

# DesCartes and other Learning Continua

Getting There from Here  
Kari Augustine ~ CESA 5  
June 18, 2009



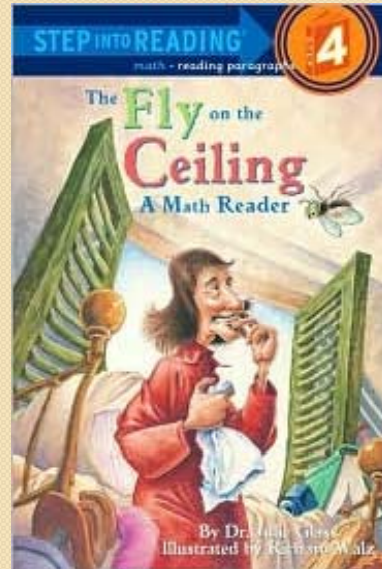
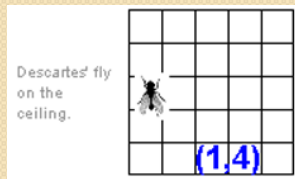
René Descartes

1596-1650



# Cartesian Plane

Location, location, location ...



TEACHERS  
**steer  
their  
own**  
LEARNING

JSD  
Spring 2007, Vol. 28, No. 2

"Nothing is ours except time."  
~Seneca

## LESSONS LEARNED

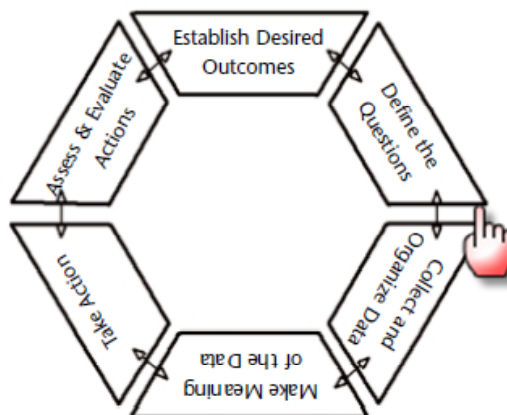
As Conrad Ball Middle School staff began to change the way teachers spent their professional learning time and emphasize new ways of instruction, we learned that all the things teachers want to have happen in the classroom for students should be the same things we should strive to create within the school for teachers.

### IF WE WANT STUDENTS TO:

### THEN WE NEED TO:

<ul style="list-style-type: none"><li>• <b>Have a toolkit of strategies to use to uncover meaning</b></li></ul>	<ul style="list-style-type: none"><li>• Provide time for teachers to understand the metacognitive processes they use, as well as the instructional strategies they can use to enhance student learning.</li></ul>
<ul style="list-style-type: none"><li>• <b>Take risks in front of their peers</b></li></ul>	<ul style="list-style-type: none"><li>• Find time to construct a nurturing environment where teachers can take learning risks by asking vital questions, checking their own understanding, and saying "I need help" and "I don't know" in front of their peers.</li></ul>
<ul style="list-style-type: none"><li>• <b>Persevere because they understand that meaning is created over time</b></li></ul>	<ul style="list-style-type: none"><li>• Create an environment where teachers are given time to construct meaning and dwell on it without fragmenting their focus with a thousand other conflicting goals.</li></ul>
<ul style="list-style-type: none"><li>• <b>Become enlightened from the continual practice of self-reflection</b></li></ul>	<ul style="list-style-type: none"><li>• Create a similar culture for teachers where time is purposefully set aside for self-reflection and the opportunity to analyze personal growth is embedded throughout the professional school year.</li></ul>

The Annenberg Institute for School Reform has developed the Inquiry Cycle, six activities that attempt to capture an ongoing, nonlinear process that involves the interaction of reflection and action. Each activity is essential; none may be omitted. The inquiry process is not over after completing one cycle. The six activities are:



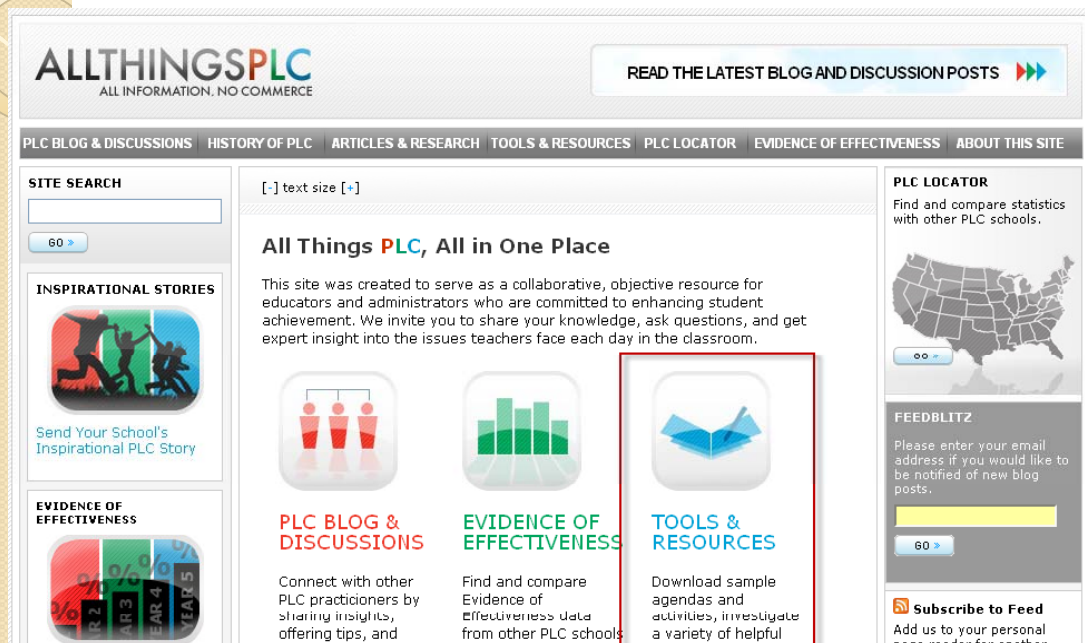
**The Inquiry Cycle**

# Define the Question

Annenberg Institute for School Reform



# Professional Learning Communities



Solution Tree

<http://www.allthingsplc.info/>

## DuFour's Four Questions

- What do you want students to learn?
- How will you know if they have learned it?
- What will you do if they have?
- What will you do if they haven't?



