

# Data Use Professional Development Series

301

Day 6

[www.ride.ri.gov](http://www.ride.ri.gov)

[www.amplify.com](http://www.amplify.com)

The contents of this slideshow were developed under a Race to the Top grant from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

Rhode Island educators have permission to reproduce and share the material herein, in whole or in part, with other Rhode Island educators for educational and non-commercial purposes.

© 2013 the Rhode Island Department of Education and Amplify Education, Inc.



# Welcome back!

# Agenda

## Today

---

Welcome/Overview

Implementation Progress

Data Questioning

Assessment Literacy

## Break

Creating Checks for Understanding

Data Conversations with Students

## Lunch

Using Data to Create Flexible Small Groups for Differentiation

Aggregate Data and Sub-populations

## Break

Intersection Analysis

Implementation Planning

Wrap-Up/Evaluations

# Objectives

By the end of day 6, SDLTs will be able to:

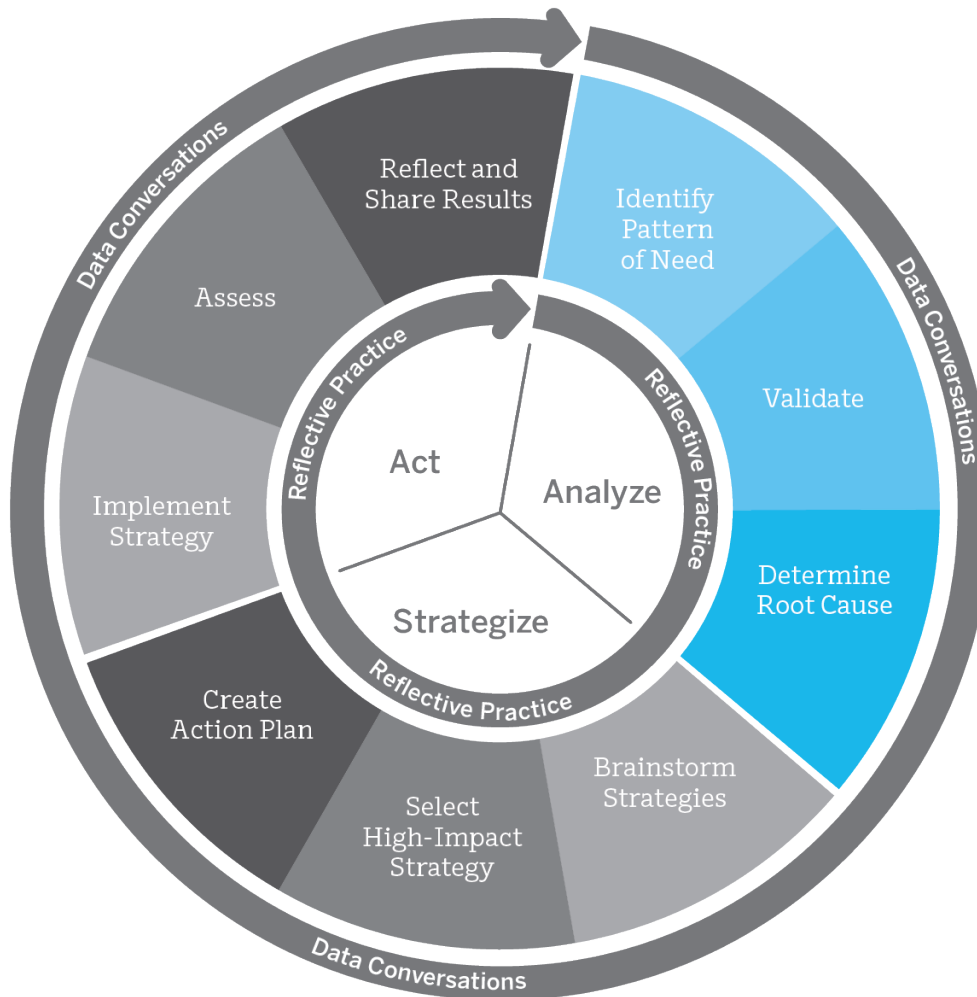
- Identify impacts of their Data Use implementation.
- Articulate questions appropriate to various data sources.
- Evaluate assessment items and create checks for understanding based on alignment to standards and Depth of Knowledge.
- Use data to create flexible small groups for differentiation.
- Engage in Data Conversations with students.
- Articulate how aggregate and disaggregated data can be used in schools.
- Articulate a plan for ongoing Data Use implementation.

