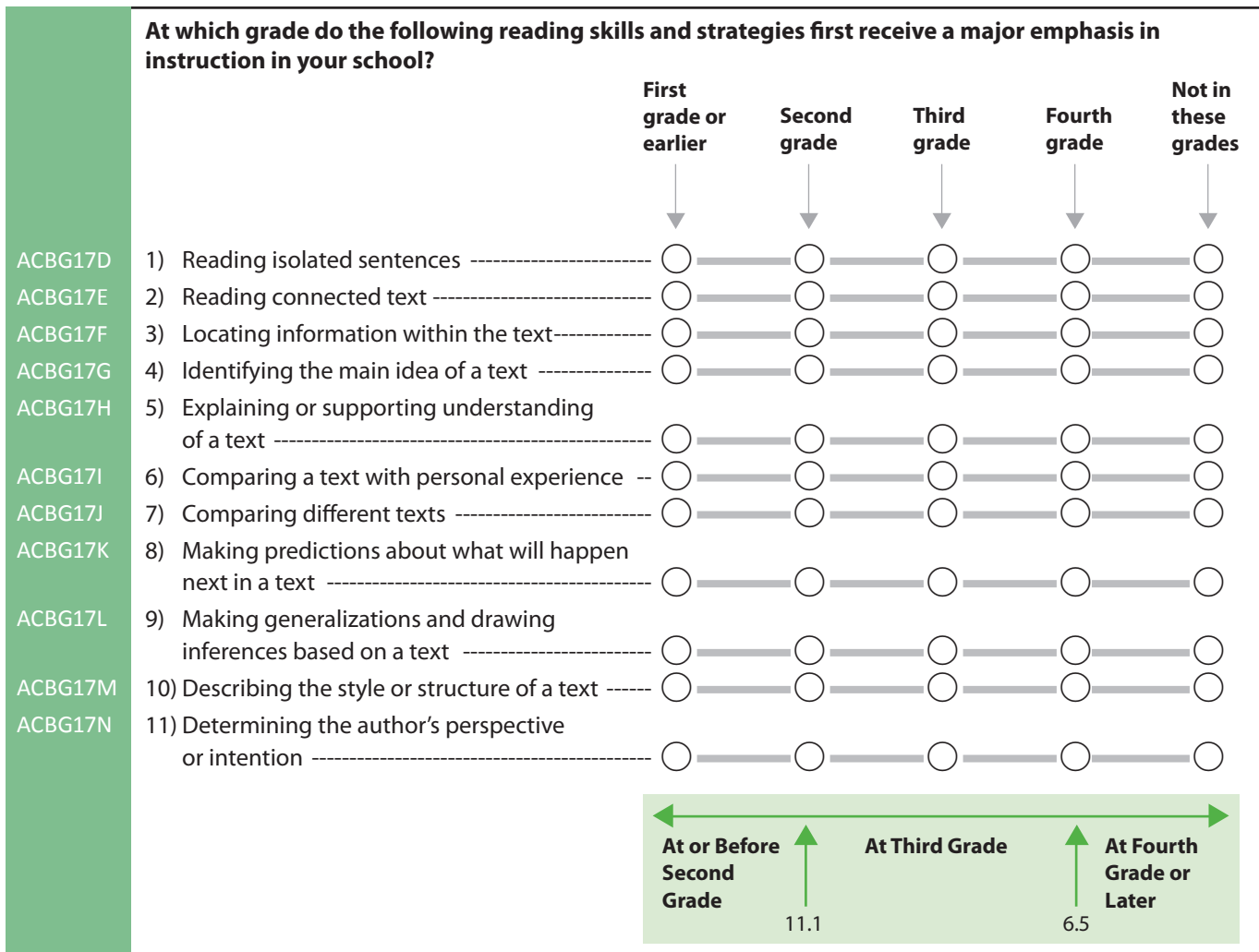


PIRLS 2011

# The PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale

The Emphasis in Early Grades on Reading Skills and Strategies (RSS) scale was created based on principals' responses about the earliest grade at which each of eleven reading skills and strategies were emphasized, described below. See [Creating and Interpreting TIMSS and PIRLS 2011 Context Questionnaire Scales](#) for more information on how the scales were formed.