## Critical Issues for Team Consideration

1. \_\_\_ We have identified team norms and protocols to guide us in working together.
2. \_\_\_ We have analyzed student achievement data and have established SMART goals that we are working interdependently to achieve.
3. \_\_\_ Each member of our team is clear on the essential learnings of our course in general as well as the essential learnings of each unit.
4. \_\_\_ We have aligned the essential learnings with state and district standards and the high-stakes exams required of our students.
5. \_\_\_ We have identified course content and/or topics that can be eliminated so we can devote more time to essential curriculum.



## Critical Issues for Team Consideration

6. \_\_\_ We have agreed on how to best sequence the content of the course and have established pacing guides to help students achieve the intended essential learnings.
7. \_\_\_ We have identified the prerequisite knowledge and skills students need in order to master the essential learnings of our course and each unit of this course.
8. \_\_\_ We have identified strategies and created instruments to assess whether students have the prerequisite knowledge and skills.

# Essentials

<b>Subject: Reading</b> <b>Goal Strand: Interpretative and Evaluative Comprehension</b> <b>RIT Score Range: 191 - 200</b>		
Subject: Topic of Mathematics, Reading, or Language Usage Goal Strand: Reporting area for tests, also referred to as the goal area RIT Score Range: Measurement of the assessment scale for each subject and goal area		
Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
<b>Main Idea</b> <ul style="list-style-type: none"> <li>Analyzes literary text to identify a title representing the main idea</li> <li>Analyzes text to identify a title representing the main idea</li> <li>Enhance: Skills and concepts of the RIT range that students are able to retain and maintain</li> <li>Interprets the main idea of informational texts based on supporting details</li> </ul>	<b>Main Idea</b> <ul style="list-style-type: none"> <li>Analyzes text to identify main idea or theme of a literary text</li> <li>Analyzes literary text to identify a title representing the main idea</li> <li>Draws conclusions supporting details</li> <li>Interprets information representing the main idea</li> <li>Interprets the main idea on supporting details</li> </ul>	<b>Main Idea</b> <ul style="list-style-type: none"> <li>Analyzes literary text using supporting details</li> <li>Analyzes text to identify the main idea of a literary text</li> <li>Analyze and represent the main idea of the RIT range that students may be ready to learn soon</li> <li>Deduct support</li> </ul>
<b>Evaluate Validity</b> <ul style="list-style-type: none"> <li>Determines viewpoints in literary text</li> <li>Interprets the author's viewpoint in informational text</li> </ul>	<b>Evaluate Validity</b> <ul style="list-style-type: none"> <li>Infers viewpoints in literary text</li> <li>Interprets the author's viewpoint in informational text</li> </ul>	<b>Evaluate Validity</b> <ul style="list-style-type: none"> <li>Infers viewpoints in literary text</li> <li>Analyzes validity of information in informational text</li> <li>Analyzes informational text using proposition and support</li> </ul>
New Vocabulary: advertise, aphorism, historical, poet New Signs and Symbols: none	New Vocabulary: none New Signs and Symbols: none	New Vocabulary: characterize, headline, historical document, narrate, primary source, research paper, thesis paper, world literature New Signs and Symbols: none
Learning statement that represents content and data from the NWEA item bank	New vocabulary in this RIT range	New signs and symbols in this RIT range

©2004 NWEA. DesCartes: A Continuum of Learning is the exclusive copyrighted property of NWEA. Unauthorized use, reproduction, or distribution is prohibited.



\* Both data from test items and review by NWEA curriculum specialists are used to place these learning continuum statements into appropriate RIT ranges. Blank cells indicate data are limited or unavailable for this range or document version.

NWEA Test Version

Page #

Figure 1 Sample Page from Reading

<https://reports.nwea.org/help/Essentials.pdf>

Welcome Your School Name Here

**Menu**

- Home
- Log Out

**Actions**

- Upload Files
- Test Term Progress
- Order Reports
- Retrieve Reports
- Retrieve Files
- Change Password

**Online Reports**

- Logins and Teacher Reports

**Data-Tools**

- NWEA Knowledge Academy
- DesCartes**
- Dynamic Reports

**Resources**

- Glossary
- NWEA Website
- Crystal Reports Viewer

NWEA 2008 RIT Scale Norms Study

Download the NWEA 2008 RIT scale Norms study from [here](#). The benefits of this latest study include: use of a stratified sample set that mirrors the ethnicity and socio-economic status proportions of the U.S. student population, includes grade K & 1 norms, and uses a model for growth norms that provides even more accurate long term growth projections.

If you are interested in comparing the differences in the percentile ranks between the 2005 and 2008 studies, that file is available [here](#) for you to download.

Growth Projection Calculator

Many educators find that setting growth goals with students is a beneficial way to involve students with assessment data and their own learning. This calculator allows you to enter a student's RIT Score in each subject area along with a number of instructional weeks in order to determine what a reasonable amount of growth would be for that student over the time period. Download the file from [here](#) (40 MB).

**Dynamic Reporting Suite**

The dynamic reporting suite is a new reporting platform that simplifies data analysis and offers classroom tools to apply test scores directly to instruction.

Without digging through pages of data or piles of numbers, at-a-glance analytical tools present information regarding the status of students (individually, by class, by grade, or by a school) relative to growth, proficiency, and norms. These data are easily accessed and analyzed, empowering educators to take meaningful action.

