

1900.
NEW ZEALAND.

EDUCATION: MANUAL AND TECHNICAL INSTRUCTION.

[In continuation of E.-5, 1899.]

Presented to both Houses of the General Assembly by Command of His Excellency.

EXTRACT FROM TWENTY-THIRD ANNUAL REPORT OF THE MINISTER OF
EDUCATION.

MANUAL AND TECHNICAL INSTRUCTION.

The general remarks made in last year's report as to the importance and prospects of manual training in our schools, and of technical instruction for the youth of the colony, still hold good, and it is not necessary to repeat them here. It is not in the improvement of industrial processes alone that the general introduction of manual and technical training would produce good results, but in the gradual recasting of the whole educational system which it would involve—in the more complete adjustment of our intellectual and practical life to our actual environment which an enlightened scheme of this kind would certainly bring about. But the progress that can be recorded in New Zealand during 1899 is little, if any; in some places the movement has gone forward a little, in others it has gone back—in fact, no substantial progress can be looked for until substantial provision has been made by the legislature for its encouragement.

The new regulations for the examination of public schools give somewhat greater facilities for the introduction of hand-work into the course of primary school instruction; but without special grants for this purpose it is not likely that many Education Boards will be likely to encourage its introduction into their schools.

The table on page 2 shows the administration of the resources afforded by the Act of 1895, the capitation paid on account of classes, and the amounts of special grants in certain cases.

No account is taken here of the important technical work done in connection with the Otago School of Mines, the Canterbury College Engineering School, and other institutions; nor of the manual instruction given in many of the primary schools and secondary schools, as no specific information in regard to them is in the possession of the department,

MANUAL AND TECHNICAL INSTRUCTION, 1899.

School or Instructor.	Subjects of Instruction (grouped), and Average Attendance.													Payments.					
	Freehand (from Flat and Round) and Shading.	Drawing from Nature, Painting, and Modelling.	Mechanical Drawing and Engineering and Machine Construction.	Geometry and Perspective.	Design and Ornament.	Architecture, and Building Construction.	Mathematics.	Natural and Experimental Science (Botany, Chemistry, and Physics).	Woodwork.	Plumbing (Theory and Practice).	Domestic Instruction.	English, and Commercial Subjects.	Singing.	Capitation.	Special Grants.				
Technical Classes Association, Auckland	5	..	..	2	..	9	4	..	10	5	..	..	..	£	s.	d.	£	s.	d.
"Elam" School of Art, Auckland	19	10	..	22	..	..	..	..	..	..	..	..	..	90	19	7	150	0	0
Payton, Mr. E. W., Auckland	8	..	..	..	..	..	..	..	..	..	..	..	..	5	16	0	..	..	..
Robinson, Mr. W. I., Auckland	..	..	45	17	..	..	..	..	..	..	..	..	..	40	0	5	..	..	..
Education Board, Auckland—																			
Devonport Public School	..	..	..	..	..	..	..	..	12	..	..	..	..	8	10	0	..	..	..
Remuera Public School	..	..	..	..	..	..	..	..	7	..	..	..	..	3	18	9	..	..	..
Education Board, Wanganui—																			
Technical School, Wanganui	34	10	15	26	4	7	5	15	28	..	29	16	..	64	11	3	..	..	..
Technical classes, Palmerston North..	13	..	..	23	..	..	..	..	..	..	..	..	..	16	11	5	..	..	..
" " Hawera	10	3	..	11	..	..	..	..	6	..	121*	..	..	44	18	10	..	..	..
Education Board, Wellington—																			
Technical School, Wellington	616	280	137	232	98	106	113	..	422	143	520	103	263	373	0	7	..	..	..
Paraparaumu Public School	..	..	..	..	..	..	..	..	7	..	..	..	..	1	4	9	..	..	..
Petone Boys' Institute	..	..	6	..	..	..	..	..	..	..	..	..	..	10	16	3	..	..	..
Caverhill, Miss L. L., Petone, Wel'gton	..	13	..	..	..	..	..	..	..	..	..	..	..	10	14	1	..	..	..
Technical School, Masterton	23	..	..	..	..	..	..	11	..	..	44	..	..	41	7	6	..	..	..
Anderson, Mr. R. N., Napier	52	..	..	..	..	..	..	..	..	..	..	..	..	33	6	7	..	..	..
Education Board, Napier—																			
Napier Public School	..	49	..	51	51	..	..	..	..	..	..	..	..	16	1	4	..	..	..
Education Board, Marlborough—																			
Blenheim Public School	..	..	..	..	..	..	..	..	..	..	24	..	..	10	7	4	..	..	..
Renwick Public School	..	..	..	..	..	..	..	..	..	..	16	..	..	6	3	5	..	..	..
Education Board, Nelson—																			
Nelson cookery class	..	..	..	..	..	..	..	..	..	87	..	..	..	10	17	6	..	..	..
Education Board, Grey—																			
Greymouth Public School	..	..	..	..	..	..	..	..	12	..	..	..	..	15	7	9	..	..	..
Education Board, Westland—																			
Kumara Public School	..	..	..	..	..	..	..	..	9	..	..	..	..	15	12	8	..	..	..
Canterbury College—																			
School of Art, Christchurch	295	92	..	119	27	18	..	..	13	..	..	..	..	168	11	9	..	..	..
School of Engineering and Technical Science, Christchurch	..	..	127	41	..	..	..	..	..	..	..	..	..	75	16	3	..	..	..
School of Domestic Instruction, Christ'ch	..	..	..	..	..	..	..	..	..	235	..	..	..	105	3	9	65	0	0
Education Board, North Canterbury—																			
Normal School	..	..	..	..	..	..	..	..	61	..	..	..	..	32	10	0	..	..	..
Amberley Public School	..	..	..	..	..	..	..	..	12	..	33	..	..	13	2	10	..	..	..
Leeston Public School	..	..	..	..	..	..	..	..	30	20	..	..	..	21	1	10	..	..	..
Technical Classes Association, Dunedin	..	..	62	..	..	..	27	63	30	21	46	201	..	45	11	4	..	..	..
" " Balclutha	..	..	..	..	..	..	..	..	16	..	..	..	..	3	0	0	..	..	..
" " Waiwera S.	..	6	..	..	..	..	..	..	..	..	..	..	..	6	6	5	..	..	..
" " Invercargill	19	..	37	..	..	9	..	12	86	..	43	27	..	49	11	6	..	..	..
Education Board, Otago—																			
School of Art, Dunedin	150	20	16	76	10	10	..	..	..	..	..	..	..	181	8	0	..	..	..
Balclutha Public School	..	..	..	..	..	..	..	..	16	..	..	..	..	3	6	0	..	..	..
Tokomairiro Public School	..	..	..	..	..	..	..	..	18	..	..	..	..	7	15	9	..	..	..
Kidson Hunter, Mr. A. G., Dunedin	..	..	..	..	..	..	..	20	..	..	..	..	..	12	11	4	..	..	..
Total	1,244	483	445	620	190	159	149	121	765	169	1,178	387	263	1,607	0	2	215	0	0

* Includes attendance at Hawera, Patea, Waverley, Manaiia, and Eltham.

The incidental expenditure is as follows:—

Examinations of Science and Art Department	....	£	s.	d.
Examinations of City and Guilds of London Institute	....	23	8	0
Railway fares of students	....	10	19	4
Railway fares of instructors	....	90	15	0
Mounting and freight of art posters	....	108	16	3
Freight on loan collection of works from South Kensington	....	4	7	6
Report on Technical Education (Mr. Riley's)	....	1	13	6
Publications	....	231	11	3
	....	3	5	8
Total	....	£474	16	6

The following table shows the results of examinations conducted in the colony on behalf of the Science and Art Department, London, and of the City and Guilds of London Institute:—

LONDON TECHNICAL AND ART EXAMINATIONS, 1899.

["C" represents candidates; "P" passes.]

Subjects of Examination.	Auckland.		Wanganui.		Wellington.		Wellington Sub-centres.*		Napier.		Christchurch.		Timaru.		Dunedin.		Invercargill.	
	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.	C.	P.
<i>Science and Art Department.</i>																		
<i>Art—</i>																		
Drawing in light and shade (elementary)	19	12	3	2	22	20	1	..	6	3	2	1	..	..	26	19	..	..
Drawing in light and shade (advanced)	13	11	3	1	12	9	..	..	5	1	5	5	1	..	17	12	..	..
Perspective (elementary)	8	8	2	2	6	6	2	1	..	..	..	..	5	5	12	7	..	..
Model drawing (elementary)	19	18	3	3	68	52	4	4	18	13	8	7	1	1	41	34	..	..
" (advanced)	14	14	4	4	7	7	..	..	6	4	5	5	1	1	7	4	..	..
Freehand drawing of ornament (elementary)	18	16	22	12	70	62	11	7	56	33	19	17	10	8	81	73	..	..
Freehand drawing of ornament (advanced)	17	15	3	3	12	11	..	..	..	..	5	5	1	1	12	7	..	..
Geometrical drawing (art)	11	7	..	..	8	3	..	..	..	..	..	..	3	3	12	10	..	..
Design (elementary) .. .. .	..	..	..	..	8	3	..	..	..	..	4	2	1	1	..	..	..	..
Painting from still life	7	4	3	1	6	3	..	..	..	..	1	1	..	..	..	..	..	..
Drawing from life .. .. .	..	..	..	..	3	..	..	..	..	..	3	2	..	..	3	..	..	..
" the antique	9	7	2	2	2	..	..	..	..	..	..	..	..	..	4	2	..	..
Painting ornament .. .. .	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..
Principles of ornament (elementary) .. .. .	..	..	2	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Students' works .. .. .	..	..	7	2	24	7	..	..	..	..	4	4	..	..	10	9	..	..
<i>Science—</i>																		
Practical plane and solid geometry .. .. .	..	..	2	2	7	5	..	..	..	..	3	3	..	..	9	4	..	..
Mathematics, stages 1, 2, 3 .. .. .	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..
Machine construction and drawing	23	15	..	..	23	14	..	..	..	..	..	..	..	..	15	11	..	..
Building construction	5	5	..	..	16	12	..	..	..	..	6	5	..	..	8	7	..	..
Steam	6	6	..	..	7	6	..	..	..	..	..	..	..	..	1	1	..	..
Human physiology .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..
Inorganic chemistry (theory) .. .. .	..	..	..	..	..	..	2	2	..	..	..	..	..	..	1	1	..	..
" (practical) .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Agriculture .. .. .	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	1	..	..
Botany .. .. .	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Applied mechanics .. .. .	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	..	..
Theoretical mechanics (solids) .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Sound, light, and heat .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
<i>City and Guilds of London Institute.</i>																		
Telegraphy and telephony .. .. .	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Electric lighting (honours) .. .. .	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Brickwork .. .. .	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Carpentry and joinery (preliminary) .. .. .	..	..	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Carpentry and joinery (ordinary) .. .. .	..	..	1	1	1	1	..	..	..	..	..	..	..	..	3	3	..	..
" (honours) .. .. .	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Woodwork, first year .. .. .	..	..	2	2	..	..	..	..	..	..	4	4	..	..	..	..	1	..
" final .. .. .	..	..	..	..	..	..	..	..	..	..	9	6	..	..	..	..	2	2
Bookbinding .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Cookery .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	..	..
Mechanical engineering .. .. .	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Plumbing (preliminary) .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	..
" (written)	2	..	..	..	11	4	..	..	..	..	..	..	..	..	5	4	..	..
" (practical)	2	2	..	..	12	5	..	..	..	..	..	..	..	..	..	..	..	..
Totals	173	140	61	41	329	234	22	14	91	54	78	67	25	22	287	222	3	2

Total of papers, 1,069; total of passes, 796.