**Exhibit 1: Items in the PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale**



**Exhibit 2: Item Parameters for the PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale**

Item	delta	tau_1	tau_2	tau_3	tau_4
ACBG17D	-5.31179	-0.61531	-1.21403	-0.76737	2.59671
ACBG17E	-4.32313	-2.48780	-1.49914	0.07541	3.91153
ACBG17F	-3.19143	-3.68535	-1.49074	0.80498	4.37111
ACBG17G	-1.98162	-3.86451	-1.44787	1.06092	4.25146
ACBG17H	-1.50722	-3.66597	-1.17303	1.15840	3.68060
ACBG17I	-1.03433	-3.27512	-0.83908	1.12108	2.99312
ACBG17J	0.18131	-3.59811	-1.12400	1.16646	3.55565
ACBG17K	-0.75330	-2.95330	-0.70201	1.12507	2.53024
ACBG17L	0.29322	-3.42990	-0.65300	1.13332	2.94958
ACBG17M	1.47227	-3.43780	-0.76948	1.10176	3.10552
ACBG17N	1.78677	-3.28822	-0.65588	1.03250	2.91160

**Exhibit 3: Scale Transformation Constants**

Scale Transformation Constants	
A = 9.91883	Transformed Scale Score = 9.91883 + 0.83063 • Logit Scale Score
B = 0.83063	

**Exhibit 4: Equivalence Table of the Raw Score and the Transformed Scale Score**

Raw Score	Transformed Scale Score	Cutpoint	Raw Score	Transformed Scale Score	Cutpoint
0	2.68968		23	9.12433	
1	3.65982		24	9.33009	
2	4.10623		25	9.53460	
3	4.40841		26	9.73791	
4	4.65451		27	9.94009	
5	4.88456		28	10.14105	
6	5.11936		29	10.34106	
7	5.37003		30	10.54045	
8	5.63911		31	10.73986	
9	5.91421		32	10.94031	
10	6.18505		33	11.14320	11.1
11	6.44715	6.5	34	11.35038	
12	6.69961		35	11.56413	
13	6.94312		36	11.78674	
14	7.17894		37	12.02232	
15	7.40845		38	12.27553	
16	7.63294		39	12.55303	
17	7.85347		40	12.86436	
18	8.07082		41	13.22509	
19	8.28554		42	13.66377	
20	8.49800		43	14.24945	
21	8.70844		44	15.32081	
22	8.91717				

**Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item										
			ACBG17D	ACBG17E	ACBG17F	ACBG17G	ACBG17H	ACBG17I	ACBG17J	ACBG17K	ACBG17L	ACBG17M	ACBG17N
Australia	0.92	60	0.34	0.65	0.76	0.80	0.85	0.83	0.86	0.74	0.82	0.84	0.85
Austria	0.91	54	0.31	0.52	0.68	0.83	0.82	0.83	0.78	0.76	0.81	0.80	0.74
Azerbaijan	0.92	56	0.44	0.64	0.77	0.78	0.80	0.81	0.84	0.82	0.75	0.76	0.74
Belgium (French)	0.92	57	0.28	0.63	0.78	0.79	0.81	0.83	0.84	0.84	0.82	0.75	0.73
Bulgaria	0.90	51	0.40	0.42	0.67	0.73	0.81	0.84	0.78	0.77	0.79	0.77	0.72
Canada	0.93	59	0.42	0.63	0.75	0.80	0.84	0.84	0.87	0.76	0.82	0.82	0.81
Chinese Taipei	0.93	60	0.45	0.61	0.71	0.77	0.84	0.85	0.84	0.82	0.87	0.83	0.80
Colombia	0.94	62	0.50	0.70	0.77	0.80	0.84	0.87	0.87	0.87	0.85	0.79	0.74
Croatia	0.92	56	0.52	0.63	0.74	0.78	0.75	0.80	0.81	0.87	0.85	0.75	0.64
Czech Republic	0.93	61	0.45	0.66	0.77	0.81	0.86	0.88	0.89	0.84	0.84	0.78	0.73
Denmark	0.91	54	0.30	0.61	0.69	0.76	0.85	0.78	0.86	0.76	0.78	0.77	0.76
England	0.91	57	0.51	0.61	0.81	0.78	0.82	0.79	0.82	0.80	0.81	0.78	0.69
Finland	0.89	49	0.35	0.50	0.68	0.69	0.76	0.79	0.83	0.74	0.77	0.74	0.69
France	0.90	51	0.32	0.53	0.70	0.74	0.85	0.79	0.83	0.75	0.71	0.77	0.73
Georgia	0.93	58	0.34	0.58	0.68	0.77	0.85	0.88	0.88	0.81	0.85	0.82	0.73
Germany	0.92	57	0.44	0.56	0.71	0.74	0.82	0.81	0.86	0.77	0.85	0.83	0.77
Hong Kong SAR	0.91	55	0.40	0.56	0.72	0.79	0.77	0.82	0.82	0.81	0.83	0.75	0.78
Hungary	0.93	59	0.43	0.66	0.76	0.82	0.84	0.88	0.83	0.79	0.80	0.81	0.73
Indonesia	0.92	57	0.42	0.58	0.73	0.79	0.84	0.85	0.84	0.82	0.81	0.79	0.70
Iran, Islamic Rep. of	0.91	53	0.48	0.64	0.73	0.82	0.84	0.81	0.81	0.76	0.76	0.67	0.64
Ireland	0.91	54	0.35	0.59	0.74	0.81	0.87	0.89	0.77	0.74	0.84	0.75	0.54
Israel	0.92	57	0.35	0.51	0.75	0.77	0.79	0.82	0.83	0.79	0.90	0.81	0.83
Italy	0.92	56	0.32	0.64	0.73	0.79	0.80	0.83	0.88	0.82	0.83	0.76	0.69
Lithuania	0.91	54	0.25	0.61	0.69	0.68	0.80	0.83	0.84	0.77	0.85	0.82	0.72
Malta	0.92	55	0.30	0.62	0.63	0.76	0.86	0.85	0.83	0.79	0.83	0.82	0.73
Morocco	0.93	60	0.48	0.61	0.71	0.82	0.85	0.86	0.87	0.86	0.84	0.78	0.75
Netherlands	0.90	51	0.12	0.51	0.73	0.79	0.82	0.75	0.83	0.73	0.83	0.77	0.64
New Zealand	0.92	58	0.05	0.40	0.76	0.83	0.87	0.83	0.87	0.74	0.86	0.88	0.86
Northern Ireland	0.92	57	0.12	0.31	0.71	0.71	0.90	0.84	0.87	0.84	0.87	0.87	0.83
Norway	0.92	54	0.35	0.56	0.73	0.82	0.82	0.87	0.84	0.77	0.77	0.76	0.68
Oman	0.92	57	0.57	0.69	0.72	0.81	0.82	0.83	0.80	0.79	0.77	0.75	0.68
Poland	0.89	49	0.12	0.44	0.63	0.73	0.77	0.82	0.78	0.82	0.81	0.71	0.70
Portugal	0.91	54	0.34	0.64	0.78	0.69	0.76	0.80	0.80	0.81	0.81	0.78	0.76
Qatar	0.95	66	0.57	0.72	0.80	0.84	0.87	0.89	0.85	0.89	0.89	0.79	0.75
Romania	0.91	54	0.37	0.60	0.72	0.68	0.81	0.86	0.84	0.81	0.75	0.77	0.75
Russian Federation	0.90	52	0.21	0.44	0.69	0.70	0.78	0.81	0.79	0.79	0.87	0.77	0.78
Saudi Arabia	0.93	60	0.41	0.58	0.75	0.81	0.86	0.89	0.85	0.88	0.87	0.81	0.66