# Implementation Progress

1 2 3 4 5 <sup>day</sup> 6 7 8 9 10

- What were the results of the Cycle of Inquiry based on your Implementation Progress data from Day 4?
- What role did our On-Site Visit play in advancing Data Use with teachers?

# Cycle of Inquiry



# Data Analysis Questions

- What questions can you ask of this particular data set?
- Which of these questions can you ask of *all* data sources?





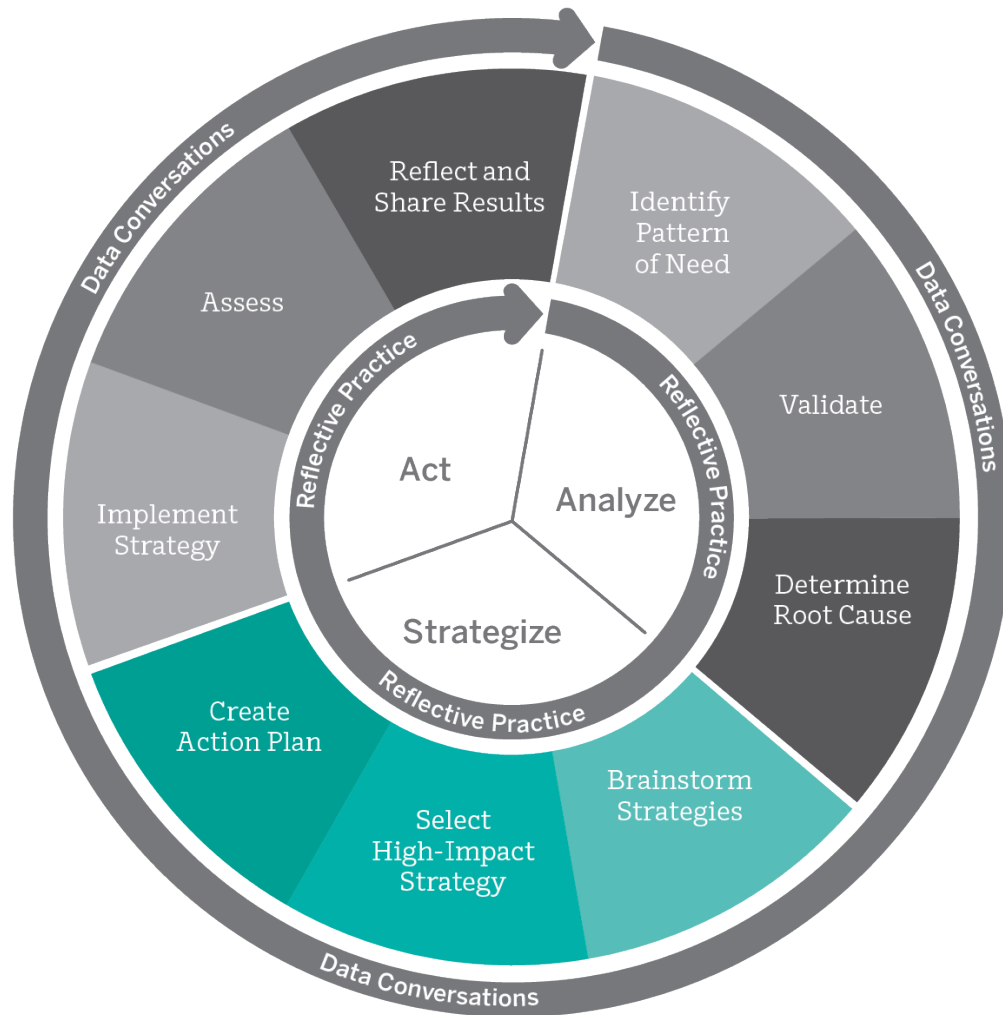
# Applying Data Analysis Questions



**Information**



# Cycle of Inquiry



# Assessment Literacy

- Evaluating Assessments
- Creating Assessments



# Assessment Literacy

## Summative:

- Assessment OF learning

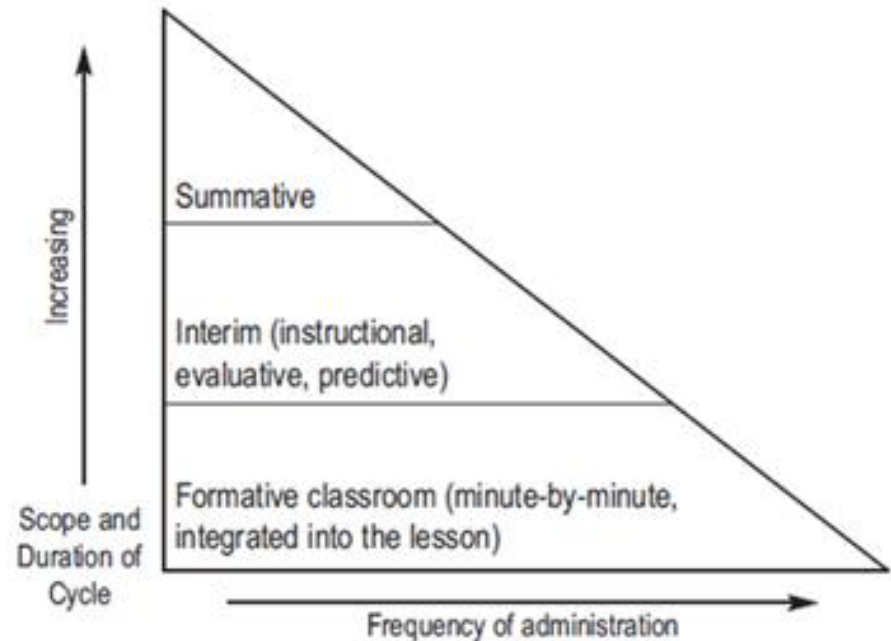
## Interim:

- Assessment OF or FOR learning

## Formative:

- Assessment FOR learning

**Figure 1. Tiers of Assessment**



# Assessment Literacy

## Dimensions of Formative Assessment:

- Clearly articulated **learning progressions**
- Identified **learning goals** and success criteria
- **Descriptive feedback**
- **Self- and peer-assessment**
- **Collaboration**

# Assessment Literacy



# Evaluating Assessments

- Alignment to Standards
- Cognitive Complexity
- Data to inform instruction

# Evaluating Assessment Items

RL.6.2 Key Ideas and Details: Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

Item	Skill/concept measured	DOK	Part/All of standard?
What are the themes of <i>Little Women</i> ?	Determine a theme or central idea of a text?	2	Part
Write a brief plot summary of <i>Little Women</i> , explaining the themes revealed throughout the text using specific examples from the text.	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text	3	All



# Evaluating Assessment Items

## Cognitive Complexity: Webb's Depth of Knowledge

### Level 1: Recall

- identify, state, list, define, recognize, use, measure

### Level 2: Skill/Concept

- classify, organize, estimate, compare, infer, summarize

### Level 3: Strategic Thinking

- generalize, draw a conclusion, support, hypothesize, investigate

### Level 4: Extended Thinking

- make connections, synthesize, prove, analyze, design and carry out the project

# Summary

- Impacts of the work look different at different schools.
- Understanding the best questions to ask of various data sources and types can help facilitate productive data meetings and Data Conversations.
- It is important for educators to plan how they will assess student learning while creating their Instructional Action Plan.



Break



# Creating an Effective Check for Understanding

- Measure only one standard, or one aspect of a standard.
- Determine the type of item that will be used.
- Keep in mind the format of the item.
- Design a question that helps diagnose common misperceptions on the topic.
- Use varying levels of cognitive complexity (DOK).
- Be aware of time constraints.
- Encourage student effort.

# Creating Checks for Understanding



# Data Conversations with Students



# Why Include Students?

“Students are motivated to try harder, risk failure, and set higher standards for themselves when they are involved in setting goals and monitoring and evaluating their own performance.”