* Pahiatua, Masterton, and Inglewood.

† Christchurch also obtained a book prize and a silver medal for works.

The stimulus and encouragement afforded to students by these examinations have been considerable, and our indebtedness to the authorities named is none the less because the examinations are conducted and prizes are given on the same terms as for students in the United Kingdom, at a comparatively small cost to the colony.

REPORTS OF TECHNICAL SCHOOLS AND CLASSES.

AUCKLAND TECHNICAL SCHOOL ASSOCIATION.

1, Durham Street E., 29th March, 1900.

Your Council beg to present the following report for the year ended the 31st December last:—

Owing to the Auckland Industrial and Mining Exhibition, 1898–99, continuing open during February last, it was deemed advisable to delay the beginning of the first school-term until the 20th of that month.

The attendances during the first term did not compare favourably with previous years, and in consequence several classes were either not commenced, or were, after the third week, discontinued for the time being.

Some changes in the *personnel* of the staff were made during the earlier part of the year, and may be stated as follows: Mr. Bruce, Instructor of Carpentry, having received an appointment in Melbourne, was succeeded by Mr. Thomas May, who has had considerable practical experience both in England and in the colony. Mr. Thomas England was appointed Instructor in Graining and Marbling, and Signwriting, in place of Mr. Charles Blomfield. Mr. A. V. Nightingale, Wood-carver, replaced Mr. William Batts. Mr. J. A. Paterson, Instructor in Mechanical Drawing, &c., having left the colony, other arrangements were made for carrying on the instruction of the class named.

The attendances during the year generally have been satisfactory compared with preceding year. By special arrangements made with certain instructors, by way of amalgamating kindred classes, the proportion of expenses incurred to receipts by fees, &c., has been considerably reduced, without in any way impairing the efficiency of the instruction provided for in the present syllabus. Though this be so, it is fully realised that, in order to provide instruction of a more advanced character, and for the addition to the syllabus of other subjects which are really necessary and frequently inquired for, the revenue of the school must be augmented, so as to make possible the extensions that are so evidently required. The appeal to the public for subscriptions to the school has for several years been so futile that a formal canvass has been abandoned. Though fairly good results were obtained from this source during the first two years of the school's establishment, when the Government contributed pound-for-pound subsidy, the withdrawal of that subsidy has had a damaging effect upon subscriptions. Efforts have been made on several occasions to induce the Government to revive the subsidy, but without avail. Thus it is that, beside the capitation earned upon average attendance of students, the association at the outset was left dependent upon the annual grant of £100 to supplement the fees received. During the year the Government intimated that even this sum would be reduced to £50, in view of the larger claims made by the increasing number of technical schools upon the £2,000 provided for the purpose. But we are pleased to add that our Auckland members of Parliament were successful in having the full amount (£100) reinstated, and also a further £50, which was necessary for the association to meet the obligations of the year. By similar efforts a sum of £300 has been promised by the Government for the year 1900. This latter sum will insure the continuation of the school for another twelve months, yet it only temporarily disposes of the difficulty that has had to be contended with for several years past.

It is to be deeply regretted that the better provision for technical education in the colony which has been spoken of in every session of the Parliament which has just expired was never accomplished, and it is to be hoped that the new Parliament will address itself effectually to remedying the great inequality that exists in the provision for education in New Zealand, which devotes upwards of £400,000 per annum to primary education and only £2,500 to technical education. Technical education is now recognised at Home, on the Continent, and in America as the most important branch of education, and it is deplorable to think how far New Zealand lags behind those countries and the Australian Colonies in the matter of establishing a thorough system of technical instruction. It is especially deplorable that in the City of Auckland its technical school should be reduced to such a state that its continuance for the last few years has been only maintained by doles dealt out by the Government. The Council hope that this is the last time they will have to draw attention to the neglect of technical education, and trust that in the coming session of the new Parliament it will be placed in that pecuniary position that its importance demands.

The thanks of the Council are due to the Government for undertaking to maintain the Auckland Technical School until suitable provision shall be made for that branch of education by the new Parliament in the ensuing session.

G. MAURICE O'ROKKE, President.

SUCCESSSES AT EXAMINATIONS.

City and Guilds of London Institute.—Plumbers' work, practical, honours grade, two.

Science and Art Department.—Geometrical drawing, two; freehand drawing (elementary), three; model-drawing (advanced), one; freehand (advanced), four; light and shade (advanced), one; model-drawing (elementary), three; mathematics, one.

Certificates were obtained by one student in machine construction and drawing, and by five in building construction.

engineers, engine-drivers, masons, coppersmiths, cabinetmakers, coachbuilders, boilermakers, and contractors.

The Saturday afternoon classes for teachers have been held as usual, the branches being plane and solid geometry and perspective, to prepare for the Board and teachers' examinations. Twenty pupils have been joined to this class the two middle terms of the year, which are the best attended. At the beginning and end of the year the attendance was small.

EXAMINATIONS.

City and Guilds of London Institute.—At the examinations held by this body in subject "mechanical engineering," two pupils from these classes received the ordinary grade certificates.

Science and Art Department, South Kensington.—The results of examinations held in July, 1898, are as follows:—Machine construction and drawing: One first-class advanced certificate, one second-class advanced certificate, and six first-class elementary certificates.

New Zealand Government.—At the local examinations held during the year by the Government examiners in land and marine engineering the following certificates were received: Six third-class engineers' certificates, eight river-engineers' certificates, five marine-drivers' certificates, six certificates for locomotive- and traction-engine driving, and one winding-engineers' certificate.

Auckland Industrial and Mining Exhibition.—At this exhibition the pupils of these classes received the first award for a set of fourteen finished mechanical drawings.

The Hon. the Minister of Education.

I have, &c.,

W. I. ROBINSON, Director.

MANUAL-TRAINING CLASS, DEVONPORT PUBLIC SCHOOL.

REPORT FOR YEAR, 1899.

THE following is a list of the articles made by the pupils: Eight pairs steps, three pairs towel-horses, five single towel-horses, three easels, one music-stand, six knife-trays, six soap-boxes, eight foot-stools, five desks, ten shield-brackets, six fan-brackets, nine balloon-brackets, thirty various brackets, five three-tier brackets, six potato-mashers, six sets towel-rollers, nine book-shelves, three cabinets, two coal-scuttles, two salt-boxes, two music-pockets. Class-fees amounted to £1 17s., and expenditure on material to £1 4s. 9d., leaving a balance of 12s. 3d. The instructor is paid at the rate of 2s. 6d. for each attendance—*i.e.*, seventy-two attendances during the year—£9 in all.

I send for the acceptance of the Minister a photograph of a number of articles made by the boys in the workshop, and shown at the Auckland Industrial Exhibition sixteen months ago, and which gained for the school the first prize in the exhibits of that class of work.

10th May, 1900.

I have, &c.,

OLIVER MAYS, Chairman.

WANGANUI TECHNICAL SCHOOL AND CLASSES.

SIR,—

Wanganui, 12th February, 1900.

I have the honour to submit my report upon primary drawing, and the work of the technical schools of Wanganui, Palmerston North, and Hawera, for 1899, as follows:—

The late Director, Mr. D. Blair, having resigned the directorship of this school in April, I was appointed to fill the vacancy in May.

The work in connection with the above schools has been of a satisfactory character throughout the year. During the latter part of the year there were four extra classes established. The average enrolment of students who attended the different classes of this school during the four quarters was as follows: Day class for drawing and painting, 4·6; evening class for drawing and painting, 26·2; building construction, 8·2; machine construction, 9·6; geometry, 17·2; teachers' Saturday class, 17·5; botany, 3; wood-carving, 25·2; clay-modelling, 2; bench-work, 11; experimental science, 9; chemistry, 5; book-keeping, 7; Latin and English, 16; mathematics, 16·2; cooking, 33; lettering, 3·6; shorthand, 4; dressmaking, 24; total, 242·3.

The following occupations are represented amongst the students of the classes: Architect, 1; blacksmiths, 2; bricklayers, 3; butchers, 3; boilermakers, 2; carpenters, 9; clerks, 15; chemists, 5; cabinetmakers, 6; carvers, 2; drapers, 1; dressmakers, 4; engineers, 6; farmers, 3; fitters, 2; grocers, 2; home duties, 28; hairdressers, 2; ironmonger, 1; joiners, 5; music-teachers, 2; nurse, 1; students, 13; saleswomen, 3; photographer, 1; painters, 4; tailor, 1; upholsterers, 2; telegraphist, 1; teachers, 29; lithographer, 1; locomotive fireman, 1; total, 161.

Drawing, Painting and Drawing.—The day classes have been poorly attended. I am pleased to report that there was a slight increase of attendance in the fourth quarter. The evening classes have received every encouragement, and some good work has been executed. A special painting class was started on Thursday, and was fairly well attended. The life class was commenced in the beginning of the third term, and was largely attended. Excellent work has been produced in black and white from the draped figure.

Landscape.—In the beginning of the fourth quarter I organized a class for the study of landscape drawing and painting from nature. The students who were qualified were accompanied by me to different parts every Monday. The progress of the students has been gratifying, and I hope that the class will be largely patronised this year.

Mechanical Drawing and Machine Construction.—This class has steadily increased in attendance. Mechanics and those engaged in mechanical pursuits should avail themselves of the benefits derived from attending this class. It is essential that an engineer should be able to do something

more than merely copy to a scale a piece of machinery. In this subject some excellent results were obtained in the examination held in December last.

Building Construction and Architectural Drawing.—This class has increased in attendance twofold during the latter part of the year, and great interest has been shown in the work. Lectures were given in brickwork, stonework, and woodwork, and the materials used in building; and drawing plans, elevations, sections, and details of structures.

Practical Plane and Solid Geometry.—This class has greatly increased in attendance. The art and science students are availing themselves of the study of this useful subject.

Manual Training.—This class has been poorly attended, and I am surprised that parents and guardians will not send their children to avail themselves of the benefit the Education Board has conferred on the town by establishing this class. The great object is to cultivate the love of construction and work. The work of the pupils include such articles as small tables, music-stands, knife-boxes, cupboards, brackets, as well as the various joints in woodwork, and the general use of the tools.

Carpentry and Joinery.—Very useful work was done. The pupils are taught to draw the work to a certain scale, and build the article afterwards. Ordinary four-panelled doors, window sashes and frames, stair-work, and the study of the bevels in roof-work were the principal work executed by the students in this class.

Wood-carving.—This class has steadily increased in attendance since last report. Some excellent work has been executed by the students from photographs of ancient carved work, plaster-casts, and designs in English, French, German, Gothic, Italian Renaissance and the Classic styles. The Examiner, Mr. A. Atkins, F.R.I.B.A., of Wanganui, reported the results of the examination very satisfactory.

Clay-modelling.—Several specimens of work were executed from the human figure and floral ornaments during the year. I draw attention to the value of this class: First, for those who are taking art as a study. The sense of form can only be learnt by working in a plastic medium that responds to the slightest touch of the fingers. Modelling is the best mode of expressing thought, being much more thorough than a drawing, the student learning how to express light, reflected light, and shade as well as the true contour of the object. Second, for a student studying wood-carving an elementary knowledge of modelling is one of the greatest helps to him, as it is the key to that art, also compelling him to use both hands continually before he starts work with carving tools.

Continuation Classes.—Mr. T. R. Cresswell having resigned the lectureship of English, Latin, mathematics, and experimental science, the vacancy was filled by the appointment of Mr. Charles George, M.A., Aberdeen University.