**Exhibit 5: Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale (Continued)**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Factor Loadings for Each Item										
			ACBG17D	ACBG17E	ACBG17F	ACBG17G	ACBG17H	ACBG17I	ACBG17J	ACBG17K	ACBG17L	ACBG17M	ACBG17N
Singapore	0.90	51	0.30	0.52	0.65	0.76	0.80	0.81	0.76	0.70	0.85	0.80	0.73
Slovak Republic	0.92	56	0.37	0.59	0.74	0.78	0.83	0.85	0.85	0.82	0.83	0.71	0.69
Slovenia	0.91	52	0.14	0.45	0.69	0.77	0.79	0.82	0.83	0.81	0.81	0.80	0.73
Spain	0.91	55	-0.02	0.40	0.68	0.77	0.80	0.85	0.88	0.82	0.85	0.83	0.76
Sweden	0.93	59	0.40	0.61	0.76	0.75	0.83	0.82	0.86	0.83	0.83	0.82	0.81
Trinidad and Tobago	0.91	54	0.34	0.44	0.70	0.84	0.88	0.87	0.80	0.77	0.86	0.71	0.68
United Arab Emirates	0.95	66	0.55	0.71	0.77	0.87	0.86	0.87	0.88	0.86	0.87	0.81	0.76
United States	0.93	61	0.57	0.64	0.81	0.84	0.88	0.83	0.81	0.79	0.79	0.80	0.78
<b>Sixth Grade Participants</b>													
Botswana	0.94	63	0.36	0.51	0.65	0.87	0.89	0.87	0.91	0.86	0.85	0.86	0.87
Honduras	0.92	56	0.32	0.54	0.67	0.78	0.86	0.85	0.86	0.83	0.84	0.79	0.73
Kuwait	0.94	69	0.59	0.68	0.79	0.87	0.92	0.88	0.90	0.88	0.92	0.89	0.74
Morocco	0.93	61	0.47	0.62	0.72	0.82	0.86	0.87	0.88	0.86	0.85	0.78	0.75
<b>Benchmarking Participants</b>													
Alberta, Canada	0.92	58	0.50	0.64	0.78	0.79	0.83	0.82	0.85	0.73	0.77	0.81	0.81
Ontario, Canada	0.93	60	0.39	0.64	0.77	0.81	0.87	0.88	0.83	0.75	0.81	0.83	0.84
Quebec, Canada	0.92	57	0.29	0.67	0.78	0.78	0.81	0.83	0.89	0.77	0.77	0.78	0.79
Maltese - Malta	0.93	62	0.35	0.57	0.77	0.81	0.89	0.92	0.89	0.80	0.85	0.83	0.78
Eng/Afr (5) - RSA <sup>◇</sup>	0.95	67	0.56	0.75	0.81	0.89	0.92	0.91	0.87	0.83	0.88	0.79	0.72
Andalusia, Spain	0.91	55	0.05	0.38	0.65	0.78	0.81	0.87	0.87	0.81	0.85	0.82	0.77
Abu Dhabi, UAE	0.95	67	0.61	0.74	0.80	0.88	0.85	0.89	0.88	0.87	0.87	0.81	0.74
Dubai, UAE	0.93	61	0.42	0.62	0.68	0.83	0.87	0.82	0.88	0.83	0.89	0.85	0.77
Florida, US	0.91	56	0.20	0.61	0.64	0.80	0.88	0.81	0.85	0.62	0.85	0.87	0.83
<b>prePIRLS Participants</b>													
Botswana	0.94	64	0.44	0.59	0.75	0.83	0.88	0.89	0.88	0.86	0.83	0.88	0.84
Colombia	0.94	62	0.50	0.70	0.77	0.80	0.84	0.87	0.87	0.87	0.85	0.79	0.74
South Africa	0.95	66	0.57	0.73	0.81	0.88	0.91	0.89	0.88	0.83	0.84	0.79	0.75