(O’Neill, 2004)

# Data Conversations with Students

You and Ms. Jackson both teach Antonio. In Ms. Jackson's class, Antonio demonstrates good behavior and is performing well academically. In your class, Antonio has become disruptive and his performance on weekly quizzes has declined over the last month.

What kind of Data Conversation could you have with Antonio?

What kinds of questions could you ask?



# Planning for Student Data Conversations Using Assessment Data

1. Explain expectations and assessment criteria.
2. Provide feedback to students that is timely, specific, well-formatted, and constructive.
3. Provide tools that help students learn from feedback.
4. Use students' data analysis to guide instruction.

IES PRACTICE GUIDE:

*Using Student Achievement Data to Support Instructional Decision Making*

# Data Conversations with Students: Goal Setting

- Use *Student Goal Setting Sheets*
- Plan your Data Conversation:
  - What the purpose of the Data Conversation?
  - What is the first question you will ask?
- Ask questions using Positive Presumptions
  - Open-ended questions to promote thinking and reflection
- Guide students toward Goal Setting
- Paraphrase as you go

# Planning for Student Data Conversations

- How can Student Data Conversations enhance what is already happening at your school?
- How can Student Data Conversations impact instructional decisions – for teachers and for students?
- What might interfere with having students analyze their own data and set learning goals?

# Summary

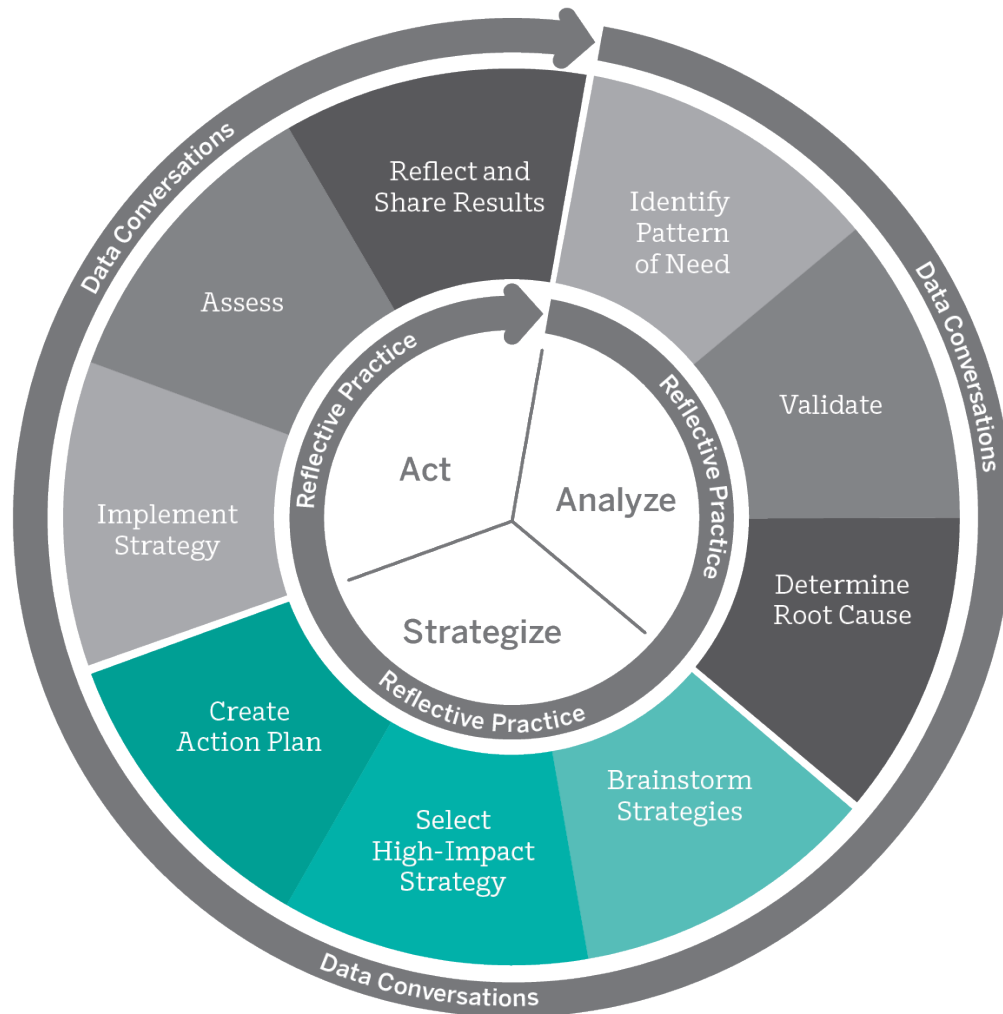
- Data Conversations can be used in various contexts and with multiple stakeholders, including students, to foster transparency.
- Evaluating and/or creating assessment items or checks for understanding require alignment with standards and appropriate cognitive complexity.
- Considering the cognitive complexity of items can help educators provide more challenging tasks for students and give educators a more nuanced view of student achievement.