Book-keeping.—This class was started at the beginning of the fourth quarter. The attendance was good; the principal work being real, personal, and nominal accounts, balance-sheet, capital account, and how to open a ledger.

Mathematics.—The attendance in this class was fair. The work is divided into two sections, the elementary and the advanced, for the study of arithmetic, algebra, euclid and trigonometry.

English and Latin.—The attendance was fair. Work: English grammar, composition, analysis, literature, and books set; Latin grammar, *Via Latina*, *Cæsar*, *Tacitus*, *Ovid*, and Latin prose.

Botany.—The attendance was good. The principal works were the examination of specimens, structure of seed of plants, cell structures, cell growth and tissues, germination, plant-food, root functions, stem structure, plumule buds, vernalion, leaves, inflorescence, structure and functions of parts of the flowers.

Chemistry.—The attendance in this class was good. Work: Lectures and experiments, analysis of metals, &c.

Experimental Science.—The attendance has only been fair. The work of this class is the preparation of teachers for the D and E Science Examination. Lectures, illustrated by experiments, on the following subjects were given: Acoustics, optics, heat, magnetism, electricity, chemistry, and physiology.

Cooking Classes.—These classes were held in Hawera, Eltham, Manaia, Patea, Waverley, and Wanganui, and were largely attended. The totals for the six towns were 501 pupils. Classes were held on Friday and Saturday in Wanganui. Plain cooking was taught in these classes; also the general management of a kitchen. Keen interest was manifested by the pupils in their lessons, and good attendance was maintained throughout the quarters. I would like to see the subject made compulsory for children attending the primary schools, the scholars to be sent, during the ordinary school-hours, to a specially organized centre.

Saturday Pupil-teachers' Class.—The attendance was good. The pupil-teachers and teachers have attended a special drawing class from 10 a.m. to 1 p.m., and have been taught freehand, model-drawing, practical plane and solid geometry, drawing on the blackboard from memory of elementary freehand copies, ambidextrous exercises on the blackboard, which they accomplish with great freedom considering that at school they do not use the left hand. I strongly recommend that children should be taught to use both hands, so as to cultivate both sides of the brain. There are close on two hundred and forty trades employing the use of both hands. Model-drawing on the blackboard from memory is taught to the second-class pupil-teachers to train them to illustrate object-lessons on the blackboard freely and correctly. The students are progressing very favourably, and will derive some benefit from such training when teaching drawing to the classes in their respective schools.

The Wanganui Girls' College.—The average attendance in the art classes was seventy-one; in the painting class, eleven: total, eighty-two. Some good work was done from freehand blackboard exercises, model-drawing, shading from the cast, outline from the cast, brushwork, and

shading from models. The painting class studied from still life and flowers from nature. This class has made considerable progress. An exhibition was held at the end of the term in the art-room in the college, and was attended by a large number of visitors. Five pupils passed in the elementary freehand drawing at the South Kensington Art Examination.

Palmerston Technical School.—It was decided to open a day and evening art class in the beginning of the third quarter. A suitable room was secured in the Fire-brigade Hall. Mr. Watkin, assistant in this school, has charge of these classes, which are held every Friday and Saturday. The afternoon class opens from 1.30 to 4.30 p.m.; the evening, from 7 to 9 p.m.; the Saturday morning class, from 9 a.m. to 12 noon. The total number of individual students for the third quarter was twenty-three; for the fourth quarter, twenty-one. The principal work in these classes was elementary freehand, model-drawing, shading from cast, painting from still life, brushwork. The work of these classes is of a very satisfactory standard, and great interest is shown by the pupils. The pupil-teachers' Saturday art class was held in the College Street School. The yearly average enrolment was 27.3. The work of this class was good. I should like to see the erection of a special building for a permanent technical school in this town.

Hawera Technical School.—The work of these classes has been the same as last year. Mr. Babbage, assistant in this school, arrives in Hawera every Friday, and returns on Tuesday to Wanganui. The year's average attendance was thirteen. An exhibition of students' work was held at the end of the year, which was well attended by the public. The pupil-teachers' Saturday art class was held on Saturday morning, and was well attended, and good work was done. The wood-carving class was commenced in the third quarter at Hawera, with an attendance of thirteen pupils; the fourth quarter, eleven students. Great interest is taken in these classes, and pupils travel a long way by rail to attend them.

I conducted the yearly examination for the second-grade drawing certificate at Palmerston, Hawera, and Wanganui. Nine candidates presented themselves for freehand, seven for model-drawing, two for geometry. The work was good on the whole. The Otago Art Society offered a silver medal for competition in art schools throughout New Zealand for a shaded group of geometrical models. The prize was awarded to Claudia E. Price, of the Wanganui Technical School.

About fifty-three large art posters, sent by the Education Department, Wellington, were exhibited for two weeks in this school, and attracted a large number of visitors. These works, executed by the best poster artists in the world, are very useful to all studying designing for lithographic production.

Five free competitive scholarships and four free nominated scholarships were given by the Education Board to students of the school.

The annual exhibition of students' work, held in February this year, was opened to the public for three days. A number of drawings, paintings, designs, carving, modelling, bench-work, &c., was on view, attracting a large number of visitors, and was highly spoken of by the Press.

The following works were accepted by the South Kensington Science and Art Department for the art-master's certificate: Group I.—Outline Drawing from foliage, L. J. Watkin; a sheet of perspective problems, Gertrude E. Browne. Five sheets were not accepted.

In the City and Guilds of London Institute's examinations two passes were obtained in manual training, first year; a pass in carpentry and joinery, preliminary; and a first-class pass in carpentry and joinery, ordinary.

I have, &c.,

DAVID E. HUTTON, Director.

The Chairman, Wanganui Education Board.

Results of the South Kensington Science and Art Department Examination:—

Subjects.	Number examined.	Passed.		Failed.
		First Class.	Second Class.	
Elementary stages—				
Freehand drawing	22	5	7	10
Model-drawing	3	1	2	...
Drawing in light and shade	3	1	1	1
Perspective	2	2	...	...
Practical plane and solid geometry	1	1	...	...
Totals	31	10	10	11
Advanced stages—				
Freehand drawing	3	1	2	...
Model-drawing	4	3	1	...
Drawing in light and shade	3	1	...	2
Principles of ornament	2	2	...	...
Painting from still life	3	...	1	2
Painting, ornament	1	...	1	...
Drawing from the antique	2	2	...	...
Practical plane and solid geometry	1	1	...	...
Totals	19	10	5	4

Local Examinations.—At the July examinations the total number of pupil-teachers examined was as follows:—

Subjects.	Number examined.	Passed			Failed.
		First Class.	Second Class.	Third Class.	
Freehand drawing ...	21	2	6	8	5
Model-drawing ...	30	2	15	11	2
Blackboard-drawing ...	30	2	10	18	...
Scale-drawing ...	21	3	9	5	4
Geometrical drawing ...	30	3	14	10	3
Solid geometry ...	30	3	24	2	1

At the December examinations the total number of teachers and pupil-teachers examined in second grade was as follows:—

Subjects.	Number examined.	Passed.			Failed.
		First Class.	Second Class.	Third Class.	
Freehand drawing...	16	7	5	2	2
Model-drawing ...	15	1	10	2	2
Geometrical drawing ...	2	1	...	...	1

RETURN of CLASSES for the Year 1899.

Subjects of Instruction.	Number of Classes.	Number of Students.	Average Attendance.
Freehand (from flat and round) and shading ...	12	77	33·7
Drawing from nature, painting, and modelling ...	6	20	10·3
Mechanical drawing, engineering, and machine construction ...	3	25	15·1
Geometry and perspective ...	3	59	26·0
Design and ornament ...	3	10	4·3
Architecture and building construction ...	1	17	7·0
Mathematics ...	2	25	5·2
Natural and experimental science (botany, chemistry, and physics)	4	30	15·4
Woodwork and work-carving ...	7	69	27·7
Domestic instruction ...	7	110	28·8
English and commercial subjects ...	5	40	16·4

WELLINGTON TECHNICAL SCHOOL.

ANNUAL REPORT of the DIRECTOR for 1899.

Primary Instruction.

LITTLE more than the drawing required can be expected under the present condition of the syllabus, and therefore the progress made in the development of hand-and-eye training in relation to ordinary school life must naturally be slow. The necessity of such a course of training is, however, steadily forcing itself upon the public mind, and the teachers are gradually admitting its importance as a factor in primary education. A number of teachers have already adopted sections of hand-and-eye work with considerable success. There has been a considerable increase in clay-modelling and paper-folding, and a fair increase in cardboard-modelling. Brickwork and wire-work have been commenced. In drawing much bolder work with greater freedom in the nature of adopting units as the basis of a pattern, and the consequent reduction in the use of copies, is having good effect. Blackboard-drawing by the scholars is freely encouraged in many schools. I sincerely hope that such changes will be made in the syllabus as will enable hand-and-eye training to be incorporated with the present school subjects, and thus bring our present educational system more in accordance with modern developments.

First-grade Drawing Examination.

In this examination the following were the results: The total number of papers issued was 7,244; the number worked, 6,536; and the number passed, 4,134, viz.: Freehand—2,097, passed, 1,159; geometry—2,027, passed, 1,389; scale—1,553, passed, 1,005; model—859, passed, 581.

Of these papers, 916 were taken by schools not under the Wellington Board, and 649 passes were recorded. The following are the schools representing the 916 papers: Marlborough District—Blenheim Boys', Blenheim Girls', Kaituna, Canvastown. Westland District—Hokitika, Jackson's. Grey District—Greymouth, Hatters, Stillwater, Cobden. Nelson District—Appleby, Girls' Central.

Schools not under Education Boards—Boys' College (Nelson), Convent of Mercy (Lyttelton), St. Mary's (Nelson), St. Mary's Convent (Christchurch), Convent School (Hokitika), Convent School, St. Mary's School, and St. Joseph's Orphanage (Wellington), St. Patrick's (Masterton), St. Joseph's (Kanieri), St. Patrick's (Ross), Convent (Greymouth), Convent (Akaroa), Wanganui Collegiate School, Miss Page's Studio (Napier), Wesley Day School.

The total number of certificates issued in connection with this examination since its inauguration in 1884 is 37,299.

I anticipate considerable changes in connection with this examination. It would be more satisfactory if the Education Department were to undertake this work on behalf of all schools desirous of presenting candidates, whilst in larger centres inspection might be substituted for examination. The importance of this inspection is impressed upon us by the large number of additional appointments of qualified Inspectors in Great Britain, and the general tendency to strengthen this work throughout the schools.

Manual Instruction.

Beyond the class conducted by Mr. Joplin at Mauriceville West, a class at the Wellington College, and the class for primary-scholarship holders at the Central Technical School little has been done in this important work. I can only again urge the advisability of its introduction, for the advantages of it to a colony such as ours are invaluable. The majority of our teachers are, I am aware, opposed to the introduction of this subject, but such opposition is mainly owing to a misconception of the aims of such instruction, and I am sure that once established by any teacher in his school he will be as much in its favour as he is now against it. Such has been the experience of many teachers in England who have personally informed me of their strong opposition in the first case, and afterwards of their full conversion to the benefits to be derived.

The introduction of hand-and-eye training culminating in manual instruction can only be a matter of time. It will force itself upon us, unless we are content to remain a colony unprogressive and unmindful of our future. I am glad to report that a few of the teachers are in attendance at the Saturday instruction class.

Domestic Economy.

Cookery classes under the instruction of Miss Ivey in the Wellington centre and Miss Milington in the Wairarapa and Forty-mile Bush districts have progressed satisfactorily.

