

ASSISTANTS—GRADE D.			Picard, John			GRADE E.			COUNTY OF YARMOUTH		
Foster, L.	85	14 07	Shaw, John	07	10 60	COUNTY OF VICTORIA.			GRADE B		
Whehuau, E.	67	11 08	Sheehan, Daniel	120	29 75	COUNTY OF VICTORIA.			G. Adams	81	\$40 17
CO. OF RICHMOND.			GRADE E.			ASSISTANTS—GRADE E.			J. Blackadar	120	59 50
GRADE B.			Bethune, Margt.	121	23 50	Crowell, Emma	60	11 15	A. Blackadar	112	55 55
McNeil, M. J. T.	113	56 30	Culliton, Eliza	115	21 38	McGill, Mary	121	22 50	H. Condon	120	58 50
McDonald, Angus	118	58 50	Dunn, Jane	90	17 87	McKay, Mary	100	18 50	J. Crosby	113	56 30
McLean, Angus	33	16 62	LoBlanc, Elizabeth	105	19 50	Newell, Mr. M.	101	18 78	G. Churchill	107	53 00
McRae, Wm.	113	50 05	Fenrelly, Mary	120	22 30	Swalz, M. L.	101	18 78	W. Crosby	95	47 12
McQuarrie, Hec.	21	60 00	McKinnon, Agens	121	22 50	COUNTY OF VICTORIA.			T. Christie	121	59 00
McLain, Donald	121	60 00	McCabe, Eliza	121	22 50	GRADE A			A. Gayton	121	59 00
McKenzie, Michael	114	50 50	Morrison, Christy	121	22 50	McLean, T. S.	GRADE B.		S. Hilton	68	29 75
McDonald, John	121	60 00	McNeil, Elizabeth	96	17 87	Campbell, Macle.	119	\$39 00	T. Hilton	106	53 05
McKenzie, Michael	144	50 50	McDonald, Ann	118	21 95	*McDonald, Peter	104	68 86	J. Killan	121	59 00
McDonald, John	121	60 00	McCabe, Mary	121	22 50	*McDonald, Murl.	110	67 60	A. Leat	121	59 00
McLean, Angus	35	17 65	Raggett, Mary	120	22 30	McKenzie, Alex	114	66 50	B. Rogers	119	59 00
GRADE C.			Terrio, Virginia	112	20 87	McLennan, John	76	37 20	A. Smith	121	59 00
Royd, Donald	117	43 50	ASSISTANTS—GRADE D.			McLean, Donald	85	42 15	G. Sparling	120	59 50
Ferguson, Rodk.	1121	45 00	Beranger, John	121	20 00	McNeil, E. P.	121	60 00	N. Sanders	82	47 67
Haywood, M. A.	120	44 62	COUNTY OF SHELBOURNE.			GRADE C			GRADE C		
Madden, Sarah	115	42 75	GRADE A.			Buchanan, Ewen	121	45 00	J. Aube	78	29 00
McKay, John	121	45 00	McDonald, C. R.	115		McDonald, M. B.	112	41 65	A. Binyay	119	44 25
McKinnon, M. E.	112	41 65	GRADE B.			McDonald, Angus	112	41 65	E. Brown	120	44 62
Morrison, Alex.	121	45 00	Colenhoun, Robt.	80	\$39 67	McDonald, John	118	42 00	H. Christie	60	22 30
McPherson, S.	121	45 00	DeVine, M. E.	100	49 60	McIver, Henry	121	45 00	*M. Crosby	112	55 63
McLeod, John	121	45 00	Doane, J. H.	101	50 68	*McKay, Angus	112	65 50	H. Cann	110	40 90
Morrison, Norman	121	45 00	Johnson, J. W.	99	49 30	McKay, Angus	85	31 62	*W. Durkee	121	60 00
St. Zeph'rine, Lady	120	44 62	Mudro, J. H.	112	55 55	McKenzie, Niel. (no return)			*L. Filnt	116	57 77
St. Maurice, Lady	120	41 62	GRADE C			McLean, Sarah	100	37 20	M. Goudey	123	44 62
St. John, Lady	120	44 62	Bower, Margaret	115	42 75	*McLeod, Norman	121	60 00	J. Harrison	120	44 62
St. Alexandrina, L.	120	44 62	Brettle, James	100	37 20	McLeod, Mac.	120	44 62	C. Hilton	98	36 44
St. Claude, Lady	115	42 75	Covill, B. F.	67	24 30	McLeod, Mac.	116	43 14	E. Hilton	121	45 00
St. Euph., L.	115	75 00	Coffin, Adeline	64	23 25	McLeod, John	121	45 00	E. Page	61	22 68
