

# A Study of the Alignment of the NWEA RIT Scale with the Delaware Assessment System

John Cronin, Ph.D.

March, 2007



Copyright © 2007 Northwest Evaluation Association

All rights reserved. No part of this document may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from NWEA.



Northwest Evaluation Association  
5885 SW Meadows Road, Suite 200  
Lake Oswego, OR 97035-3526

[www.nwea.org](http://www.nwea.org)  
Tel 503-624-1951  
Fax 503-639-7873

# A Study of the Alignment of the NWEA RIT Scale with the Delaware Assessment System

John Cronin, Ph.D.— Northwest Evaluation Association

March, 2007

Recently, NWEA completed a project to connect the scale of the tests used for Delaware mathematics and reading assessments with NWEA's RIT scale. Information from the Delaware assessments was used in a study to establish performance-level scores on the RIT scale that would indicate a good chance of success on these tests.

To perform the analysis, we linked aggregate state test results with NWEA test results for all schools whose NWEA test count for a grade and subject was between 95% and 105% of the count tested on the state assessment. This provided assurance that only schools that had tested a very similar population on both tests were included.

The Delaware state test is administered in spring. For the spring season, an equipercentile method was used to estimate the RIT score equivalent to each state performance level. For spring, we determined the percentage of the population within the selected study group that performed at each level on the state test and found the equivalent percentile ranges within the NWEA dataset to estimate the cut scores. For example, if 40% of the study group population in grade 3 mathematics performed below the proficient level on the state test, we would find the RIT score that would be equivalent to the 40<sup>th</sup> percentile for the study population (this would not be the same as the 40<sup>th</sup> percentile in the NWEA norms). This RIT score would be the estimated point on the NWEA RIT scale that would be equivalent to the minimum score for proficiency on the state test.

More complete documentation about this method can be found on our website.

Tables 1 through 4 show the best estimate of the RIT equivalent to each Delaware performance level for same-season (spring) and prior-season (fall) RIT scores. These tables may be used to identify students who may need additional help to perform well on these tests.

Tables 5 through 8 show the proportion of students achieving various RIT score ranges whom we estimate would achieve a proficient score on the state assessment. These tables can be used to assist in identifying students who are not likely to pass these assessments, thereby increasing the probability that intervention strategies will be planned and implemented.

**Table 1 – Recommended same-season (spring) RIT cut scores for Delaware performance levels – Reading**

Grade	Well Below the Standard		Below the Standard		Meets the Standard		Exceeds the Standard		Distinguished	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
2	-	<178	-	178	23	195	66	219	99	
3	<181	181	13	191	28	207	73	213	88	
4	<189	189	13	200	32	213	71	221	90	
5	<193	193	10	202	23	218	70	227	91	
6	<197	197	11	208	27	225	76	237	96	
7	<198	198	9	209	23	229	77	239	95	
8	<201	201	8	211	20	233	80	244	97	
9	<204	204	9	214	21	234	77	242	93	
10	<205	205	9	219	27	242	91	248	97	

**Table 2 – Recommended same-season (spring) RIT cut scores for Delaware performance levels – Mathematics**

Grade	Well Below the Standard		Below the Standard		Meets the Standard		Exceeds the Standard		Distinguished	
	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile
2	-	-	<176	-	176	11	193	57	220	99
3	<185	-	185	10	194	25	207	68	217	91
4	<194	-	194	11	202	26	217	69	226	88
5	<200	-	200	10	208	24	229	77	237	91
6	<208	-	208	17	215	29	234	74	240	85
7	<217	-	217	25	223	36	239	72	245	83
8	<221	-	221	24	228	36	242	67	248	78
9	<221	-	221	18	234	39	247	68	252	80
10	<228	-	228	23	237	39	250	69	255	81

**Table 3 – Recommended prior-season (fall) RIT cut scores for Delaware performance levels – Reading**

Grade	Well Below the Standard		Meets the Standard		Exceeds the Standard		Distinguished		
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile
2	-	<164	-	164	24	185	67	209	99
3	<173	173	13	183	29	200	73	207	89
4	<183	183	14	194	32	208	73	216	91
5	<187	187	10	197	23	214	71	223	92
6	<193	193	11	204	27	221	76	233	96
7	<195	195	9	206	23	226	79	235	95
8	<197	197	8	208	20	230	80	241	97
9	<201	201	9	211	21	232	79	239	93
10	<205	205	9	218	27	241	92	246	97