# Lunch



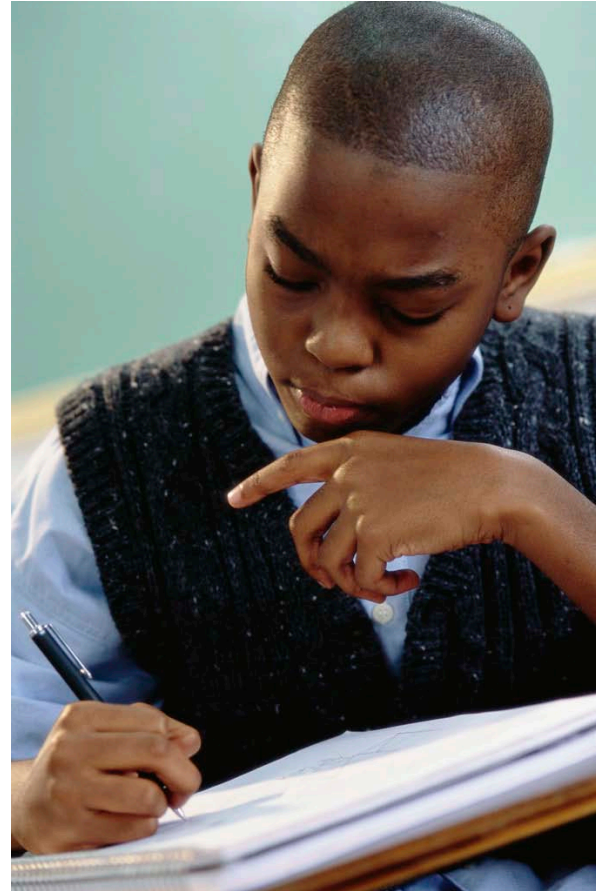
# Cycle of Inquiry



# Using Data For Flexible Grouping

Types of flexible small groups:

- Short Term
- Long Term
- Spontaneous



# Using Two Data Sets to Create Groups for Differentiation

## 9-Grid Matrix

Data Point A:	Level 3			
	Level 2			
	Level 1			
	Level 1	Level 2	Level 3	
	Data Point B:			



# Aggregate Data

## What is it?

“Student performance data reported at the largest, aggregate-group level, such as by grade level and content area for a school, district, or state.” (p. 146)

## Why is it important?

“It paints a broad brush picture of student achievement overall” and helps us “understand how students in their school perform in comparison to students in similar schools.”(p. 146)

Love, N., Stiles, K.E., Mundry, S., & DiRanna, K. (2008). The Data Coach’s Guide to Improving Learning for All Students