[Access dynamic reports now.](#)

# Subject, Goal Area, RIT Range



Welcome

School

## Menu

[Home](#)

[Log Out](#)

## Actions

[Upload Files](#)

[Test Term Progress](#)

[Order Reports](#)

[Retrieve Reports](#)

[Retrieve Files](#)

Please select from the following subjects:

Concepts and Process  
General Science  
Language Usage  
Mathematics 2-5  
Mathematics 6+  
Reading

Language  
Sen, Paragraph Forms; Parts of Speech; C  
Write Nonfiction and Creative Pieces (Form  
Write, Plan, Revise, Edit, Produce

**DesCartes**  
A continuum of learning

combined  
Above230  
Below171  
171-180  
181-190  
191-200  
201-210  
211-220  
221-230

# Selected RIT Range in Center

Subject: Language Usage  
Goal Strand: Write, Plan, Revise, Edit, Produce  
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce Above 230
<b>Write for a Variety of Readers</b> <ul style="list-style-type: none"> <li>Identifies the form of writing that is most appropriate for a given purpose<sup>a</sup></li> <li>Selects writing form appropriate to topic and purpose</li> <li>Chooses persuasive writing as the most effective form for the given purpose</li> <li>Evaluates to determine what type of language is most appropriate for a given purpose</li> </ul>	<b>Write for a Variety of Readers</b> <ul style="list-style-type: none"> <li>Evaluates the level of detail and information appropriate for a given audience<sup>a</sup></li> </ul>	<b>Write for a Variety of Readers</b> <ul style="list-style-type: none"> <li>Evaluates the relevance of potential research questions<sup>a</sup></li> </ul>
<b>Plan and Revise Clear and Effective Writing</b> <ul style="list-style-type: none"> <li>Recognizes the steps of the writing process<sup>a</sup></li> <li>Identifies the process of revising<sup>a</sup></li> <li>Uses prewriting strategies to plan written work</li> <li>Uses organizing as a prewriting strategy</li> <li>Describes process of revision</li> <li>Identifies suitable research questions</li> <li>Gathers research information from analyzing original documents<sup>a</sup></li> <li>Describes the writing tasks organized by a particular graphic organizer</li> <li>Identifies the appropriate style for a summary<sup>a</sup></li> <li>Explains how and why outlines are used</li> <li>Revises compositions for clarity in purpose<sup>a</sup></li> <li>Evaluates writing samples for descriptive word choice<sup>a</sup></li> <li>Evaluates word choice for the meaning or feeling it suggests (connotation, term not used)<sup>a</sup></li> <li>Identifies combining sentences as a revision technique<sup>a</sup></li> <li>Combines sentences to improve clarity by using a compound sentence (term not used)<sup>a</sup></li> <li>Rewrites sentences in question form<sup>a</sup></li> <li>Revises and combines sentences using gerund phrases (terms not used; e.g., Jon is a soccer player. Sue is a soccer player. Jon plays for Lincoln High School. Sue plays for Jefferson High School. Jon and Sue are soccer players, Jon playing for Lincoln High School and Sue for Jefferson High School.)<sup>a</sup></li> <li>Revises sentences by using an adverb clause to combine</li> </ul>	<b>Plan and Revise Clear and Effective Writing</b> <ul style="list-style-type: none"> <li>Recognizes the last step of the writing process within a given writing scenario<sup>a</sup></li> <li>Uses clustering as a prewriting strategy<sup>a</sup></li> <li>Understands that the process of revision includes revising for audience interest<sup>a</sup></li> <li>Uses the writing process to align content with purpose</li> <li>Distinguishes examples of thesis statements from other written text<sup>a</sup></li> </ul>	<b>Plan and Revise Clear and Effective Writing</b> <ul style="list-style-type: none"> <li>Describes the structure of formal outlines<sup>a</sup></li> <li>Evaluates the format of outlines<sup>a</sup></li> <li>Revises sentences for fluency</li> <li>Uses evidence in support of a thesis statement</li> </ul>

©2006 NWEA. DesCartes: A Continuum of Learning is the exclusive copyrighted property of NWEA. Unauthorized use, reproduction, or distribution is prohibited.

WI 3.2.1

<sup>a</sup> Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.

Blank cells indicate data are limited or unavailable for this range or document version.



# Teacher Reports

Teacher Report - Language Usage Spring 2009											Goal Performance			
School:														
Class:														
Teacher:														
Test: Language Survey w/ Goals WI V2														
Student ID	Name	Grd	Test Type	Test Date	RIT	Std Err	RIT Range	%ile	%ile Range	Write Nonfiction / Creative Forms	Write / Plan / Revise / Edit	Spn / Para / Conventions	Language	
11256		7	S/G	May 12	213	3.0	210-216	32	24-41	213-226	209-221	204-216	203-215	
140010058		7	S/G	May 12	213	2.9	210-216	32	24-41	211-223	210-222	206-218	203-214	
140010078		7	S/G	May 12	214	3.0	211-217	35	26-44	214-226	216-229	210-221	191-206	
140050003		7	S/G	May 12	214	2.9	211-217	35	26-44	203-215	218-231	210-222	201-213	
11007		7	S/G	May 11	217	3.2	214-220	44	32-54	210-223	217-229	208-220	206-219	
140080008		7	S/G	May 11	218	2.9	215-221	47	38-58	206-218	212-224	216-228	214-225	
10892		7	S/G	May 12	220	3.0	217-223	54	44-65	214-226	210-222	213-225	218-230	
12194		7	S/G	May 12	221	3.0	218-224	58	47-68	213-225	215-227	215-227	217-229	
140050004		7	S/G	May 12	223	3.0	220-226	65	54-74	210-223	212-225	217-229	227-239	
140090030		7	S/G	May 12	223	3.0	220-226	65	54-74	213-225	224-237	213-225	217-230	
11053		7	S/G	May 12	224	3.0	221-227	68	58-77	224-236	206-220	214-226	225-237	
12488		7	S/G	May 12	224	3.0	221-227	68	58-77	210-223	233-249	214-225	214-226	
140010025		7	S/G	May 12	226	2.9	223-229	74	65-83	217-229	223-235	214-226	227-239	
140090021		7	S/G	May 12	227	2.9	224-230	77	68-83	226-237	216-228	216-229	223-235	
140010038		7	S/G	May 11	229	3.0	226-232	83	74-90	228-241	222-234	219-231	223-236	
140010059		7	S/G	May 11	230	3.2	227-233	86	77-92	222-234	219-232	215-228	241-262	
140010046		7	S/G	May 11	235	3.0	232-238	94	90-97	228-240	233-245	226-238	231-243	
140080013		7	S/G	May 12	237	3.0	234-240	96	93-98	234-246	232-244	237-249	224-236	
140010073		7	S/G	May 12	237	3.0	234-240	96	93-98	235-248	229-241	226-238	233-246	
140010015		7	S/G	May 12	238	3.0	235-241	97	94-99	229-241	225-237	235-247	243-264	
Totals For: Language Survey w/ Goals WI V2														
Students:					20									
Mean RIT:					224.2	Mean:					224.1	225.3	222.5	225.7
Std Dev:					8.2	Std Dev:					9.3	8.5	8.7	14.2
Median RIT:					223	Median:					220	223	220	226