In the Forty-mile Bush district during the two terms, January to April and October to December, there were 123 pupils on the roll; 128 lessons were given, with a total attendance of 1,874, and an average of 15 pupils per class.

In the Wairarapa district during the term May to September there were 180 pupils on the roll; 143 lessons were given, with a total attendance of 2,687, and an average of 18 pupils per class.

In the Wellington centre the numbers for the two terms were as follows: Number of pupils on the roll, 193 and 147; number of lessons given, 150 and 147; total attendance, 2,082 and 2,610; average number of pupils per class, 14 and 18.

The progress may be considered decidedly encouraging and a feature of the year's work. There can be no question of the value of this instruction to all concerned. Appreciation has been shown upon all sides; in some cases the girls of the classes in a body have attended half an hour earlier and asked for additional instruction. I recognise the difficulties of teachers in finding the necessary time for cookery in addition to the regular work of the syllabus. My thanks are due to those teachers who have loyally assisted me in carrying on this work. Naturally it will take time to overcome all the difficulties incidental to changes in the syllabus. Arrangements are being made for the extension of this work to the Manawatu district. The question of the cost is important, and I fail to see how this work can be continued unless the new Technical Instruction Act provides the necessary assistance.

The Saturday class established for the purpose of giving the necessary training to school-teachers has not proved altogether satisfactory. It has therefore been decided to take one assistant every six months and attach her to the central school as assistant to Miss Ivey, in order that the actual class instruction to primary scholars may be practically dealt with, such teacher afterwards returning to her school and giving the instruction in cookery. By this means it is hoped to gradually overcome the difficulty of schools beyond the radius of cookery centres receiving instruction.

Agricultural Instruction.

In my visits of inspection to the country districts I have endeavoured to impress upon the School Committees I have had the pleasure of meeting the importance of this work. The Committees of the Wairarapa and Forty-mile Bush districts have arranged for a joint meeting to include the Town Lands Trusts of Masterton and Greytown, with a view to the formation of a scheme of intermediate scholarships, and probably a school farm. In the matter of elementary agriculture as a part of the primary-school course, the Education Department, in its admirable special reports on educational subjects, has recently given suggestive exercises.

Primary Drawing Scholarships.

The work of the sixty-two scholars holding scholarships has been satisfactory. The boys' course of manual instruction has been considerably improved; the change of workshop has enabled this to be done. The scholars manifest a keen interest in this branch of the work. The girls'

course included light and shade and colour-work upon brown paper, as well as clay-modelling. Useful work is being done in this section, which acts as a connecting-link between the primary and the technical school. The number of competitors continues as large as in former years, 135 competing for the vacancies.

Instruction to Teachers and Pupil-teachers.

The subject of perspective in the central school has been discontinued; advanced freehand, including elementary design with coloured chalks upon brown paper, and blackboard-drawing have been substituted with beneficial results. The work of a number of the junior teachers in plane and solid geometry is still unsatisfactory, very little effort being made to encompass the work of this subject. A number of these pupil-teachers look upon the work as a matter of putting in the necessary time for instruction, but make little effort to qualify themselves. It will be necessary to take strong steps to remedy this matter during the forthcoming year. Appreciation is shown of the advantage offered to teachers of attending the classes after they have completed their full second-grade certificate. The efficiency of such teachers will thereby be increased, and should benefit the schools largely. The correspondence-class work has improved. The work has been defined in the various sections for each month with beneficial results. The revision takes place the last Friday in each month, and the work is returned with remarks and corrections, together with the requirements for the next month's work.

The following classes are held in the Technical School for teachers in the Board's service: Geometry; model, freehand, and memory drawing; advanced drawing or brushwork; manual instruction in wood, clay, or cardboard; wood-carving; singing.

Arrangements are in progress for additional classes at Masterton, Pahiatua, Carterton, and Greytown. Every encouragement is given to teachers to qualify themselves in the various branches of instruction.

Technical Instruction.

Number of Students.—Day classes: Design—First quarter, 27; second, 28; third, 28; fourth, 30. Drawing and painting (whole-day students)—First quarter, 15; second, 15; third, 17; fourth, 15. Drawing and painting (half-day students)—First quarter, 48; second, 49; third, 47; fourth, 48. Geometry and perspective—First quarter, 15; second, 11; third, 8; fourth, 5. Secondary-school scholars (drawing)—Second quarter, 29; third, 29; fourth, 26. Secondary-school scholars (manual instruction)—Second quarter, 27; third, 25; fourth, 23. Primary-school scholars—First quarter, 52; second, 53; third, 47; fourth, 47. Teachers and pupil-teachers—First quarter, 104; second, 92; third, 97; fourth, 90. Wood-carving—First quarter, 12; second, 16; third, 19; fourth, 22. Manual instruction (Saturday class)—Second quarter, 5; third, 3; fourth, 5. Advanced geometry—First quarter, 14; second, 10; third, 11; fourth, 9. Clay-modelling—Second quarter, 21; third, 17; fourth, 23. Singing, Saturday—First quarter, 96; second, 86; third, 78; fourth, 68. Singing, Wednesday—First quarter, 22; second, 17; third, 21; fourth, 19. Cookery, not inclusive of primary schools—First quarter, 35; second, 73; third, 69; fourth, 28. Evening classes: Architectural and building construction—First quarter, 32; second, 36; third, 30; fourth, 30. Mechanical drawing—First quarter, 47; second, 56; third, 49; fourth, 37. Drawing—First quarter, 73; second, 73; third, 83; fourth, 80. Life class—First quarter, 7; second, 8; third, 7; fourth, 8. Practical plumbing—First quarter, 36; second, 24; third, 33; fourth, 29. Theory of plumbing—First quarter, 23; second, 21; third, 16; fourth, 15. Wood-carving and modelling—First quarter, 5; second, 26; third, 27; fourth, 13. Mathematics—First quarter, 33; second, 33; third, 31; fourth, 32. Joinery and carpentry—First quarter, 17; second, 24; third, 22; fourth, 22. Shorthand—First quarter, 31; second, 30; third, 30; fourth, 27. Design—First quarter, 5; second, 13; third, 15; fourth, 10. Geometry and model—First quarter, 53; second, 67; third, 51; fourth, 40. Moulding—Second quarter, 11; third, 7. Totals both classes—First quarter, 802; second, 954; third, 917; fourth, 801.

Inclusive of primary scholars receiving instruction in cookery by the school instructors, the number of students controlled directly by the Technical Instruction Branch is over 1,500.

The following occupations are represented among the students of the evening classes: Saleswoman, 1; office boys, 2; blacksmiths, 2; law students, 5; mechanics, 2; engineers, 53; salesmen, 5; saddlers, 2; interpreter, 1; carvers, 4; coachbuilders, 2; optician, 1; joiners and carpenters, 27; plumbers, 59; clerks, 35; dairyman, 1; signwriters, 2; electricians, 2; architects' assistants, 3; teachers, 18; lithographers, 3; cabinetmakers, 6; photographer, 1; bricklayers, 6; scholars, 20; printer, 1; tailor, 1; moulders, 3; farmer, 1; builders, 5; students, 93; dressmakers, 5; wood-carvers, 3; surveyors, 6; fitters, 2; telegraph messenger, 1; draughtsmen, 3; cooks, 4; coachpainter, 1.

Reports upon Classes.

Drawing, Painting, and Modelling.—Day classes: The work in these classes has been fairly satisfactory. The most serious cause of complaint is the indifference to serious study, particularly of the junior students. The general desire is to reach colour before even the simplest elements for drawing are well grounded. The course of work has been made more interesting by the use of coloured work in tinting and chalks, and by a greater variety of work generally. But however interesting the work may be there is a want of serious effort to obtain knowledge upon the part of a considerable number of students. Memory-drawing, one of the most important studies, is considered a subject to be avoided if possible, and in many ways there is a want of application not usually met with in English schools. In the more advanced sections of antique, still life, and drawing from the life better work has been done all round. In the antique and life sections several students attempted the examinations without having the necessary experience; this in future will not be

permitted, nor will students be admitted to the life-room without the necessary test drawings. The usual competitions in memory-drawing, subject sketches, still life, and design were held, the number of competitors being much larger than previous years, and, as a result of the interest taken, better work has been produced. The new additions to the school have enabled a room to be set aside for clay-modelling; this has enabled me to make modelling a part of the ordinary drawing course with considerable benefit to the students. I would again urge the necessity for students practising memory-drawing away from the school. The mere making of an accurate copy of a cast, model, or object is in itself of little importance. The question of reflected light, shade, shadow, direction of light, and, most important of all, the actual forms requiring to be expressed should receive very careful consideration. A student should be able to fairly model from memory a cast or model after once drawing the same; this alone is a real test of knowledge. If a mere copy is made, it is hardly worth the paper it is drawn upon, from a knowledge point of view. Evening classes: Geometrical and model drawing are now compulsory subjects for all trade students under eighteen years of age. This section has been well attended, and the interest taken and the results obtained are very satisfactory. A number of the students still make an effort to escape this very necessary work, but by careful watching I have managed to hold many wavering ones to their class. A few have temporarily escaped by leaving at the second or third term. These students will probably present themselves a little later on, trusting to luck that their absence has not been detected. They will find that such is not the case. Workshop-drawing has now been included in this class-work, and I am sure will prove a great boon to many of the young apprentices. The advanced geometrical and perspective class has been fairly well attended. This class is rendered necessary by the higher qualifications required by the Science and Art Department of South Kensington. A first-class pass is now required in order to qualify for a teacher's certificate or a full technological certificate under the City and Guilds of London Institute. A more advanced course than the ordinary so-called second grade is required. The general elementary and advanced drawing-work has progressed well. The students are earnest and painstaking; good all-round work has been done in coloured chalk on brown paper, light-and-shade studies, sepia, plant-form studies, and studies of New Zealand birds, &c., combined with memory-work and modelling antique and life. The Saturday teachers' classes are well attended, with a consequent improvement in the primary-school work. Mr. Charles N. Worsley, who examined the work of these sections, remarks upon the unfittedness of many of the candidates for examination, which I have just mentioned, whilst much of the work he considers good. Mr. Worsley does not consider the examination test a criterion of the value of a school's work, and I thoroughly agree with him upon that point, particularly in relation to these classes. The real test lies in good grounding, which is seldom looked at by the public.

Design.—This class has shown a marked advance upon previous years' work. No doubt the fact of having a room for this special study, the display of examples procured from various decorative establishments, and a definite course of study have materially helped this development. Brush forms have received particular attention, many excellent designs being produced. Plant form, particularly native foliage, have been freely used. This class, however, does not make sufficient use of the library, where examples may be found of the best class of workmanship.

Machine Construction and Drawing.—The class has been largely attended during the year. The examiner, Mr. Marchbanks, reports the works and methods very good, and shows evidence of careful teaching. He considers the classes invaluable to all engineering apprentices. A course of lectures upon "Steam and the Steam-engine" has now been arranged for the benefit of all students connected with this branch. The models recently provided have proved of great service, as well as the works upon engineering added to the library.

Architectural Drawing and Building Construction.—The number of students attending is higher than that of previous years. The results of the English examinations proved satisfactory. Mr. Barr, who examined the class, speaks well of the instruction given and the general efficiency of the class. The new examples and models, as well as the additional text-books, have been largely used by the class, and are evidently well appreciated. Arrangements have been made for a course of lectures throughout the year upon architecture and building construction, and for practical demonstration in brickwork.