# Disaggregated Data

## What is it?

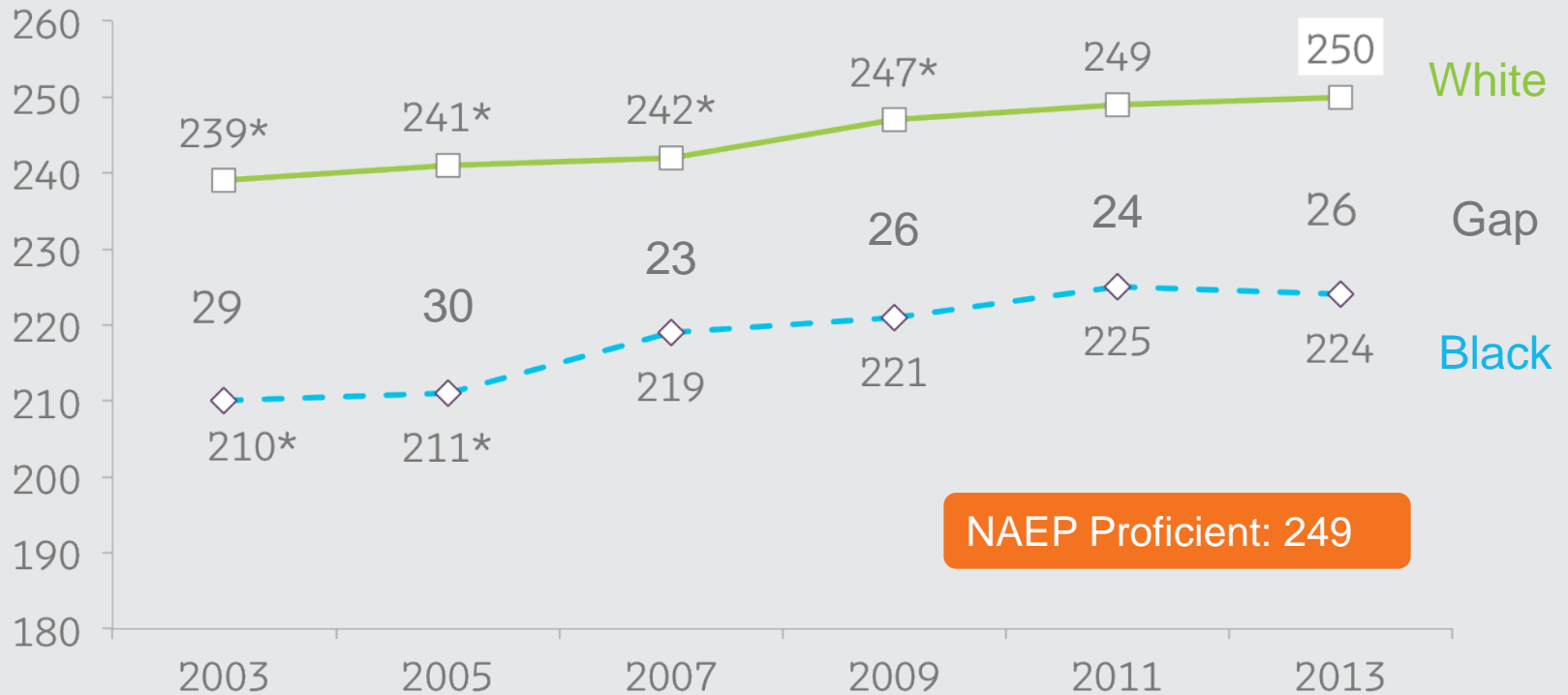
- Disaggregated data is the presentation of data broken down into segments of the student population instead of the entire population.
- Some common ways to disaggregate data include by: gender, grade level, enrollment in special programs, ethnicity, school or class, socioeconomic status, year of entry into district.

## Why is it important?

Disaggregation can help educators at all levels reveal critical issues that might otherwise remain invisible.

# Disaggregated Data – RI NAEP Results

## Mathematics – Grade 4 Average Scale Scores



\* Significantly different ( $p < .05$ ) from 2013



**Aggregate Report**

[Save Report as a PDF File]

The aggregate report below is displaying student level data on the following measures: On-track to Graduation percentage, Attendance Percentage, Number of Suspensions, Years Over-age and NECAP math and reading scores.