# What do you wonder about ...

Teacher Report - Language Usage Spring 2009											Goal Performance			
School:														
Class:														
Teacher:														
Test: Language Survey w/ Goals WI V2														
Student ID	Name	Grd	Test Type	Test Date	RIT	Std Err	RIT Range	%ile	%ile Range	Write Nonfiction/ Creative Forms	Write / Plan/ Revise / Edit	Spn / Para / Conventions	Language	
11256		7	S/G	May 12	213	3.0	210-216	32	24-41	213-226	209-221	204-216	203-215	
140010058		7	S/G	May 12	213	2.9	210-216	32	24-41	211-223	210-222	206-218	203-214	
140010078		7	S/G	May 12	214	3.0	211-217	35	26-44	214-226	216-229	210-221	191-206	
140050003		7	S/G	May 12	214	2.9	211-217	35	26-44	203-215	218-231	210-222	201-213	
11007		7	S/G	May 11	217	3.2	214-220	44	32-54	210-223	217-229	208-220	206-219	
140080008		7	S/G	May 11	218	2.9	215-221	47	38-58	206-218	212-224	216-228	214-225	
10892		7	S/G	May 12	220	3.0	217-223	54	44-65	214-226	210-222	213-225	218-230	
12194		7	S/G	May 12	221	3.0	218-224	58	47-68	213-225	215-227	215-227	217-229	
140090030		7	S/G	May 12	223	3.0	220-226	65	54-74	213-225	224-237	213-225	217-230	
140050004		7	S/G	May 12	223	3.0	220-226	65	54-74	210-223	212-225	217-229	227-239	
11053		7	S/G	May 12	224	3.0	221-227	68	58-77	224-236	206-220	214-226	225-237	
12488		7	S/G	May 12	224	3.0	221-227	68	58-77	210-223	233-249	214-225	214-226	
140010025		7	S/G	May 12	226	2.9	223-229	74	65-83	217-229	223-235	214-226	227-239	
140090021		7	S/G	May 12	227	2.9	224-230	77	68-83	226-237	216-228	216-229	223-235	
140010038		7	S/G	May 11	229	3.0	226-232	83	74-90	228-241	222-234	219-231	223-236	
140010059		7	S/G	May 11	230	3.2	227-233	86	77-92	222-234	219-232	215-228	241-262	
140010046		7	S/G	May 11	235	3.0	232-238	94	90-97	228-240	233-245	226-238	231-243	
140080013		7	S/G	May 12	237	3.0	234-240	96	93-98	234-246	232-244	237-249	224-236	
140010073		7	S/G	May 12	237	3.0	234-240	96	93-98	235-248	229-241	226-238	233-246	
140010015		7	S/G	May 12	238	3.0	235-241	97	94-99	229-241	225-237	235-247	243-264	
Totals For: Language Survey w/ Goals WI V2														
Students:					20									
Mean RIT:					224.2	Mean:					224.1	225.3	222.5	225.7
Std Dev:					8.2	Std Dev:					9.3	8.5	8.7	14.2
Median RIT:					223	Median:					220	223	220	226



# Class by RIT Report

## Online Reports

Teacher Reports

Class Rosters

Class By  
Subject

Grade By  
Subject

Students Not  
Tested

## Instructional Resources

Class By RIT

## Data-Tools

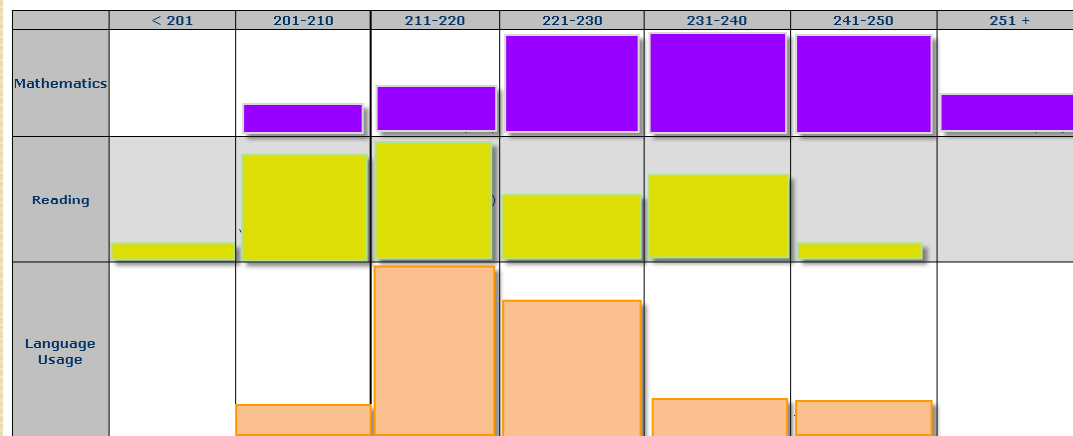
NWEA  
Knowledge  
Academy

DesCartes

Dynamic  
Reports

- class results by subject
- goal areas within subject ("drill down")
- access to DesCartes by RIT range