Carpentry.—The new building has enabled this class to be at last placed upon a satisfactory footing, with the result that there has been considerable improvement in the work done. Workshop-drawing is compulsory. A number of young students under the age of sixteen has been removed from this class and required to take up the course of geometrical drawing previous to the carpentry. It is to be hoped that apprentices in connection with the trade will now take full advantage of the opportunities offered of obtaining bench practice and a wider knowledge of the principles of their trade.

Plumbing, Theory and Practice.—The number of students and the attendance at these classes continue very good. As in former years, a number of apprentices and younger workmen again attempted the examinations in the hope of obtaining a certificate, but failed to reach the necessary standard. A two-years course of work is a necessity if success is to be obtained. The City and Guilds of London Institute have now made it compulsory that candidates shall present themselves in theory as well as in practice at the same examination, and juniors are required to pass in the preliminary examination of the Institute or the geometry and model of the Wellington school prior to the ordinary grade. The theoretical class has also done good work, many students attending for the more advanced stages of work. Complimentary notices have appeared in English papers relating to the work done and the arrangement existing between the City Council and the school. The plumbers' board has been re-established, and now consists of the Chairman of the Board of Education, the Director for Technical Instruction representing the Education Board, the city engineer representing the City Council, and a master plumber and a journeyman plumber representing their society. There can be no doubt of the advantage of such an advisory body, and

I can only express a hope that other industries will follow suit. The City Council has contributed the usual sum of £60 towards this particular class.

Mathematics.—The number of students continues as good as in former years.

Wood-carving.—This class has for years suffered from the want of accommodation, and was consequently reduced in number owing to the shed in which it was held being utterly unsuited to the work. A room has been set apart in the new wing, and the class has once more fully justified its existence. Both day and evening classes have been well attended, and some very excellent specimens of work produced. Several students have so far succeeded as to be able to use their knowledge profitably in their daily occupations.

Shorthand.—Good work has also been done in this class, the attendance having been exceptionally good. Many of the students are making practical use of their knowledge in connection with their daily occupations. Several students were successful in the speed-examinations recently held by the Wellington Shorthand-writers' Association.

Iron- and Brass-moulding.—At the request of the workmen in this branch of industry, a class was formed, the deputation guaranteeing the necessary twelve students. This number was not by any means kept up, and, although provision was made for the theory as well as practice, the interest gradually flagged, and at the end of the second quarter the class was closed.

Cookery, Demonstration and Practice.—Classes in this subject were formed during the two midwinter quarters, and were eminently successful, the limit in point of numbers being quickly reached. A number of girls were admitted to the day classes, where vacancies occurred, at a small fee. Application was made in the fourth quarter for a high-class course of demonstration, but as the fee charged (£2) was considered excessive the class fell through. As the fees of these classes must cover all cost to the Board, and as the number of students is limited, no reduction could possibly be made in the fee charged. The teachers' class was discontinued in the fourth term, the Board deciding that individual teachers should be received and trained to give instruction to the children for a period of not less than six months, and then return to their schools with qualifications sufficient to enable them to give the children the necessary instruction.

Wellington College Classes.—Drawing has been continued as formerly by an instructor of the Central Technical School to a class of twenty-six boys. It is unfortunate that fees are required for this subject in any secondary school. The best use has been made of such time as is placed at our disposal. Mr. Firth, the Principal of the College, informs me that an effort is now to be made to give instruction in drawing throughout the school, thus enabling an intermediate course between the primary and Technical School to be effectively dealt with. About one hundred boys are now instructed by the college staff, in addition to those instructed by the Technical School. Manual instruction has also been continued throughout the year with generally satisfactory results.

Examinations.—The usual examinations have been held during the year. In the higher-grade work there has been a considerable diminution of candidates, practically only those who found it necessary to present themselves for teaching or trade certificates coming forward. Wherever possible students have been dissuaded from taking these examinations unless certificates are especially required. The number of papers examined during the year was 7,437. The number of certificates issued in all grades since the school was established in 1886 is 44,941, subdivided as follows: Primary or first grade, 37,299; intermediate or second grade, 4,006; higher or third grade, 1,375; South Kensington, 2,143; and the City and Guilds of London, 118. Second grade (local): Total number of papers taken, 585; 336 passed; 249 failed; 13 excellent; 29 good. Number of individual candidates examined, 365; passed, 236. Third Grade (local): Number of papers worked, 101; number of passes, 55; failures, 46; number of individual candidates, 65; passes, 44. Papers excellent, 2; good, 10.

Science and Art Department, South Kensington.

Second-grade Art.—Number of papers taken, 176; passed, 146; failed, 30. Freehand—76 candidates, 23 first class, 42 second class; failed, 11. Model—70 candidates, 18 first class, 36 second class; failed, 16. Perspective—8 candidates, 6 first class, 1 second class; failed, 1. Light and shade—22 candidates, 7 first class, 13 second class; failed, 2. Of the above number, eleven papers were taken by external candidates; five obtained first class, two obtained second class, and four failed.

Third-grade Art.—Number of papers submitted, 50; passed, 33; failed, 17. Outline from cast—12 candidates, 9 first class, 2 second class; 1 failed. Light and shade from the cast—12 candidates, 1 first class, 8 second class; 3 failed. Drawing from models—7 candidates, 5 first class, 2 second class; 0 failed. Design—8 candidates, 3 second class; 5 failed. Still life—6 candidates, 3 second class; 3 failed. Antique—2 candidates; 2 failed. Drawing from life—3 candidates; 3 failed.

Science.—Number of papers submitted, 57; passed, 41; failed, 16. Plane and solid geometry—7 candidates; 5 passed, 2 failed. Machine construction—23 candidates; 14 passed, 9 failed. Building construction—16 candidates; 12 passed, 4 failed. Steam—7 candidates; 6 passed, 1 failed. Applied mechanics—1 candidate; 1 passed. Botany—1 candidate; 1 passed. Mathematics—2 candidates; 2 passed.

The number of works accepted towards the art class and art masters' certificates was seven.

The following students have completed their full certificates in compliance with the regulations of the Science and Art Department: Art-class teacher's certificate, Maud Kimbell; elementary drawing certificate, first class, Rhoda Meek, Daisy Carter, Mary Thompson; elementary drawing certificate, second class, Elizabeth Innes and Daisy Tonks.

City and Guilds of London Institute for the Advancement of Technical Education.

The examinations under this department have been conducted as usual. The number of papers examined was 33; passed 16, failed, 17. Plumbing, theory—11 candidates; 4 passed,

7 failed. Plumbing, practice—12 candidates; 8 passed, 4 failed. Brickwork—1 candidate; 1 passed. Mechanical engineering (ordinary)—2 candidates; 2 failed. Telegraphy and telephony—1 candidate; 1 failed. Electric lighting (honours)—1 candidate; 1 passed. Electric lighting (wiring)—1 candidate; 1 failed. Carpentry and joinery (ordinary)—3 candidates; 1 passed, 2 failed. Carpentry and joinery (preliminary)—1 candidate; 1 passed.

Free Studentships.

The work done by all free students has been of a steady character and satisfactory throughout.

Library.

This important department has now been removed to a special room on the ground-floor of the new wing. The works have been completely rearranged and catalogued. The number of periodicals has been increased by purchase and by contribution. A sum of £10 was generously voted on behalf of the Library Fund by the Industrial Association of Wellington, this being a gift by Mr. John Ross, of Messrs. Sargood, Son, and Ewen, to be dispensed as the association thought fit. The association also contributed three periodicals—viz., "The Art Journal," "Plumber and Decorator," and "The Architect." The number of volumes contained in the library is as follows: Fine arts, 251; architecture and building construction, 124; mechanical, 170; general, 443. The library, which has accommodation for readers, is open daily, and each evening from 7 to 9 p.m. This is one of the most important improvements made during the year, and will be invaluable to all technical students and teachers. The lending portion of the library has been largely availed of by the students during the year.

Additional Classes.

Preparations have been made for the establishment during 1900 of the following additional classes: Arithmetic, workshop-drawing, electric light and power distribution, book-keeping, Latin and English. I have for years urged the necessity of the establishment of a sort of higher-grade school where boys may continue their ordinary school course for, say, a couple of years before entering upon industrial or other occupations.

There are large numbers of youths who now leave school upon passing the Sixth Standard, and who would, from financial and other reasons, never attend any of our secondary schools. These youths, unfortunately, upon entering industrial occupations are more or less in an unprepared state for workshop practice without a continuation of their school-work, particularly in arithmetic, drawing, and plane and solid geometry. Special courses of work have therefore now been arranged in these particular sections, and boys under the age of eighteen years are required to continue this work previous to or in conjunction with their particular trade study, and thus prevent the waste of valuable time upon the part of the instructors in the more advanced work. I would again urge the advantages to be derived from a higher-grade school for Wellington, where the time of the students would be utilised in special courses of study such as chemistry, physics, mathematics, English, and manual instruction. Such an institution would, I am sure, meet with success, and be invaluable as an aid to technical instruction. I do not consider such an institution would interfere with the secondary schools, for it would practically mean that the present Seventh Standards, now conducted in our primary schools, would be centralised for the purposes of special instruction in the subjects I have named.

General.

Technical Bill.—I can only regret the fact that a new Technical Instruction Act is not yet in force. The want of funds and general aid to appliances has seriously hampered our work, and makes the successful working of the classes a double hardship. I trust we shall see success attend the Bill this coming session; if not, it will undoubtedly mean a heavy pruning of the work now successfully inaugurated.

Loan Collection.—I further hope that my suggestions regarding the establishment of a small annual loan collection of works, and the purchase of suitable examples of industrial art from the South Kensington authorities, will be successfully brought into operation, for the value to the colony of such a collection cannot be overestimated.

Finance.

The total cost for the year is £3,175 6s. 7d., and the total receipts amount to £1,499 18s. 7d., leaving a balance of £1,675 8s. As against this sum the following items are chargeable: Instructions to 100 teachers at 15s. per quarter, £300; sixty-two scholarship-holders at 10s. per quarter, £124; twenty teachers in evening classes at 7s. 6d. per quarter, £30; cost of primary examinations, £165; inspection of schools, £120 11s.; cost of cookery classes, £585 9s. 3d.; vote of City Council for plumbing class for 1899 (due), £60; capitation for fourth quarter (Government), £79 8s. 9d.; Wellington College fees, fourth quarter, £19 17s. 6d.: total, £1,484 6s. 6d.

A. D. RILEY, Director.

MANUAL-INSTRUCTION CLASS, MAURICEVILLE PUBLIC SCHOOL.

DEAR SIR,—

The School, Mauriceville West, 9th February, 1900.

I have the honour to submit the following report, for year ending 1899, on the manual-instruction class held in connection with this school:—

The class is held during school-hours, and is attended by boys in Standards V. to VII. There are nine boys receiving instruction. The income and expenditure are nil. During the year I carried on the class at my own expense. The following is a list of the tools: One half-rip saw, eight chisels, one tenon saw, one draw-knife, two mallets, two screwdrivers, one spokeshave, two

set squares, one pair wing compasses, one two-foot rule, one claw-hammer, one bevel square, one dozen lead-pencils, four bits, one oil-stone, one punch, one wood-rimer, two German bits, one jack-plane, one smoothing-plane, three gauges, one screwdriver bit, three squares, six gauges, eight chisels, fourteen bench-stops, four mallets. In addition to the above I lend the pupils my tools, including one grindstone, two iron bench-screws, one iron block-plane, brace, bits, saws, planes, &c.

Visitors to the school still express great satisfaction with the introduction of manual instruction, and I understand that boys who have left school find the knowledge they acquired in the use of tools of great benefit.

