Teacher.	Girls.	Boys.	Infants.
50	Children or under	—	1	1	—
75	,,	1	2	1	1
125	,,	2	2	2	2
175	,,	2	3	2	2
225	,,	2	3	2	3
275	,,	2	4	3	3
325	,,	2	5	3	4

For Infants' Schools.

		Teacher.	Girls.	Boys.
100	Children or under	1	4	3
150	,,	1	5	4
200	,,	1	6	5
250	,,	1	7	6

6. The pan doors and risers of closets to be kept clear of both head and cill and of floor, respectively, to secure a thorough current of air.

7. Urinals to be arranged as under:—

(1.) To be outside the latrine building, and open to the air, and to be enclosed by close screens, 5ft. high, with a separate small pent roof to shield the boys' heads from the weather.

(2.) The floors to be of cement or asphalt, with a fall of 1in. to the foot towards a deep channel in the floor, having a rapid fall and well tarred all over.

(3.) No trough to be used.

(4.) Generally the urine is to be conveyed by glazed or earthenware pipes to a well ventilated soak well about 30ft. distant.

(5.) In districts where the local regulations require discharge into a pan, such pan should be tarred and sunk in a brick pit, and be of convenient size for the periodical removal.

(6.) The back of the urinal to be of galvanised iron, well tarred, and of the following lengths:—

For	50	children	... 6ft. long
„	100	„	... 10ft. „
„	200	„	... 15ft. „
„	300	„	... 20ft. „
„	400	„	... 25ft. „

8. The openings to Infant Boys' latrines to be from the Girls' playground.

9. The lavatory basins to empty direct into a galvanised iron tarred trough under the shelf, and be connected to a rapidly falling waste pipe discharging through the outside wall over a short channel leading to an open gully grating. No enclosure of the lavatory bench to be permitted.

10. Lavatories to be provided with towel rails on walls as required.

(L.)—SITES AND PLAYGROUNDS.

1. A school-site being one of the first reserves made by the Government in laying out new townships, should be generally central in position and of ample size.

2. Separate playgrounds and gates to be provided for (1) Boys, and for (2) Girls and Infants.

3. Each playground (in the larger schools) to have a light shelter shed, unless verandahs are provided for the purpose against the school building.

4. The rails of fences dividing the playgrounds to be always fixed on the girls' side.

(M.)—INFANTS' SCHOOLS.

1. The foregoing general rules apply to Infants' Schools, with the following additions:—

(1.) Infants' Schools to have a central hall with surrounding class-rooms opening therefrom.

(2.) An escape door may be provided for the hall.

(3.) The class-rooms to correspond in all other respects to those of mixed schools.

(N.)—TEACHERS' HOUSES.

1. Residences for teachers to be of four classes, with accommodation varying according to the size of the school and requirements of the locality; generally as follows:—

Class A.

Living room, 16ft. by 12ft.
Bedroom, 14ft. by 12ft.
Kitchen, 12ft. by 10ft.
Verandah back and front.

Class B.

Living room, 16ft. by 12ft.
Bedroom, 14ft. by 12ft.
Bedroom, 10ft. by 10ft.
Kitchen, 12ft. by 10ft.
Front verandah and back lobby.

Class C.

Sitting room, 12ft. by 11ft. 6in.
Living room, 16ft. by 12ft.
Bedroom, 14ft. by 12ft.
Bedroom, 14ft. by 12ft.
Kitchen, 12ft. by 10ft.
Bathroom, pantry, back lobby, and front verandah.

Class D.

Sitting room, 14ft. by 12ft.
Dining room, 16ft. by 12ft.
Bedroom, 14ft. by 12ft.
Bedroom, 14ft. by 12ft.
Bedroom, 12ft. by 11ft. 7½in.
Bedroom, 12ft. by 11ft. 7½in.
Kitchen, 12ft. by 10ft.
Bathroom, pantry, back lobby, and front verandah.

2. The residences to be always on the school-site, and (except in very small schools) detached from the school building, with a separate yard and outhouses.

3. In small schools, where quarters adjoining the school are provided for the teacher, there should be no direct communication between the school portion of the building and the quarters.

4. The rooms to be generally 10ft. in height, well lighted and ventilated, with a fire-place in each dwelling room and an oven in the kitchen.

By Authority: WM. ALFRED WATSON, Government Printer, Perth.