*Note: The indicators below were processed on 11/6/2013 3:01:34 AM. When generating the indicators, RIDE uses the most current data available to RIDE which has been submitted by your LEA.*

Indicator	Low Risk	Some Risk	At Risk	High Risk
On Track Percentage	92.91% (944)	3.64% (37)	1.97% (20)	1.48% (15)
Attendance Percentage	92.52% (940)	2.56% (26)	1.48% (15)	3.44% (35)
Number of Suspensions	98.62% (1002)	1.08% (11)	0.20% (2)	0.20% (2)
Years Over Age	86.22% (876)	7.09% (72)	4.53% (46)	2.17% (22)
Math Score	76.08% (773)	12.80% (130)		11.12% (113)
Reading Score	88.48% (899)	7.78% (79)		3.74% (38)

Low Risk
Some Risk
At Risk
High Risk

[Export Data to Excel]

SASID	FirstName	LastName	Student Grade	On Track Percentage	Attendance Percentage	Number of Suspensions	Years Over-Age	Math Score	Reading Score
			12	85	100	0	1.7	1142	1152
			9	37	90	0	1.7	845	857
			10	64	95	0	1.6	849	850
			12	76	80	0	1	818	1148
			10	89	100	0	0.7	861	860
			10	88	100	0	0.7	858	865
			10	96	100	0	-0.2	849	856
			9	93	100	0	-0.3	836	836
			10	71	90	0	0.5	829	827
			9	87	100	0	-0.7	809	809
			12	94	100	0	0.4	1138	1144
			12	96	100	0	0.4	1146	1148
			12	98	100	0	0.1	1146	1171



## Disaggregate Report

Use the filters below to generate a disaggregate report

### Grade(s):

All Grades  6  7  8  9  10  11  12

### Demographic(s):

Gender  M  F      Free/Reduced Lunch  Y  N      Section 504 Status  Y  N  
IEP Status  Y  N      LEP Status  Y  N

Race  American Indian or Alaska Native  Asian  Black or African American  Hispanic/Latino  Native Hawaiian or Other Pacific Islander  White  Two or more races

Show Data

## Disaggregate Report

 [Save Report as a PDF File]

Report results filtered by Grade(s): [9] Demographic(s) [Free/Reduced Lunch-N]  
[\[Show Filter Options\]](#)

The aggregate report below is displaying student level data on the following measures: On-track to Graduation percentage, Attendance Percentage, Number of Suspensions, Years Over-age and NECAP math and reading scores.

*Note: The indicators below were processed on 11/6/2013 3:01:34 AM. When generating the indicators, RIDE uses the most current data available to RIDE which has been submitted by your LEA.*

Indicator	Low Risk	Some Risk	At-Risk	High Risk
On Track Percentage	96.67% (203)	1.90% (4)	0.48% (1)	0.95% (2)
Attendance Percentage	91.90% (193)	4.76% (10)	0% (0)	3.33% (7)
Number of Suspensions	100% (210)	0% (0)	0% (0)	0% (0)
Years Over Age	67.14% (141)	13.81% (29)	14.29% (30)	4.76% (10)
Math Score	89.05% (187)	6.19% (13)		4.76% (10)
Reading Score	93.33% (196)	5.71% (12)		0.95% (2)

## Disaggregate Report

 [Save Report as a PDF File]

Report results filtered by Grade(s): [9] Demographic(s): [Free/Reduced Lunch-Y]  
[\[Show Filter Options\]](#)

The aggregate report below is displaying student level data on the following measures: On-track to Graduation percentage, Attendance Percentage, Number of Suspensions, Years Over-age and NECAP math and reading scores.

*Note: The indicators below were processed on 11/6/2013 3:01:34 AM. When generating the indicators, RIDE uses the most current data available to RIDE which has been submitted by your LEA.*

Indicator	Low Risk	Some Risk	At Risk	High Risk
On Track Percentage	65.85% (27)	17.07% (7)	14.63% (6)	2.44% (1)
Attendance Percentage	78.05% (32)	7.32% (3)	0% (0)	14.63% (6)
Number of Suspensions	100% (41)	0% (0)	0% (0)	0% (0)
Years Over Age	63.41% (26)	9.76% (4)	2.44% (1)	24.39% (10)
Math Score	43.90% (18)	34.15% (14)		21.95% (9)
Reading Score	73.17% (30)	19.51% (8)		7.32% (3)

# Summary

- Differentiating for small groups of students can mean flexibly adjusting core instruction for clusters of students within a Cycle of Inquiry.
- Aggregate data provides a look at the big picture, while disaggregated data helps us drill down into sub-groups and refine our Patterns of Need and follow-up questions.
- It is important to be prepared for conversations about sub-groups when disaggregating large data sets.