The Director, Technical School, Wellington.

Yours, &c.,

CHAS. R. JOPLIN.

NAPIER TECHNICAL SCHOOL.

REPORT FOR 1899.

THE school opened on the 20th February, 1899. Since that date the classes have been well attended, especially during the third quarter, when the roll of the evening classes reached the goodly number of thirty-seven. The attendance in the evening for the fourth quarter has fallen off slightly, on account of the summer sports; but, on the contrary, the classes for teachers and pupil-teachers have increased to forty-two, as against nineteen for the second quarter. Of this number about sixteen are teachers who attend a special class for instruction in kindergarten technical work, such as modelling, colour-work, &c.

The subjects taught during the year in the teachers' and pupil-teachers' classes have been as follows: Pupil-teachers—Freehand and model drawing, colour-work or elementary design, light and shade, perspective and geometry. Teachers—Colour-work and modelling in clay.

Evening Classes (the students of which are for the most part boys and young men).—Freehand and model drawing, perspective, light and shade, scale-drawing, geometry, elementary design, modelling in clay, wash-drawing, and mechanical drawing. These evening classes have been greatly appreciated by those attending them. Most of the students who joined at the beginning of the year have attended the school regularly right through, and with excellent results, as shown by the work at present on exhibition. Other classes in higher-art subjects, such as drawing from life, painting from nature, still-life painting, modelling in clay, &c., are also flourishing.

The authority granted by the Education Department to hold examinations and issue drawing certificates to teachers (under recognition of the Government) has been taken advantage of for the first time, the examinations having been held on the 2nd December, under supervision of the Inspector and other gentlemen. Six candidates passed in freehand drawing, five in model-drawing, two in geometry, and one in perspective. At the South Kensington examinations held at the school last June, under the auspices of the Education Department, about seventy candidates presented themselves. Out of this number, twenty-eight were children I had chosen from the district school for elementary freehand. The results of this examination are not yet to hand. A special class was established at the district school in more advanced technical drawing, the subjects being elementary design or colour-work as taught in the London Board schools, perspective, freehand, and model drawing.

As master of the technical school, I would add, in concluding this report, that I am highly gratified at the progress made during the year in the various branches of the work, and at the enthusiasm shown by the students in the evening classes, and also the teachers' classes, which has much encouraged me. My efforts have been made entirely without assistance from the Education Board.

R. N. ANDERSON, Master.

COOKERY CLASSES, NELSON.

SIR,—

Education Office, Nelson, 6th February, 1900.

In reply to your memorandum of the 11th December last, I have the honour to inform you that the cookery classes held in Nelson last winter were entirely managed by the Nelson School Committee, a copy of whose report on the subject, forwarded to the Board, is enclosed herewith. The Board took no further part in the matter than to authorise the holding of the classes and defraying all expenses. No fees were demanded from the pupils who attended, and the only receipt was the Government subsidy of £10 17s. 6d., while the expenditure, as stated in the report, was £33 0s. 7d.

I have, &c.,

STEAD ELLIS, Secretary.

The Secretary, Education Department, Wellington.

[Enclosure.]

SIR,—

Town Schools' Committee, Nelson, 23rd December, 1899.

In reply to your favour of the 21st instant, I have the honour to inform you that cookery lessons were given to girls attending the State schools here under the tuition of Miss Tendall, from Christchurch. The classes began in the fourth week of June last, and continued for ten weeks. Ninety girls were enrolled, and were divided into two classes of forty-two and forty-eight girls respectively. Each class had ten demonstration and ten practice lessons of one hour each. The average attendance was 39.55 in the former class and 47.35 in the latter. The sales of articles made by the girls covered the cost of material used. The expenditure for utensils, rent, gas, cleaning, &c., was £8 0s. 7d., and Miss Tendall's fee was £25. The utensils are carefully stored for a future occasion.

I have, &c.,

The Chairman, Nelson Education Board.

J. P. KEMPTHORNE, Chairman.

CHRISTCHURCH SCHOOL OF DOMESTIC INSTRUCTION.
REPORT FOR THE YEAR ENDING DECEMBER, 1899.

THE school continues to enjoy a vigorous life, and, to judge by the number of pupils who have during the year taken advantage of the opportunity it affords, maintains its position well in the confidence of the people.

It is particularly gratifying to find the elementary schools of the city and suburbs keeping up their interest. From this source we have derived a varying but numerous body of pupils, and we trust that the schools which have not yet made arrangements for classes will see their way to do so. We need scarcely urge the importance of the practical instruction of young girls in the chief of their future domestic duties, and we welcome this class of pupils all the more readily that we look to them to furnish a substantial proportion seeking further instruction in after years.

The following are the numbers in attendance in the several quarters of the year now closing, together with the number of classes held in each of the three branches, cooking, dressmaking, and laundrywork: First quarter—On roll, 255; average attendance, 205·7; number of classes, 15; cooking, 12; dressmaking, 2; laundrywork 1. Second quarter—On roll, 126; average attendance, 112·4; number of classes, 11; cooking, 8; dressmaking, 2; laundrywork, 1. Third quarter—On roll, 336; average attendance, 279; number of classes, 15; cooking, 11; dressmaking, 3; laundrywork, 1. Fourth quarter—On roll, 384; average attendance, 341·1; number of classes, 17; cooking, 14; dressmaking, 3; laundrywork, 0.

In the first quarter out of the above totals the public schools were represented by 114 pupils from three schools; in the second there were no pupils from this source, the children being required for other instruction at the time available; in the third quarter there were again three schools, with 176 pupils; and in the fourth five schools, with the large total of 261 out of the 384 included in the various classes.

In our last report reference was made to an examination held during the year for cooking certificates under the auspices of the City and Guilds of London Institute. At the end of the year we had received notice that twelve of the thirteen candidates entered had qualified in the theoretical part of the examination, but the result of the practical part was not then known. It is gratifying to have now to report that the whole of the twelve satisfied the further test, two receiving first-class certificates, and the remainder certificates of the second class. A number of candidates was again prepared to enter for a similar examination during this year, but to the disappointment both of the intending candidates and their teachers the examination through some misunderstanding as to the date fixed was not held.

Our own annual certificate examination has just been completed. The examination was, as on previous occasions, conducted by Mrs. Harman, whose report is appended. That Mrs. Harman has been able to express so favourable an opinion of the character of the work done cannot but be highly gratifying to those who take an interest in the school. It may further be noted that the school has maintained its country connection during the year by supplying a teacher for the classes established at Amberley and Leeston, a special arrangement being made with a local committee in each case for weekly services.

The committee are disappointed that another year has been allowed to pass without the introduction of a new Technical Education Act, providing a more liberal capitation allowance. There had been a considerable correspondence with the Education Department during the year as to the inadequacy of the present allowance, and the Minister had held out hopes that a new measure would be brought forward. The considerably increased attendance has somewhat strained the financial resources at the disposal of the committee. Details of income are furnished in the accompanying statement.

CHARLOTTE W. TURRELL, Vice-President.

13th December, 1899.

MRS. HARMAN'S REPORT.

Mrs. R. D. Harman begs to state that she held the annual examination in cookery at the School for Domestic Instruction, and judging by the result both teachers and pupils had done their year's work thoroughly, a large number of those going in for certificates taking very high marks, the average being good. The practical work was well and carefully done, and the papers showed that careful attention had been paid to the study of the rules and principles of cookery, and also to the scientific facts upon which such rules are based, the reasons for each method of cookery being very clearly explained. The practical work also showed that excellent discipline had been maintained, the work of the school-children in that respect being exceptionally good, great attention being also paid to neatness and method in all the minor details of the work. There were four classes in all—one for high-class-cookery certificates, two for plain-cookery certificates, and one class of school-children for prizes, the ages in this latter class differing so much they were divided according to age.

BALANCE-SHEET for the YEAR ending 7th December, 1899.

<i>Receipts.</i>	£ s. d.	<i>Expenditure.</i>	£ s. d.
Balance	55 13 8	Salaries	206 13 0
Petty cash	8 9 3	Cooking materials	£158 8 11
Subscriptions and donations—		Less for sales	84 5 2
From Government, special	65 0 0		74 3 9
" subsidy on attendance	105 3 9	General expenses—Rent, gas, advertising,	
From subscribers, Christchurch ..	2 15 0	coals, sundries	155 7 9
School-fees	267 4 0	Preliminary expenses	21 7 10
		Petty cash	2 4 0
		Balance	44 9 4
	£504 5 8		£504 5 8

W. CHRYSTALL, Treasurer.

CANTERBURY MANUAL-TRAINING CLASSES.

NORMAL-SCHOOL CLASSES.

THE work of the year has been very fair, showing an improvement on last year's work, so far as drawing is concerned. This, I think, is caused by the masters, who have attended the classes, and have now some idea of what is required; further, several schools are now using our models in teaching the scale-drawing, and consequently the boys are more familiar with their construction.

The third quarter shows a large increase in the attendance, which was maintained to the end of the year.

The tools are in good order, though the breakage is somewhat heavier than last year, bow-saw blades and the iron bench-screws being the chief items. I beg to recommend that in any future benches which may be required, no iron stops or bench-screws be used, experience showing that they are a continual source of trouble, boys damaging the chisels and planes very much by contact with them.

Several of the boys took part in the exhibition of work held at the Ellesmere Agricultural and Pastoral Association's show in October. The exhibition was very favourably commented on by the Press and the public.

The masters' classes held on Saturdays have only been moderately attended, but the work done has been good. Four masters sat for the first-year examination of the London and City Guilds Institute in woodwork, all of whom passed, and nine masters sat for the final examination, six of whom passed.

The attendance of the boys was affected by some leaving to go to work, but I am glad to be able to inform you that the Wednesday evening class, which was started during the second quarter, is enabling boys to continue their work. I hope you will be able to authorise the continuation of this class.

I wish to suggest that elementary solid geometry should receive more attention from the teachers who attend the classes at the School of Art.

LEESTON CLASSES.

The classes have been well attended, and for the two last quarters it has been found necessary to use a second class-room and add a number of benches. Considerable impetus was given by the action of the Ellesmere Agricultural and Pastoral Association in adding a new clause in their programme—viz., juvenile competitions (male and female) for manual work. Prizes were given for gate-, hurdle-, and ladder-making for the boys. These drew large entries and keen competition; and there were also other articles, such as carving, entered for exhibition. The judges were practical mechanics, and expressed themselves as well satisfied with the work done.

During the year Messrs. Anderson and Burns have been appointed assistant instructors.

Considerable interest is taken in this class by the public, some of whom visit the class-room every week. I am much indebted to several residents for their assistance on the day of the exhibition, particularly to Mrs. Osborne, who kindly provided a dinner for the Christchurch boys who exhibited.

F. W. SANDFORD, Instructor.

NORMAL-SCHOOL CLASSES.

Quarter commencing	Number of Classes.	Teachers.	Boys.	Total Roll-number.	Average Attendance.
February	7	17	72	89	57.12
May	7	7	49	56	47.39
July	6	...	98	98	73.80
October	7	10	92	102	63.84

LEESTON CLASSES.					
February	1	3	8	11	8.70
May	1	3	12	15	9.28
July	1	2	16	18	14.60
October	1	2	18	20	15.16

NORMAL-SCHOOL CLASSES.—BALANCE-SHEET for 1899.