St. Mary, Lady	115	42 75	Crowell, Eben	101	40 72	*McMillan, Allan	168	53 64	D. Potter	90	36 80
Tooney, James	63	22 42	Doane, Carrie T.	97	39 80	McMillan, Duncan	100	37 20	W. Robbins	65	24 17
GRADE D.			Gibbons, John	107	37 85	Morrison, John	121	45 00	A. Robbins	118	43 88
Barrett, A. A. C.	121	30 00	Goodick, J. D.	103	38 30	McNeill, John H.	120	44 62	M. Rogers	120	44 62
Boyd, Angus	119	29 50	Lavers, A. H.	103	38 30	Newton, James	86	32 00	E. Stubbart	100	37 20
Campbell, J. M. E.	120	29 75	Lyle, Emilie	120	41 61	Rold, Della	121	45 00	O. Spinnney	60	22 30
Gagnon, Peter	77	19 23	Matheson, Wm.	120	37 85	Sparling, Emma	121	45 00	A. Vanuorden	117	43 60
Hearne, Bridget	121	30 00	Matheson, Daniel	121	37 85	GRADE D.			J. Westcott	187	43 50
Johnston, Arch.	121	30 00	Nickerson, M. H.	109	37 00	*McAulay, Murl.	107	35 56	M. Woodworth	120	44 62
McNeil, James	121	30 00	Taylor, Harriet	116	43 14	*Campbell, Donald	118	39 00	GRADE D.		
McKerrow, Joseph	103	25 53	VanNorden, M. J.	109	40 72	McCharles, Fred.	121	39 00	M. Crosby	118	29 25
McCuish, Margt.	121	30 00	GRADE D			McDermid, Eunice	121	40 00	G. D'Entremont	112	22 65
McCuish, Angus	121	30 00	*Atwood, Amanda	79	19 72	McDonald, James	100	24 80	E. Grant	112	37 00
McNeil, Rod.	108	26 77	Bowker, Scetilia	54	13 28	Hart, Elizabeth	119	24 50	*M. Goudey	118	29 25
Matheson, Alex.	96	23 80	Crowell, Letitia	100	24 80	*McIver, Angus	106	34 04	J. Gavel	114	28 35
McLeod, Ken.	121	30 00	Demstadt, Wm.	108	26 27	McKay, Norman	119	36 36	*J. Jackson	116	28 35
McDougall, Peter	121	30 00	Doane, Augusta	100	24 80	McKay, Daniel	104	25 78	*J. LeBlanc	69	22 60
McDougall, Peter	10	2 48	Forbes, Phoebe J.	71	17 65	Kerr, Duncan	121	30 00	G. McDonald	60	14 87
			Fox, Mary	85	21 08	McKenzie, Ann	121	30 00	T. Potter	93	30 75
			Golden, Thomas	111	27 52	McKenzie, Christina	84	29 83	L. Seely	121	30 00
			Harding, Allen	79	19 68	McKinnon, Norman	101	25 04	*A. Tedford	118	39 50
			Hogg, George	115	28 50	McKinnon, Joseph	121	30 00	*A. Travis	95	31 40
			McDonald, Mgt.	112	27 75	McLennan, Fred.	88	29 09	*J. Vanenburg	50	16 62
			*Reynolds, Leander	117	36 67	McLeod, Angus	120	39 73	GRADE E.		
			Snow, Deborah	100	24 80	McLeod, Donald	110	27 27	*M. Binyay	20	15 00
			Stalker, Susan	49	24 54	McLeod, John	118	29 25	*M. Gridley	58	14 37
			Swaine, Emeline	110	27 27	McMillan, Angus	118	39 00	A. Holmes	70	13 00
			*Thomas, Isaac	58	19 16	Nicholson, Neil	121	30 00	L. Hilton	105	19 50
			Wilson, Letitia	116	28 75	McNeill, Murl.	117	29 00	M. LeBlanc	107	26 50
						McNeill, Stephen	99	24 54	E. Surtette	61	11 37
						McTearle, Norman	112	27 75	ASSISTANTS—GRADE D.		
						*Ross, Aaron	114	37 05	A. Hilton	65	10 74
						GRADE E.			M. Jackson	15	2 48
						McAulay, Jessie	106	19 70	GRADE E.		
						Ferguson, Helen	100	20 25	M. Cottran	120	14 87
						McLeod, Ann B.	116	21 57	J. Doucette	114	14 13
						*Smith, Sarah	108	26 77	M. Hervey	40	4 97
						Peppy, Charles	102	18 95	E. Hatfield	33	4 08