## Same Class in Class by RIT

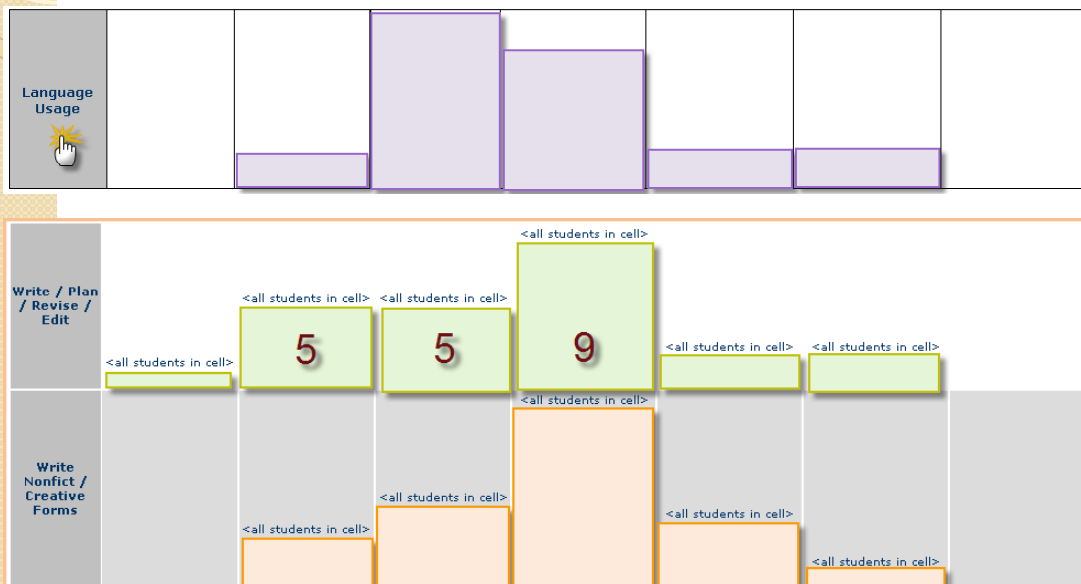


# Language Usage Goal Strands

- Language
- Sentences, Paragraphs & Conventions
- Write, Plan, Revise, Edit
- Write Nonfiction, Creative Forms\*

\* Wisconsin Standards Language

## Drilling Down



# Auditing the Curriculum

Grade 7: Language Arts: Write, Plan, Revise, Edit, Produce Completed by: \_\_\_\_\_

Proficient	RIT Range: 211-220	Skills and Concepts to Enhance 211 - 220	Examples from Present Curriculum	Adequacy Rating of Current Curriculum	Ideas for Improvement
		Write for a Variety of Readers			
		<ul style="list-style-type: none"> <li>Identifies the form of writing that is most appropriate for a given purpose*</li> <li>Selects writing form appropriate to topic and purpose</li> <li>Chooses persuasive writing as the most effective form for the given purpose</li> <li>Evaluates to determine what type of language is most appropriate for a given purpose</li> </ul>		<input type="checkbox"/> Exemplary <input type="checkbox"/> Adequate <input type="checkbox"/> Inadequate	
		Plan and Revise Clear and Effective Writing		<input type="checkbox"/> Exemplary <input type="checkbox"/> Adequate <input type="checkbox"/> Inadequate	
		<ul style="list-style-type: none"> <li>Recognizes the steps of the writing process*</li> <li>Identifies the process of revising*</li> <li>Uses prewriting strategies to plan written work</li> <li>Uses organizing as a prewriting strategy</li> <li>Describes process of revision</li> <li>Identifies suitable research questions</li> <li>Gathers research information from analyzing original documents*</li> <li>Describes the writing tasks organized by a particular graphic organizer</li> <li>Identifies the appropriate style for a summary*</li> <li>Explains how and why outlines are used</li> <li>Revises compositions for clarity in purpose*</li> <li>Evaluates writing samples for descriptive word choice*</li> <li>Evaluates word choice for the meaning or feeling it suggests (connotation, term not used)*</li> <li>Identifies combining sentences as a revision technique*</li> <li>Combines sentences to improve clarity by using a compound sentence (term not used)*</li> <li>Rewrites sentences in question form*</li> <li>Revises and combines sentences using compound sentences</li> </ul>			

## DesCartes Resources

The screenshot shows the DesCartes website interface. On the left is a sidebar with navigation links: Home, NWEA Links, MAP ~ Primary, Reading ~ Lexile, **DesCartes** (highlighted with a green circle), MAP Math, Reading Strategies, Academic Vocab, Handouts & PPTs, MAP Training, Parent Outreach, MAP Practice, Assessment, Setting Goals, MW Users' Group, and ACT's EPAS. The main content area has a header with 'DesCartes' and tabs for 'page', 'discussion', 'history', and 'notify me'. Below the header is a description of DesCartes as part of the MAP Assessment package. A list of resources follows, including links to 'Interpreting MAP Data for Teachers and Students', 'Poway School District' resources, 'Des Cartes Essentials', 'NWEA DesCartes Overview', 'Vocabulary by RIT Range', 'Signs and Symbols by RIT Range', 'Boise ISAT Sample Questions by RIT Score', and 'Curriculum Ladders'.

<http://gps-map.wikispaces.com>



Making Goal Growth Rocks!

## Targeted Instruction

# Relationship Between MAP and WKCE

Spring scores can be used to predict WKCE Proficiency Levels

- Summer School recommendations
- Clustering for instructional purposes
- Rtl Tier 2 small group interventions and “double-dosing” instruction
- Advanced placement – early Algebra



# 2005 WKCE-CRT Cut Scores



# 2005 WKCE-CRT Cut Scores

Table 1. Cut scores and associated impact data for WKCE-CRT Reading.

Grade	Score Range				Impact Data				
	Minimal	Basic	Proficient	Advanced	Minimal	Basic	Proficient	Advanced	Proficient +Advanced
3	270-393	394-429	430-465	466-640	3.9%	13.8%	38.9%	43.4%	82.3%
4	280-395	396-439	440-488	489-650	4.5%	12.1%	40.4%	43.0%	83.4%
5	290-400	401-443	444-496	497-690	4.8%	11.3%	40.8%	43.0%	83.4%
6	300-417	418-456	457-513	514-730	5.2%	10.4%	41.4%	42.9%	84.3%
7	310-433	434-466	467-522	523-780	5.4%	9.8%	42.0%	42.8%	84.8%
8	330-444	445-479	480-538	539-790	5.6%	8.8%	43.4%	42.3%	85.7%
10	350-455	456-502	503-554	555-820	9.2%	14.1%	33.0%	43.6%	76.6%



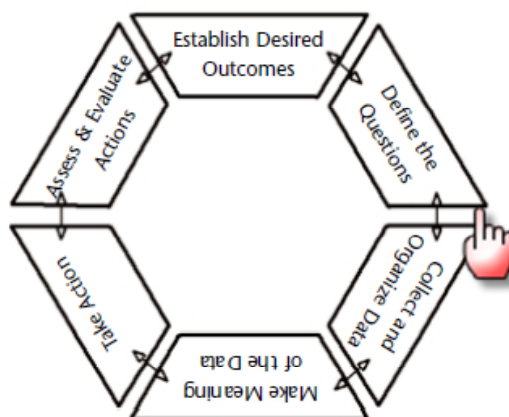
6<sup>th</sup> Grade reading cut scores set so that 84.3% would be A or P (457+).