**Table 4 – Recommended prior-season (fall) RIT cut scores for Delaware performance levels – Mathematics**

Grade	Well Below the Standard		Below the Standard		Meets the Standard		Exceeds the Standard		Distinguished	
	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile
2	-	-	<166	-	166	12	181	59	205	99
3	<177	-	177	10	185	27	198	68	207	91
4	<187	-	187	11	196	27	209	71	216	88
5	<194	-	194	10	203	26	221	77	229	92
6	<204	-	204	18	210	29	227	74	232	85
7	<214	-	214	26	219	37	233	72	238	83
8	<218	-	218	25	224	36	237	68	242	79
9	<217	-	217	19	229	39	241	68	247	81
10	<225	-	225	23	234	39	246	69	252	82

**Table 5 – Proportion of students passing the Delaware state reading assessment based on same-season (spring) reading RIT range**

RIT Range	Percent in this range who pass								
	2	3	4	5	6	7	8	9	10
150	7%	2%	1%	1%	0%	0%	0%	0%	0%
155	11%	3%	1%	1%	1%	1%	0%	0%	0%
160	17%	5%	2%	2%	1%	1%	1%	1%	0%
165	25%	8%	4%	3%	2%	1%	1%	1%	1%
170	36%	13%	6%	5%	3%	2%	2%	1%	1%
175	48%	20%	9%	8%	4%	4%	3%	2%	1%
180	60%	29%	14%	12%	7%	6%	5%	4%	2%
185	71%	40%	22%	18%	11%	10%	8%	6%	4%
190	80%	52%	31%	27%	17%	16%	13%	10%	6%
195	87%	64%	43%	38%	25%	23%	20%	16%	10%
200	92%	75%	55%	50%	36%	33%	29%	23%	16%
205	95%	83%	67%	62%	48%	45%	40%	33%	23%
210	97%	89%	77%	73%	60%	57%	52%	45%	33%
215	98%	93%	84%	82%	71%	69%	64%	57%	45%
220	99%	96%	90%	88%	80%	78%	75%	69%	57%
225	99%	97%	94%	92%	87%	86%	83%	78%	69%
230	100%	98%	96%	95%	92%	91%	89%	86%	78%
235	100%	99%	98%	97%	95%	94%	93%	91%	86%
240	100%	99%	99%	98%	97%	96%	96%	94%	91%
245	100%	100%	99%	99%	98%	98%	97%	96%	94%
250	100%	100%	99%	99%	99%	99%	98%	98%	96%



**Table 6 – Proportion of students passing the Delaware state mathematics assessment based on same-season (spring) mathematics RIT range**

RIT Range	Percent in this range who pass								
	2	3	4	5	6	7	8	9	10
145	5%	1%	0%	0%	0%	0%	0%	0%	0%
150	8%	1%	1%	0%	0%	0%	0%	0%	0%
155	13%	2%	1%	1%	0%	0%	0%	0%	0%
160	20%	4%	2%	1%	1%	0%	0%	0%	0%
165	29%	6%	3%	2%	1%	0%	0%	0%	0%
170	40%	10%	5%	3%	1%	1%	0%	0%	0%
175	52%	16%	8%	4%	2%	1%	1%	0%	0%
180	64%	23%	12%	7%	4%	2%	1%	1%	0%
185	75%	33%	18%	11%	6%	3%	2%	1%	1%
190	83%	45%	27%	17%	9%	4%	3%	1%	1%
195	89%	57%	38%	25%	14%	7%	4%	2%	2%
200	93%	69%	50%	36%	22%	11%	7%	4%	3%
205	96%	78%	62%	48%	31%	17%	11%	6%	5%
210	97%	86%	73%	60%	43%	25%	17%	10%	8%
215	98%	91%	82%	71%	55%	36%	25%	16%	12%
220	99%	94%	88%	80%	67%	48%	36%	23%	18%
225	99%	96%	92%	87%	77%	60%	48%	33%	27%
230	100%	98%	95%	92%	84%	71%	60%	45%	38%
235	100%	99%	97%	95%	90%	80%	71%	57%	50%
240	100%	99%	98%	97%	94%	87%	80%	69%	62%
245	100%	99%	99%	98%	96%	92%	87%	78%	73%
250	100%	100%	99%	99%	98%	95%	92%	86%	82%
255	100%	100%	100%	99%	99%	97%	95%	91%	88%
260	100%	100%	100%	100%	99%	98%	97%	94%	92%
265	100%	100%	100%	100%	99%	99%	98%	96%	95%