# Break

# Triangulation and Intersection Analysis

**Triangulation** is “analyzing other data to illuminate, confirm, or dispute what you learned through your initial analysis — you will be able to identify your problem with more accuracy and specificity.”

Boudett, K. P., City, E. A., Murnane, R. J. (2007) [Data Wise: A Step-by-Step Guide to Using Assessment Results to Improve Teaching and Learning.](#)

**Intersection Analysis** is investigating the different dimensions of data to “look more closely and understand each piece of information we gather about a school.”

Bernhardt, V. L. (2004). *Data Analysis for Continuous School Improvement.* Larchmont, NY: Eye on Education

# Intersection Analysis

## Demographic

Attendance, grade level, ethnicity, gender, etc.

## Student Learning

Standardized test results, GPA, curriculum assessments

## Perception

Surveys, questionnaires, observations

“People act in congruence with what they believe, perceive, or think about different topics.” (Bernhardt)

## School Process

Data that describe instructional practices, strategies, programs, scheduling

Bernhardt, V. L. (2004). [Data Analysis for Continuous School Improvement](#)

# Two-Way Intersections

Intersections	Can Tell Us
Demographics by Student Learning	If subgroups of students perform differently on student learning measures
Demographics by Perceptions	If subgroups of students are experiencing school differently
Demographics by School Processes	If all students are represented in the different programs offered by the school
Student Learning by School Processes	If different programs are achieving similar student learning results
Student Learning by Perceptions	If student perceptions of the learning environment have an impact on their results
Perceptions by School Processes	If people are perceiving programs and processes differently



# Three-Way Intersections

Intersections	Can Tell Us
Demographics by Student Learning by Perceptions	The correlation between demographic factors and attitudes about student learning
Demographics by Student Learning by School Processes	The relationship between different subgroups of students participating in specific programs, as measured by subgroup learning results
Demographics by Perceptions by School Processes	What programs different students like best, or the relationship among different programs and student attitudes
Student Learning by School Processes by Perceptions	The relationship between the processes students prefer and learning results



# Four-way Intersections

Intersections	Can Tell Us
Demographics by Student Learning by Perceptions by School Processes	What processes or programs have the strongest relationship with different subgroups of students' learning according to student perceptions and as measured by student learning results

# Using Questions to Drive Intersection Analysis

For each intersection:

- Generate a question that targets the heart of each intersection.
- Determine what data we would need to answer these questions.
- Be ready to share your table's best data question.

# Intersection Analysis

## Action Plan

- Create a plan for an Intersection Analysis you can conduct at your school.
  - What is your question?
  - Is it a two-way, three-way, or four-way intersection?
  - What data will you analyze?
  - What additional supports will you need?
  - What stakeholders might be interested in the results?



# Summary

- Intersection Analysis is useful when examining large aggregate data sets.
- Intersection Analysis can be used when tackling high-stakes school- and district-level decisions.

# Implementation Planning

# Days 6, 7 & 8

## Day 4

---

Adaptive Change and Collaborative Structures  
Inference Validation  
Correlation/Causation  
Triangulation  
Effort/Impact  
Techniques for Data Conversations:  
Paraphrasing  
Planning Conversations  
On-Site Visits

## Today

---

Welcome/Overview  
Implementation Progress  
Data Questioning  
Assessment Literacy  
**Break**  
Creating Checks for Understanding  
Data Conversations with Students  
**Lunch**  
Using Data to Create Flexible Small Groups for Differentiation  
Aggregate Data and Sub-populations  
**Break**  
Intersection Analysis  
Implementation Planning  
Wrap-Up/Evaluations

## Day 7: On-Site Visit

---

Agenda to be determined with your coach

## Day 8: Partial list of topics

---

Visual Data Displays  
Action Research and Sustainability Planning  
Vertical and Horizontal Alignment  
Data Conversations with Parents  
Revisiting Data Inventory



# Reflection

# Day 6 Session Evaluation

[www.surveymonkey.com/s/pdsessioneval](http://www.surveymonkey.com/s/pdsessioneval)



# Wrap Up