# Spring Reading RIT and WKCE

Table 4 – Recommended prior-season (spring) RIT cut scores for Wisconsin performance levels – Reading

Grade	Minimal Performance	Basic	Proficient		Advanced	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score
3	<156	156	2	172	14	191
4	<168	168	4	184	16	202
5	<175	175	4	191	16	209
6	<185	185	5	198	16	214
7	<188	188	5	203	18	219
8	<190	190	5	203	14	223
10	<202	202	8	215	23	229

The Annenberg Institute for School Reform has developed the Inquiry Cycle, six activities that attempt to capture an ongoing, nonlinear process that involves the interaction of reflection and action. Each activity is essential; none may be omitted. The inquiry process is not over after completing one cycle. The six activities are:



**The Inquiry Cycle**

Back to the Beginning Define the Question



## SUMMARY

Teachers and administrators are using data to influence instruction. We want to ask ourselves tough questions about how to challenge all of our students and how to help them all meet our high standards. By looking at the data openly, we expect to move beyond the skills we have already mastered so we can all grow.

### Bedford School District

To be effective, schools must establish **specific achievement goals** for students and carefully **monitor** the extent to which these goals are being met.

(Marzano, *New Era of School Reform*, McREL, 2000)

Comparison: Bedford to National RIT Block Growth Norms (95% confidence)				
Grade	RIT Block	Language		
		Usage	Math	Reading
Three	160-169	N/A	N/A	More than expected
	170-179	More than expected	N/A	More than expected
	180-189	More than expected	Expected	More than expected
	190-199	More than expected	More than expected	More than expected
	200-209	More than expected	Expected	Expected
	210-219	Expected	Expected	Expected
Four	190-199	More than expected	More than expected	More than expected
	200-209	More than expected	More than expected	More than expected
	210-219	More than expected	More than expected	Neutral
	220-229	Expected	Less than expected	Neutral
	230-239	N/A	Expected	N/A
Five	180-189	N/A	Expected	N/A
	190-199	More than expected	More than expected	More than expected
	200-209	More than expected	More than expected	More than expected
	210-219	Expected	More than expected	Expected
	220-229	Expected	Expected	Expected
	230-239	Expected	N/A	Expected
Six	200-209	Expected	Expected	Expected
	210-219	More than expected	Expected	Expected
	220-229	Expected	Less than expected*	Less than expected
	230-239	Expected	Less than expected*	Less than expected
	240-249	N/A	Less than expected*	N/A
Seven	200-209	More than expected	N/A	More than expected
	210-219	More than expected	Expected	Expected
	220-229	More than expected	Expected	Expected
	230-239	Expected	Less than expected*	Less than expected
	240-249	Expected	Met	Expected
	250-259	N/A	Met	Expected
Eight	260-269	N/A	N/A	Met
	200-209	Expected	N/A	N/A
	210-219	Expected	N/A	Expected
	220-229	Expected	Expected	Less than expected
	230-239	Less than expected	Less than expected*	Less than expected
	240-249	N/A	Less than expected*	Expected
Nine	250-259	N/A	Less than expected*	N/A
N/A indicates no RIT Block Growth Norm available or less than 10 students in group.				

# Wisconsin Revised Standards

## Overview of PK-12 Mathematics STANDARDS and Grade Band FOCUS AREAS

PK-2	3-5	6-8	9-12
CONCEPTS AND CONNECTIONS IN NUMBER AND ALGEBRA			
<b>Foundations of Number and Number Sense</b> (Number and Algebra) 1. Develop understanding of numbers by counting and working with spatial pattern, and represent quantities. 2. Develop number relationships, including comparisons, relation of one and two more or one and two less, relation of five and ten, and part-part-whole concepts.	<b>Number and Operation Sense with Whole Numbers and Decimals</b> (Number, Operations, and Algebra) 1. Develop understanding of base-ten concepts and equivalent representations, extend the base-ten numeration system to decimal numbers, and reason with multiplicative relationships. 2. Model and solve problem situations, develop and justify estimation and computation strategies, and be flexible in choosing efficient solution strategies. 3. Reason algebraically to make conjectures about relations and properties, use these understandings to develop computation strategies, and determine rules to describe functional relationships.	<b>Numeric and Algebraic Reasoning</b> (Number and Algebra) 1. Represent and communicate with real numbers in a variety of contextual problem situations, including number theory concepts. 2. Compute fluently and make reasonable estimates using rational numbers. 3. Understand and apply number properties and the concept of inverse. 4. Understand patterns, relations, and functions, as well as their connections within and outside of mathematics. 5. Model and solve a variety of mathematical and contextual problems using algebraic expressions, equations, and inequalities.	<b>Algebraic Reasoning</b> (Algebra, Number Operations, Data Analysis) 1. Reason, communicate, and compute with numeric and algebraic expressions and equations. 2. Understand functions and their representations, properties, and applications. 3. Understand, recognize, and justify solutions to problems from given algebraic applications. 4. Interpret and create algebraic models to make predictions and evaluate decisions.
<b>Foundations of Operation Sense</b> (Number, Operations and Algebra) 1. Explore the operations through solving story problems, develop computational strategies based on number relationships, and build fluency for single-digit addition facts. 2. Develop foundational ideas of algebraic reasoning through problem solving situations and demonstrate initial understandings of equality and properties and relationships of operations.	<b>Number and Operation Sense with Fractions</b> (Number, Operations, and Algebra) 1. Develop understanding of the uses of fractions and the quantities they represent, and use models, benchmarks, and equivalent forms to compare and judge the size of fractions. 2. Develop meanings for operations with fractions in everyday situations, and develop, use, and evaluate strategies to estimate computations and to model and solve problems involving fractions.		
CONCEPTS AND CONNECTIONS IN GEOMETRY AND MEASUREMENT			
<b>Foundations of Shape, Size, and Spatial Sense</b> (Geometry, Measurement, and Number) 1. Develop spatial visualization and reasoning to interpret and describe the physical world with geometric ideas. 2. Recognize measurable attributes of everyday objects, understand unit concepts and the process of measurement, and develop strategies to estimate and measure the size of objects.	<b>Shape, Size, and Spatial Sense</b> (Geometry, Measurement, and Number) 1. Visualize, describe, and reason about classes of shapes and investigate problems involving shapes, transformations, and spatial relationships. 2. Develop understanding of measurement concepts and attributes, and use and evaluate strategies to estimate and make measurements of familiar objects and aspects of our physical world.	<b>Geometric Reasoning</b> (Geometry, Measurement, and Algebra) 1. Communicate an understanding of geometric attributes and relationships, symmetry and transformations, proportionality, and the use of representational systems to describe locations and spatial relationships. 2. Use visualization, spatial reasoning, and geometric modeling to connect geometric representations to algebraic relationships. 3. Understand measurable attributes, processes, systems and units of measurement and use appropriate tools and techniques to work with both direct and indirect measurement.	<b>Geometric Reasoning</b> (Geometry, Measurement, and Algebra) 1. Select, apply and understand measuring tools and procedures. 2. Recognize attributes and properties of common geometric figures, and the relationships between them. 3. Understand the representation of geometric facts, figures, and transformations on a coordinate plane. 4. Understand the representation and application of geometric models to real-world situations.