SCIENCE AND LITERATURE IN GENERAL EDUCATION.

INVESTIGATION vs. CHAMMING.

IN Mr. Farrar's volume of Essays on a Liberal Education is one contributed by Mr. J. M. Wilson, mathematical and natural science master in the celebrated Rugby School, which to our mind is one of the best contributions to the discussion of the vexed question of the relations of Science and Literature in general education that has been published.

In the course of his argument, Mr. Wilson makes some suggestions as to the spirit and method of teaching natural science in schools—a subject on which, he justly remarks, there is much misconception, and his suggestions are so eminently sensible and practical, that we transcribe the following for the sake of commending both the spirit and the method to certain American teachers who flatter themselves that they are teaching science, and teaching it scientifically, while they are really doing neither.

This class of teachers is well represented in a fashionable young ladies' seminary that we have in mind. A pupil of this school—it ranks among the first in the country—one day remarked to us that she could not "endure" Botany. It was "perfectly horrid," she said. We knew her to be fond of flowers! why then should she hate the study of them? A few questions solved the difficulty. Her first plunge into Botany (?) had been into the Linnæan System of Classification, which she had been set to commit to memory! And all her study of the "horrid" science had resulted merely in the acquisition of a gibberish of *-andreas*, *-acias*, *-gynia*, and so on, that would have frightened a disciple of Jessien.

The extensive sale of the text-book of Botany used in that school is proof that the "exquisite perversion" of its method is not disapproved in more than one school, and by more than one teacher. In fact, the greater part of our science teaching is, we fear, equally unscientific.

"There are two different methods of teaching science. One, the method of authority. The first starts with the concrete and works up to the abstract; starts with facts and ends with laws; begins

with the known and proceeds to the unknown. The second starts with what we call the principles of the science; announces laws and includes the facts under them: declares the unknown and applies it to the known. The first demands faith, the second criticism. Of the two, the latter is the easier, and the former by far the better. But the latter is seen in most text-books and is the method on which many unscientific people ground their disapproval of science. What this former method is, and why it is the better, will be seen by the following remarks.

In the first place, then, *knowledge must precede science*: for science is nothing else but systematized experience and knowledge. In its extreme applications this principle is obvious enough: It would be absurd to teach boys classifications from minerals, or the power of experimental science by an investigation into the organic bases. A certain broad array of facts, must pre-exist before scientific methods can be applied, this order cannot be reversed. And this is illustrated by the profound analogy that exists between the growth of scientific knowledge in an individual and in the world. Generation after generation of men passed away, and the world patiently accumulated experience and observation of facts: and then there sprang up in the world the uncontrollable desire to ascertain the sequences in nature, and to penetrate to the deep-lying principles of natural philosophy. And the same desire is based in the individual on the same kind of experience. Where there is wide knowledge of facts, science of some kind is sure to spring up. After centuries of experience the *Philosophiæ Naturalis principia* were published.

And, secondly, this knowledge must be homogeneous with pre-existing knowledge. It is of no use to supply purely foreign facts; they must be such as the learner already knows something of, or be so similar in kind that his knowledge of them is equally secure. Such that he can piece them in with his own fragmentary but wide-ning experience. It is to his existing knowledge, and to that alone that you must dig down to get a sure foundation. And the facts of science must reach continuously down and rest securely thereon. Otherwise you will be building a castle in the air. Hence the master's business is to take up the knowledge that already exists;