◇ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

**Exhibit 6: Relationship Between the PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale and PIRLS 2011 Achievement**

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale ( $\eta^2$ )
	(r)	(r <sup>2</sup> )	
Australia	0.00	0.00	0.00
Austria	-0.03	0.00	0.00
Azerbaijan	-0.03	0.00	0.02
Belgium (French)	-0.07	0.00	0.00
Bulgaria	0.12	0.01	0.03
Canada	0.03	0.00	0.00
Chinese Taipei	-0.03	0.00	0.00
Colombia	0.10	0.01	0.01
Croatia	0.04	0.00	0.00
Czech Republic	-0.02	0.00	0.00
Denmark	0.04	0.00	0.00
England	0.01	0.00	0.01
Finland	0.03	0.00	0.00
France	0.09	0.01	0.01
Georgia	0.02	0.00	0.00
Germany	0.18	0.03	0.06
Hong Kong SAR	0.09	0.01	0.01
Hungary	0.04	0.00	0.00
Indonesia	0.03	0.00	0.00
Iran, Islamic Rep. of	0.16	0.03	0.02
Ireland	0.06	0.00	0.00
Israel	0.10	0.01	0.00
Italy	0.01	0.00	0.00
Lithuania	0.10	0.01	0.02
Malta	0.05	0.00	0.00
Morocco	0.20	0.04	0.02
Netherlands	-0.01	0.00	0.00
New Zealand	0.05	0.00	0.00
Northern Ireland	0.03	0.00	0.00
Norway	-0.02	0.00	0.00
Oman	0.15	0.02	0.03
Poland	-0.02	0.00	0.00
Portugal	-0.06	0.00	0.00
Qatar	0.14	0.02	0.02
Romania	0.05	0.00	0.02
Russian Federation	-0.04	0.00	0.00
Saudi Arabia	0.11	0.01	0.00

**Exhibit 6: Relationship Between the PIRLS 2011 Emphasis in Early Grades on Reading Skills and Strategies Scale and PIRLS 2011 Achievement (Continued)**

Country	Pearson's Correlation with Reading Achievement		Variance in Reading Achievement Accounted for by Difference Between Regions of the Scale ( $\eta^2$ )
	(r)	(r <sup>2</sup> )	
Singapore	0.00	0.00	0.00
Slovak Republic	0.03	0.00	0.00
Slovenia	-0.02	0.00	0.00
Spain	-0.05	0.00	0.00
Sweden	0.03	0.00	0.00
Trinidad and Tobago	0.01	0.00	0.00
United Arab Emirates	0.33	0.11	0.08
United States	0.02	0.00	0.00
<b>International Median</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>
<b>Sixth Grade Participants</b>			
Botswana	0.04	0.00	0.00
Honduras	0.19	0.03	0.02
Kuwait	-0.01	0.00	0.00
Morocco	0.22	0.05	0.03
<b>Benchmarking Participants</b>			
Alberta, Canada	0.06	0.00	0.00
Ontario, Canada	-0.05	0.00	0.00
Quebec, Canada	0.02	0.00	0.00
Maltese - Malta	-0.06	0.00	0.01
Eng/Afr (5) - RSA <sup>◇</sup>	0.31	0.09	0.04
Andalusia, Spain	0.04	0.00	0.00
Abu Dhabi, UAE	0.20	0.04	0.03
Dubai, UAE	0.42	0.17	0.13
Florida, US	-0.06	0.00	0.00
<b>prePIRLS Participants</b>			
Botswana	0.02	0.00	0.01
Colombia	0.10	0.01	0.01
South Africa	0.18	0.03	0.04

◇ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).