# Mathematics Grades 6–8

Revised Wisconsin Model Academic Standards for Mathematics

Grades 6–8

v. 5.0

Focus Area 4: Understand patterns, relations, and functions, as well as their connections within and outside of mathematics.

## Learning Continuum

Learning Priorities	Grade 6	Grade 7	Grade 8
Change	Create a rule to describe the change in a numeric or geometric pattern and be able to justify its selection.	Identify and describe linear change as represented in tables, graphs, and equations.	Explore, analyze, generalize, and represent patterns of linear and non-linear change (e.g., direct and inverse variations, exponential growth and decay)
Patterns and Generalizations	Describe, recognize, and interpret representations of patterns in relevant contexts, including patterns on coordinate grids.	Select and use appropriate representations, recognizing and communicating the strengths and weaknesses of oral and written descriptions, tables, equations, and graphs.	Analyze and generalize linear and non-linear patterns in a variety of forms (e.g., tables, graphs, and equations).
Linear and Non-linear Relationships	Represent relationships between quantities using oral and written descriptions, tables, graphs and student-generated formulas.	Represent a linear function in context with oral and written descriptions, table, graph, or symbolic expression, make connections among these representations and communicating the strengths and weaknesses of each representation	Identify functions as linear or non-linear and compare and contrast their properties when the function is presented in table, graph or equation form and flexibly translate among these representations.
Interpreting Graphs	Match a realistic story to a representation on a given graph.	Create a realistic story that a given graph might represent.	Generate a variety of realistic stories to match graphical representations with various shapes.

# NCTM Focal Points

## Curriculum Focal Points and Connections for Grade 7

The set of three curriculum focal points and related connections for mathematics in grade 7 follow. These topics are the recommended content emphases for this grade level. It is essential that these focal points be addressed in contexts that promote problem solving, reasoning, communication, making connections, and designing and analyzing representations.

Grade 7 Curriculum Focal Points	Connections to the Focal Points
<p><b>Number and Operations and Algebra and Geometry:</b> Developing an understanding of and applying proportionality, including similarity</p> <p>Students extend their work with ratios to develop an understanding of proportionality that they apply to solve single and multistep problems in numerous contexts. They use ratio and proportionality to solve a wide variety of percent problems, including problems involving discounts, interest, taxes, tips, and percent increase or decrease. They also solve problems about similar objects (including figures) by using scale factors that relate corresponding lengths of the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and identify the unit rate as the slope of the related line. They distinguish proportional relationships (<math>y/x = k</math>, or <math>y = kx</math>) from other relationships, including inverse proportionality (<math>xy = k</math>, or <math>y = k/x</math>).</p>	<p><b>Measurement and Geometry:</b> Students connect their work on proportionality with their work on area and volume by investigating similar objects. They understand that if a scale factor describes how corresponding lengths in two similar objects are related, then the square of the scale factor describes how corresponding areas are related, and the cube of the scale factor describes how corresponding volumes are related. Students apply their work on proportionality to measurement in different contexts, including converting among different units of measurement to solve problems involving rates such as motion at a constant speed. They also apply proportionality when they work with the circumference, radius, and diameter of a circle when they find the area of a sector of a circle and when they make scale drawings.</p>
<p><b>Measurement and Geometry and Algebra:</b> Developing an understanding of and using formulas to determine surface areas and volumes of three-dimensional shapes</p> <p>By decomposing two- and three-dimensional shapes into smaller, component shapes, students find surface areas and develop and justify formulas for the surface areas and volumes of prisms and cylinders. As students decompose prisms and cylinders by slicing them, they develop and understand formulas for their volumes (<math>\text{Volume} = \text{Area of base} \times \text{Height}</math>). They apply these formulas in problem solving to determine volumes of prisms and cylinders. Students see that the formula for the area of a circle is plausible by decomposing a circle into a number of wedges and rearranging them into a shape that approximates a parallelogram. They select appropriate two- and three-dimensional shapes to model real-world situations and solve a variety of problems (including multistep problems) involving surface areas, areas and circumferences of circles, and volumes of prisms and cylinders.</p>	<p><b>Number and Operations:</b> In grade 4, students used equivalent fractions to determine the decimal representations of fractions that they could represent with terminating decimals. Students now use division to express any fraction as a decimal, including fractions that they must represent with infinite decimals. They find this method useful when working with proportions, especially those involving percents. Students connect their work with dividing fractions to solving equations of the form <math>ax = b</math>, where <math>a</math> and <math>b</math> are fractions. Students continue to develop their understanding of multiplication and division and the structure of numbers by determining if a counting number greater than 1 is a prime, and if it is not, by factoring it into a product of primes.</p>
<p><b>Number and Operations and Algebra:</b> Developing an understanding of operations on all rational numbers and solving linear equations</p> <p>Students extend understandings of addition, subtraction, multiplication, and division, together with their properties, to all rational numbers, including negative integers. By applying properties of arithmetic and considering negative numbers in everyday contexts (e.g., situations of owing money or measuring elevations above and below sea level), students explain why the rules for adding, subtracting, multiplying, and dividing with negative numbers make sense. They use the arithmetic of rational numbers as they formulate and solve linear equations in one variable and use these equations to solve problems. Students make strategic choices of procedures to solve linear equations in one variable and implement them efficiently, understanding that when they use the properties of equality to express an equation in a new way, solutions that they obtain for the new equation also solve the original equation.</p>	<p><b>Data Analysis:</b> Students use proportions to make estimates relating to a population on the basis of a sample. They apply percentages to make and interpret histograms and circle graphs.</p> <p><b>Probability:</b> Students understand that when all outcomes of an experiment are equally likely, the theoretical probability of an event is the fraction of outcomes in which the event occurs. Students use theoretical probability and proportions to make approximate predictions.</p>