**Table 7 – Proportion of students passing the Delaware state reading assessment based on prior-season (fall) reading RIT range**

RIT Range	Percent in this range who pass								
	2	3	4	5	6	7	8	9	10
140	10%	2%	1%	0%	0%	0%	0%	0%	0%
145	16%	3%	1%	1%	0%	0%	0%	0%	0%
150	23%	4%	1%	1%	1%	0%	0%	0%	0%
155	33%	7%	2%	2%	1%	1%	1%	0%	0%
160	45%	11%	4%	3%	1%	1%	1%	1%	0%
165	57%	17%	6%	5%	2%	2%	2%	1%	1%
170	69%	25%	10%	8%	4%	3%	3%	2%	1%
175	78%	36%	16%	12%	6%	5%	4%	3%	2%
180	86%	48%	23%	18%	10%	8%	7%	5%	3%
185	91%	60%	33%	27%	16%	13%	11%	8%	4%
190	94%	71%	45%	38%	23%	20%	17%	13%	7%
195	96%	80%	57%	50%	33%	29%	25%	20%	11%
200	98%	87%	69%	62%	45%	40%	36%	29%	17%
205	99%	92%	78%	73%	57%	52%	48%	40%	25%
210	99%	95%	86%	82%	69%	64%	60%	52%	36%
215	99%	97%	91%	88%	78%	75%	71%	64%	48%
220	100%	98%	94%	92%	86%	83%	80%	75%	60%
225	100%	99%	96%	95%	91%	89%	87%	83%	71%
230	100%	99%	98%	97%	94%	93%	92%	89%	80%
235	100%	100%	99%	98%	96%	96%	95%	93%	87%
240	100%	100%	99%	99%	98%	97%	97%	96%	92%
245	100%	100%	99%	99%	99%	98%	98%	97%	95%

**Table 8 – Proportion of students passing the Delaware state mathematics assessment based on prior-season (fall) mathematics RIT range**

RIT Range	Percent in this range who pass								
	2	3	4	5	6	7	8	9	10
140	8%	1%	0%	0%	0%	0%	0%	0%	0%
145	13%	2%	1%	0%	0%	0%	0%	0%	0%
150	20%	4%	1%	1%	0%	0%	0%	0%	0%
155	29%	6%	2%	1%	1%	0%	0%	0%	0%
160	40%	9%	3%	2%	1%	0%	0%	0%	0%
165	52%	14%	5%	3%	1%	1%	0%	0%	0%
170	64%	22%	8%	4%	2%	1%	1%	0%	0%
175	75%	31%	13%	7%	4%	1%	1%	1%	0%
180	83%	43%	20%	11%	6%	2%	1%	1%	1%
185	89%	55%	29%	17%	9%	4%	2%	1%	1%
190	93%	67%	40%	25%	14%	6%	4%	2%	1%
195	96%	77%	52%	36%	22%	10%	6%	4%	2%
200	97%	84%	64%	48%	31%	16%	10%	6%	4%
205	98%	90%	75%	60%	43%	23%	16%	10%	6%
210	99%	94%	83%	71%	55%	33%	23%	16%	10%
215	99%	96%	89%	80%	67%	45%	33%	23%	16%
220	100%	98%	93%	87%	77%	57%	45%	33%	23%
225	100%	99%	96%	92%	84%	69%	57%	45%	33%
230	100%	99%	97%	95%	90%	78%	69%	57%	45%
235	100%	99%	98%	97%	94%	86%	78%	69%	57%
240	100%	100%	99%	98%	96%	91%	86%	78%	69%
245	100%	100%	99%	99%	98%	94%	91%	86%	78%
250	100%	100%	100%	99%	99%	96%	94%	91%	86%
255	100%	100%	100%	100%	99%	98%	96%	94%	91%
260	100%	100%	100%	100%	99%	99%	98%	96%	94%
265	100%	100%	100%	100%	100%	99%	99%	98%	96%