<i>Receipts.</i>		£ s. d.	<i>Expenditure.</i>		£ s. d.
Fees .. ..	.. ..	45 2 9	Instructor's salary .. ..	.. ..	63 17 6
Capitation .. ..	.. ..	33 10 0	Timber for use in school .. ..	.. ..	7 12 0
" Leeston classes .. ..	.. ..	31 1 10	Gas .. ..	.. ..	4 0 8
" Amberley classes .. ..	.. ..	25 16 2	Advertising .. ..	.. ..	2 12 11
			Stationery .. ..	.. ..	0 7 6
			Paid to Leeston classes .. ..	.. ..	32 2 8
			" Amberley classes .. ..	.. ..	24 15 4
			Balance .. ..	.. ..	0 2 2
		<u>£135 10 9</u>			<u>£135 10 9</u>

LEESTON MANUAL-TRAINING CLASS.—BALANCE-SHEET for 1899.

			<i>Receipts.</i>			<i>Expenditure.</i>		
			£	s.	d.	£	s.	d.
Balance ..	..	..	0	6	4	Instructor ..	..	11 11 3
Fees ..	..	..	14	15	0	Instructor's expenses ..	..	4 2 0
Demonstration ..	..	..	1	18	6	Bank-fee ..	..	1 0 6
Capitation ..	..	..	25	4	4	Cookery class ..	..	18 16 10
Gift ..	..	..	0	1	3	Mr. Rennie (loan) ..	..	1 0 0
						Tools ..	..	1 7 9
						Timber and cartage ..	..	1 14 4
						Printing ..	..	0 10 0
						Kerosene ..	..	1 5 6
						Postage and exchange ..	..	0 5 3
						Nails, screws, &c. (2s. 3d.); railage (1s.) ..	..	0 3 3
						Balance ..	..	0 8 9
			<u>£42</u>	<u>5</u>	<u>5</u>			<u>£42</u>
								<u>5</u>

DUNEDIN SCHOOL OF ART AND DESIGN.

SIR,—

I have the honour to submit my report on the School of Art and Design for the year 1899:—

During the period over which the report extends—viz., from February to December—the number of students who received instruction was 386. This included ninety-three teachers and pupil-teachers, thirty-five students in training, 102 students who attended the day classes, and 156 students who attended the evening classes. The courses of instruction and the arrangement of the classes were practically the same as in the previous year.

Students in Training.—Thirty-five students in training attended the school during the year. Of these, nine completed their full drawing certificate, which includes freehand drawing, model-drawing, practical geometry, perspective, drawing on the blackboard, and drawing in light and shade, and eighteen students passed in the first four of these subjects. Seven students require to pass in drawing in light and shade to complete their certificates.

Pupil-teachers.—The subjects embraced in this course were freehand drawing, model-drawing, practical geometry, and perspective, fifty-two students being in attendance at the classes. At the July examinations twenty entered for examination in model-drawing, twelve obtaining the mark “excellent” and six “good” (the same students had previously passed in freehand drawing); twenty-two entered for geometrical drawing, seventeen obtained “excellent” and five “good”; eighteen entered for perspective, nine obtained “excellent” and six “good.” The same course of instruction, including drawing in light and shade, was followed on Saturdays from 10 a.m. till 12 noon throughout the session. Forty-one teachers and pupil-teachers who had no opportunity of attending the regular class availed themselves of these classes.

Mining Students.—During the session seventeen students of the School of Mines attended as usual on two days in the week. At the end of the session nine students presented themselves for examinations in model-drawing; of these, seven gained first-class and two second-class; nine entered for geometrical drawing, seven obtained first-class and two second-class; seven entered for solid geometry, four obtained first-class and three second-class; seven entered for machine-drawing, five obtained first-class and two second-class.

Design.—The students of the class for elementary design continued their studies of plant forms. Several very good designs suitable for wood-carving, book-covers, and room-decorations, &c., were made by the advanced students. Two students, Miss C. M. S. Hutton and Miss E. Overton, were awarded by the directors of the Royal Humane Society of New Zealand first and second prizes for their designs for a certificate of honour.

Modelling.—Modelling was carried on as usual, and the progress made by the students was very creditable.

Drawing from the Living Model.—The students worked very well, and their drawings of heads and the full-length figure were up to the standard of last year.

Evening Classes.—The evening classes were opened every evening (except Saturday) from 7 to 9. Monday and Wednesday were set apart for freehand and model drawing, perspective, drawing in light and shade, and drawing from the antique. Friday was devoted to drawing from the life; Tuesday and Thursday to practical plane and solid geometry, building construction and machine construction, and drawing. The work done in these classes was of the most useful and practical kind, being connected with the occupations of the students, who were mostly young men having a deep interest in the work. During the second and third quarters the accommodation was barely sufficient to enable the students who attended on Tuesdays and Thursdays to work with comfort.

The following are the results of the London Science and Art Department's examinations held in the month of June last:—

Science Subjects.—Practical plane and solid geometry (elementary stage)—Examined, 8; passed—first class, 3; failed, 5. Building construction (elementary stage)—Examined, 5; passed—first class, 2; second class, 2; failed, 1. Building construction (advanced stage)—Examined, 3; passed—first class, 1; second class, 2. Machine construction (elementary stage)—Examined, 10; passed—first class, 4; second class, 3; failed, 3. Machine construction (advanced stage)—Examined, 2; passed—second class, 1; failed, 1. Total: Examined, 28; passed—first class, 10; second class, 8; failed, 10.

Art Subjects.—Geometrical drawing (elementary stage)—Examined, 12; passed, 10; failed, 2. Perspective drawing (elementary stage)—Examined, 12; passed—first class, 3; second class, 4; failed, 5. Freehand drawing (elementary stage)—Examined, 79; passed—first class, 34; second class, 38; failed, 7. Freehand drawing (advanced stage)—Examined, 9; passed—first class, 4; second class, 3; failed, 2. Model-drawing (elementary stage)—Examined, 40; passed—first class, 12; second class, 21; failed, 7. Model-drawing (advanced stage)—Examined, 7; passed—first class, 3; second class, 1; failed, 3. Drawing in light and shade (elementary stage)—Examined, 25; passed—first class, 6, second class, 12; failed, 7. Drawing in light and shade (advanced stage)—Examined, 16; passed—first class, 3; second class, 8; failed, 5. Principles of ornament (elementary stage)—Examined, 1; passed—second class, 1. Painting ornament—Examined, 2; failed, 2. Drawing from the life—Examined, 2; failed, 2. Drawing from the antique—Examined, 4; passed—second class, 2; failed, 2. Totals: Examined, 209; passed, 165; failed, 44.

The works accepted for the art-class teacher's certificate were as follows: Geometrical drawing, 1; freehand drawing, 3; model-drawing, 1. The works accepted for the art master's certificate were: Perspective, 1; outline drawing from nature, 1; outline drawing from the figure, 1; painting group, 1. One student gained the art-class teacher's certificate. In July the Education Department, Wellington, forwarded for exhibition an instructive collection of posters. These were exhibited in the school, and attracted a large number of interested visitors. The usual exhibition of students' work was held at the close of the session, and was largely attended.

I have, &c.,

DAVID C. HUTTON, Art Master, Principal.

The Secretary, Otago Education Board.

The following occupations are represented by the students of the evening classes: Architect, 1; blacksmiths, 4; builders, 2; baker, 1; brass-finishers, 2; carpenters, 29; clerks, 3; copper-smith, 1; cutter, 1; cabinetmaker, 1; coachbuilders, 2; draughtsmen, 3; drapers, 2; dairy-man, 1; dressmaker, 1; engineers, 33; engraver, 1; farmer, 1; fitters, 11; home duty, 1; ironmoulders, 2; ironmonger, 1; joiners, 7; jewellers, 2; japanner, 1; machinist, 1; plumber, 1; pattern-maker, 1; painters, 10; photographer, 1; retouchers, 3; students, 7; signwriter, 1; sales-woman, 1; starch-manufacturer, 1; tailoresses, 4; turners, 2; telephonist, 1; teachers, 2; wool-classer, 1; no occupation, 5: total, 156.

DUNEDIN TECHNICAL CLASSES ASSOCIATION.

Your committee begs to submit the eleventh annual report of the Dunedin Technical Classes Association.

Your committee regrets that no further progress has been made towards the establishment of a technological museum. Should the projected addition to the buildings be carried out, it is intended to provide accommodation for this purpose. Similarly there is nothing to report in regard to the library.

The association during the past session employed twenty-six paid teachers and assistants, and thirty-five classes were carried on in twenty-three different subjects. Of these classes, two were held at Port Chalmers, and the experiment was so far successful that the local committee hope to extend the scope of the work during the coming session. The total number of students enrolled was 767, and of these seventeen received total or partial remission of their fees. Four students gained the senior diploma of the association, fourteen the junior diploma, and 228 gained certificates qualifying for diplomas.

The reports of the examination held in 1899 by City and Guilds of London Institute show that four candidates passed the preliminary grade in plumbers' work, while in the ordinary grade of the same work two gained first-class passes, and one a second-class. In the honours' work in plumbing one gained a second-class, and in the honours' work in bookbinding one gained a first. In carpentry and joinery, ordinary grade, three candidates were successful in gaining a first-class. The positions gained by Dunedin candidates in this examination compare favourably with those of all other centres in the colony. In the examination of the Science and Art Department one student was awarded a first-class pass in drawing and machine construction, and one a second-class in advanced theoretical chemistry and a first-class in practical chemistry.

During the year Mr. George M. Thomson organized a scheme for raising a building fund through the agency of past and present students. This work was not very enthusiastically taken up, but £125 17s. 6d. was collected and handed to the treasurer.

With regard to the workshops and laboratory required for the teaching of practical electricity, your committee, after full consideration of the position, decided to proceed, as soon as possible, with the erection of an additional building at the back of the present premises. Plans and specifications were prepared by the association's architect, whose estimate of cost of a two-story building was £1,230, while alternative plans showed that a three-story building would involve an approximate expenditure of £1,700.

On the 1st November a deputation waited upon the Premier to ascertain what amount of assistance the Government were prepared to grant for this purpose. After discussion of the scheme and examination of the association's premises, the Premier undertook to further the wishes of the association as far as lay in his power. Owing, however, to the general election and patriotic movements having since engrossed universal attention, nothing definite has been arranged up to the present, but the committee is still in communication with the Government on the subject. Meanwhile, although the association is in possession of a valuable plant and apparatus for practical electrical work, the opening of a class in this subject is still postponed.

The committee would like to see a wider interest than is manifested at present taken in the work of the technical school by some of our public bodies. The City Corporation, the Trades and Labour Council, the Chamber of Commerce, the Industrial Association of Otago, and other bodies are all, either directly or indirectly, interested in the work which is done, and might reasonably be expected to render some assistance to the association.

BALANCE-SHEET.				
	<i>Receipts.</i>	£ s. d.	<i>Expenditure.</i>	£ s. d.
Balance, 31st January, 1899		530 18 10	Salaries	673 7 10
Class-fees		531 19 0	Printing, stationery, and advertising	74 4 4
Subscriptions—			Rent, taxes, and insurance	100 6 11
General		66 4 6	Gas and coal	33 14 5
Building fund		125 17 6	Incidental expenses	6 0 3
Cookery School		8 10 3	Apparatus and material for practical classes .. .	13 7 10
Rent		8 12 0	Premises and furniture	94 0 7
Interest		3 4 2	Electrical plant	199 11 11
Government subsidy		80 16 0	Balance—	
Education Board		75 0 0	Bank of New Zealand	121 9 11
			Dunedin Savirgs-Bank	114 15 6
		£1,431 2 3		£1,431 2 3

Examined and found correct.—C. GRATER, Auditor.

SUPERINTENDENT'S REPORT FOR 1899.