**SCHOLASTIC** Teachers ▾ Parents ▾ Kids ▾ Administrator ▾ Librarians ▾ More ▾ Sign In ▾ My Account ▾

**Teachers** **TEACHING RESOURCES** **STUDENT ACTIVITIES** **BOOKS & AUTHORS** **CONNECT**

New & Noteworthy **Teacher Book Wizard™** Book List Exchange

**Teacher Book Wizard™**

"Finding books at the right levels can open up new worlds for students."

MI Won Kim  
Teacher, Grade 4

**Your Reading Level System:**

☒ Grade Level Equivalent ☐ Lexile Framework ☐ Guided Reading ☐ DRA **Set**

**BookAlike™** **Quick Search** **Leveled Search** **Help** **Comments?**

**Quick Search** **Know what you're looking for? Find it fast.**

Enter author, title, or keyword

**Search**

**Leveled Search** **Customize by reading and interest level, subject, genre, and more.**

**Go**

**BookAlike™** **Find similar books at the reading level you need.**

Enter book title

Use slider for desired level:

same reading level

Easier  -3  -2  -1  0  1  2  3 Harder

**Find Similar Books**

**Find Books!** **Just the Right Books!**

- Level your books
- Find booktalks, author info & lesson plans
- Create and share your book lists

Take the **Teacher Book Wizard Tour**

**New Widget** **Get It Now**

Teacher Book Wizard

BookAlike

**Find a Book:** Four simple steps. One custom reading list.

**My Reading List (0)** **Quick Search** Title, Author or Keyword **Search**

**LEXILE Find the right BOOK for YOU!**

The "Find a Book" Web site is a quick and easy way to search the Lexile Book Database for titles at your reading (Lexile) level. Whether you're reading for school or for pleasure, you can use this site to build a custom reading list on the subjects that interest you the most.

**Enter Lexile** **Select Interests** **Search Results** **My Reading List**

**My Lexile measure is:** Please enter either a Lexile measure or range.

Measure:  L

Range:  L to  L

[Where can I find my Lexile measure?](#)

**Continue**

**I don't know my Lexile measure:** Please enter your grade level and check one of the options below.

My current grade is:  Kindergarten ▾

☐ I find the books I read for school difficult.

☐ I find the books I read for school challenging, but not difficult.

☐ I find the books I read for school easy.

**Continue**

**What's New?**

**Just Measured:**

**Gray Wolves**  
by Goldish, Meish  
**Lexile: 810L**

**Resources**

**The Lexile Framework for Reading**

**Find out about the North Carolina state "Find a Book" summer reading initiative**

**For Readers**  
Learn how to select the "right" books based on your ability.

**For Educators**  
Learn how to make custom book lists for your students.

**For Librarians**  
Learn how Lexile measures support reading programs.

Copyright © 2009 MetaMetrics, Inc. All rights reserved. [Privacy Policy](#) [Disclaimer](#) [www.lexile.com](#)

Send us [questions](#) or [feedback](#)

<http://fab.lexile.com/>

# GPS-MAP Wikispace

GPS-MAP - home

Kari\_Augustine · My Account · Help · Sign Out · wikispaces

home page discussion history notify me

## GPS - Guiding Professionals in Schools

Join us as we use Measures of Academic Progress to Improve Instruction for all Students!

Summer **MAP Conference** Handouts

**NEW!** [2008 Normative MAP Data](#)

- California ELAR (Electronic Learning Assessment Resources) [Description of MAP](#) -- Excellent Summary

### Resources for Professional Development:

- [Data Quality Campaign](#): Using Data to Improve Student Achievement
  - [Tapping into the Power of Longitudinal Data](#): The Need for Growth Models
  - [Information Won't Be Used if No One Can See It](#): Raising the Visibility of Critical Issues with Longitudinal Data
- "[Conjuring Cut Scores: How it Distorts Our Picture of Student Achievement](#)," American Educator (AFT) Includes a comparison of MAP items with items from a sampling of state test items in the "proficient" range.
- [Wisconsin Alignment Study](#) - projecting WKCE performance based on MAP scores Spring or Fall.
- "[Doing Growth Right](#)," Center for Public Education (an archived chat) (12-07)
- [NWEA 2008 Member's Seminar Handouts and Materials](#)
- [Midwest Users' Group Handouts](#) (2007)

Home  
NWEA Links  
MAP ~ Primary  
Reading ~ Lexile  
DesCartes  
MAP Math  
Reading Strategies  
Academic Vocab.  
Handouts & PPTs  
MAP Training  
Parent Outreach  
MAP Practice  
Assessment  
Setting Goals  
MW Users' Group  
ACT's EPAS  
Kari's Pages

<http://gps-map.wikispaces.com/>