The total number of students enrolled was 767, an increase of thirty-six on last year's figures. This number, however, includes those students who carried on their work at Port Chalmers, so that the real increase was only small. An analysis of the roll is appended to this report.

At the outset of the association's work classes were carried on only during the winter months, but of late years there has been a summer session as well. Thus, as soon as the 1898 session closed, the work of the new year began with the spring botany class, as well as senior classes for theoretical carpentry and plumbing, and chemistry.

Throughout the session thirty-five classes were carried on in twenty-three subjects. Two projected classes, for modelling and for painters and decorators' art, were not carried on, as a sufficient number of students did not enrol for them. During the session sixteen students applied for and received either partial or total remission of their fees.

Classes in two new subjects were opened during the session—viz., commercial law and elocution. The former was an entirely new departure, which fully justifies its initiation. A better class of students could not be desired, and they maintained their interest in the work to the close of the session. The elocution classes were well attended, and the results obtained were very satisfactory. In the final examination, the first of the kind held here, fourteen passed the first grade and twelve the second. The examination for the third and highest grade is to be held at the close of next session.

As was the case last year, the classes for book-keeping were the most largely attended in the school. The mathematics class was almost too large for manipulation, and will require subdivision in future. It is satisfactory to find that the necessity for this subject is being more fully recognised by our students. Three classes for typewriting were held, and the numbers attending were limited only by the number of machines available.

In addition to the ordinary class in theoretical chemistry, a special class was carried on in connection with the New Zealand Pharmacy Board, and also a small senior class in practical chemistry. Professor Black offers free tuition at the University for one session to the student who succeeds in gaining first place in the annual examination.

The physics class was better attended than has been the case for many years, and in view of the special teaching in practical electricity which it is hoped to undertake next session this is very gratifying. In this class also free tuition at the University is offered by Professor Shand. In connection with the wood-carving class, the substitution of relief for chip-carving has led to a very considerable increase in the number of men in attendance. The class was a very large one.

The dressmaking classes were so large at the outset that after enrolling forty pupils several had to be turned away.

As was stated in my last report, Mrs. Reynolds and Mrs. Denniston, assisted by several other ladies who have in the past materially helped the association, undertook to raise funds for the better fitting up of the cookery room. This was accomplished during the summer recess, and the improvement is very noticeable. The classes have been very largely attended during this session. At the final examination thirteen candidates gained the C, and three the B, certificates of the association.

At the commencement of the session a deputation appointed by the engineers' apprentices employed at Port Chalmers called on me to see whether classes could be opened down there. In response to their request a number of the committee of the association went down to the Port, and at a meeting held under the presidency of Mr. John Mill (the Mayor) it was resolved to open classes for engineering and mechanical drawing. These classes were very well attended during the first quarter, and, though the numbers fell off greatly during the second, the result on the whole has been satisfactory.

I have not specified several of the other classes because the work went on unchanged, the attendances being well sustained, and the quality of the work done being satisfactory. The reports

of the teachers and of those ladies and gentlemen who have assisted in the class examinations testify to the continued good work which is being carried on in the school. The general conduct of the students is also extremely satisfactory.

GEO. M. THOMSON,

Honorary Secretary and Superintendent.

Occupations of Students.—Accountants, 7; artist, 1; bicycle-makers, 2; blacksmiths, 6; boilermakers, 10; book-keeper, 1; booksellers, 4; bootmakers, 4; brass-finishers, 6; bricklayer, 1; butchers, 2; cabinetmakers, 2; carpenters, 17; cash-boy, 1; cashiers, 4; chemists, 27; Civil servants, 2; clerks, 93; coachbuilder, 1; commission agent, 1; compositors, 5; constables (police), 2; cooks, 2; cooper, 1; currier, 1; dairyman, 1; dentists, 3; domestic duties, 25; domestic servants, 15; drapers, 11; draughtsmen, 3; dressmakers, 19; dyer, 1; electrician, 1; engine-drivers, 2; engineers, 59; factory-hands, 10; farmers, 5; fitters, 8; florist, 1; gardeners, 4; gripmen (cable car), 1; grocers, 13; hosier, 1; hospital-attendants, 2; house-keeper, 1; ink-manufacturer, 1; ironmongers, 8; ironmoulders, 3; jeweller, 1; joiners, 2; kindergarten students, 5; kindergarten teachers, 2; knitter, 1; law clerks, 4; laundress, 1; letter-carriers, 2; machinists, 12; mantle-makers, 2; message-boys, 7; milliner, 1; monumental sculptor, 1; music-teacher, 1; news agent, 1; office-boys, 26; packers, 3; painters, 3; pattern-makers, 2; piano-maker, 1; plumbers, 19; photographers, 2; picture-framer, 1; presser, 1; printers, 4; pupil-teachers, 8; railway-hands, 3; reeler, 1; retouchers, 4; saddlers, 4; sail-maker, 1; salesmen, 7; saleswomen, 7; school (attending), 31; seedsman, 1; shop-boys, 5; shopmen, 2; station-hand, 1; stationers, 6; storemen, 13; striker, 1; students, 5; tailors, 6; tailoresses, 8; teachers, 9; telegraphists, 3; timekeeper, 1; tinsmiths, 2; traveller, 1; turners, 2; typist, 1; Venetian-blind makers, 2; warehousemen, 12; watchmakers, 2; wood-carver, 1; no occupation, 68; occupation not stated, 43; total, 767.

Total number of students enrolled, 767; new students, 512; former students, 255; male students, 529; female students, 238; number entered for one class only, 614; number entered for two classes, 130; number entered for three classes, 11; number entered for four classes, 9; number entered for five classes, 3.

Winners of a single certificate, 192; winners of two certificates, 32; winners of four certificates, 2; winners of five certificates, 2.

Ages of students: Over twenty-five years, 64; over twenty years, 207; over nineteen years, 64; over eighteen years, 65; over seventeen years, 98; over sixteen years, 105; over fifteen years, sixty-six; under fifteen years, 54; not stated, 44; total, 767.

TECHNICAL CLASSES, TOKOMAIRO PUBLIC SCHOOL.

As in former years, there were two classes in woodwork, consisting of twenty boys, with an average attendance of fifteen, and a class in agricultural chemistry of seventeen boys, with an average attendance of fourteen. In woodwork the boys pay for their own material, and make some article for their own or parents' use, such as boxes, writing-desks, bookcases, music-holders, tables, and various ornamental articles, inlaid or in fretwork. The work is carried on for two quarters in the year, each boy paying quarterly 2s. 6d. to the instructor. £13 13s. 9d. was paid by the boys for material, and £4 5s. 6d. as fees.

In agricultural chemistry, lime, its occurrence and value as a fertiliser, along with the analysis of limestone, formed the subject of study. The Government subsidy of £7 15s. 9d. was expended as follows: Replacing tools and saw-sharpening, 15s. 7d.; platinum weights, 11s. 7d.; drilling-machine and blowpipe lamp, £3; chemicals, £3 6s. 8d.; carriage, 1s. 6d.

JAMES REID.

WAIWERA MANUAL AND TECHNICAL ASSOCIATION.

REPORT, SESSION 1899.

THE only work carried on under the auspices of this association during 1899 was a painting class, taught by Mrs. Anderson. The number on the roll was seven, with an average attendance of 6.30. As in former years, the work done and the progress made by this class was a surprise to all who examined the exhibits at the close of the session.

The committee express their regret that a great deal more interest is not taken in the classes by those whom they are designed to assist.

The balance-sheet shows a receipt of £8 8s. 6d., and an expenditure of £6 19s., leaving a credit balance in hand of £1 9s. 6d.

5th April, 1900.

J. A. ANDERSON, President.

M. G. TAIT, Hon. Secretary and Treasurer.

SOUTHLAND TECHNICAL CLASSES ASSOCIATION.

ANNUAL REPORT for Year ended 28th February, 1900.

YOUR committee has much pleasure in presenting to members the fourth annual report:—

The Government being unable, owing to their failure to pass the necessary legislation, to give any extra financial assistance beyond the ordinary capitation grant, an appeal was made to the Education Board, and that body most generously donated the sum of £20 towards assisting the

association in the pursuit of its good work. This, with a balance of £18 1s. 8d. in hand, enabled the committee to prosecute the work with vigour.

Ten classes were put on the prospectus for the year—viz., English, wood-carving, dressmaking, building, surveying, chemistry, freehand and model drawing, carpentry, mechanical drawing, perspective drawing, and cookery. As in previous years, your committee found that the list had to be altered somewhat. An additional class was added, that of book-keeping, while two classes—perspective drawing and cookery—failed to obtain sufficient entries to justify their being started. All the classes mentioned, with these two exceptions, were carried on during the two terms with marked success. The total number of students was higher during the past year than in any previous year. The wood-carving, dressmaking, and mechanical-drawing classes proved very popular; the numbers in attendance were so large, and the instruction being chiefly individual, teachers were compelled to divide their classes into sections and devote extra evenings to their work.

The number of students enrolled, and the average attendance in each class, are given in the following table:—

	Roll, First Term.	Average Attendance.	Roll, Second Term.	Average Attendance.
English	7	6.4	7	6.5
Book-keeping	12	10.0	4	3.9
Wood-carving	40	35.1	34	31.8
Dressmaking	27	26.1	18	17.2
Chemistry	8	6.6	6	5.6
Carpentry	13	10.6	11	8.0
Mechanical drawing	23	19.4	20	17.3
Freehand and model drawing	12	10.7	10	8.6
Building surveying	5	4.4	5	4.5
Totals	147	129.3	115	103.4

As hitherto, the teachers received the sum of three guineas and a half for each term as salary, with an added bonus of 6s. for each student in excess of six in any class. Your committee has found that this system of paying their teachers is an equitable one, and has given entire satisfaction to all, while it has also had the effect of helping the teachers to feel that they are in vital touch with the committee in working for the success of the association.

An exhibition of work performed in the wood-carving, carpentry, and drawing classes was held at the close of the session, and the steady influx of visitors showed the interest that was taken by the townspeople in the work of the association.

The classes are now fairly established, and your committee look forward to a time, which they hope is not very far distant, when students will undertake systematic work in order that they may qualify themselves to obtain the certificates issued by the City and Guilds of London Institute, and by the Science and Art Department, in the various branches of technical education.

Your committee would here tender their thanks to the Education Board for their unvarying generosity in giving the association the free use of their buildings, and also for the handsome donation of £20 to its funds. It is evident that without such kindly consideration the association would have the greatest difficulty in carrying on its work.

On behalf of the governing body,
Invercargill, 16th March, 1900.

WM. R. RIDDELL, President.
WILLIAM A. McCAW, Secretary.

BALANCE-SHEET for YEAR ended 28th February, 1900.

Receipts.			Expenditure.		
	£	s. d.		£	s. d.
Balance from 1899	18	1 8	Teachers' salaries	105	9 0
Interest in P.O.O.	0	4 5	Advertising, &c.	8	18 0
Subsidy from Education Board	20	0 0	Gas and janitor	8	15 6
Government capitation, 1898-99	1	5 0	Secretary	7	17 6
Government capitation, 1899-1900	33	15 6	Students' material	1	15 8
Students' fees	82	0 0	Refund to Education Board (capitation)	4	15 0
Timber account refunded	1	5 6	Bank charge for keeping account	0	5 0
			Stamps and stationery	0	8 6
			Balance.. ..	18	7 11
	<u>£156</u>	<u>12 1</u>		<u>£156</u>	<u>12 1</u>

6th March, 1900.

WILLIAM A. McCAW, Treasurer.

Examined and found correct.—R. J. CUMMING, 13th March, 1900.

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