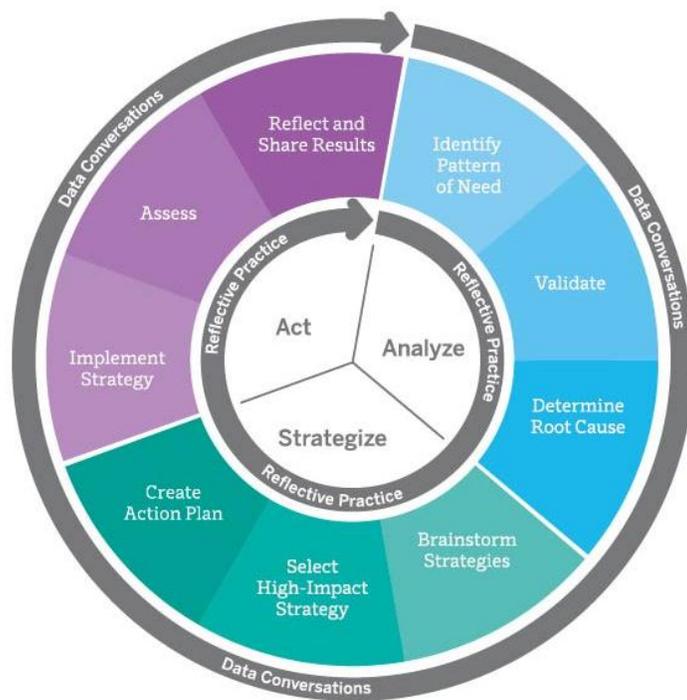




Day 6: 301 Participant Resources

*Data Use Professional Development Series
Rhode Island Department of Education*



www.ride.ri.gov

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Implementation Progress: Cycle of Inquiry

Analyze

The following is a list of possible data sources related to your implementation progress. Analyze your implementation progress using the Cycle of Inquiry with one or more of these data sources:

Data Conversation Log

Meeting notes

Turnkey Log

Agendas

Survey data

Observations

Reflection data

Data Source

Pattern of Need

After analyzing the data source(s) what evidence-based Pattern of Need can you identify?

Potential Actionable Cause

What is a Potential Actionable Cause for the Pattern of Need above?

Strategize

Brainstorm strategies that could be implemented to address this Pattern of Need.

Action Plan

Create an action plan using one or more of the brainstormed strategies.

Plan
Who will be leading and/or participating?
When? Where? How Long?
What resources will you need?
What data will you collect? How will you assess?

Act

After implementing Action Plan:

Assessment results

Next Steps

Exercise 2.8: Data Analysis Questions

Data Set _____

	What questions can you ask of this data set?	Why is this question important to ask?
1		
2		
3		
4		
	What questions can you ask of all data sources?	Why is this question important to ask?
5		
6		
7		
8		

Exercise 2.9: Data Questioning Protocol

Instructions

Using a colleague's data set, record questions and answers to two kinds of data analysis questions: those that can be asked of all data sources, and those that are pertinent to a specific data set. After applying the questions to the colleague's data set and recording the results, identify a Pattern of Need and a Potential Actionable Cause. Please cover up student information before passing the data set to a colleague.

Questions that can be asked of all Data Sources:

Question	Answer

Questions that can be asked of my colleague's Data Set:

Question	Answer

Pattern of Need

Potential Actionable Cause:

Additional questions for my colleague regarding this data set:

Suggested next steps:

Exercise 2.9: Data Conversation Reflection Sheet

Instructions

Upon completion of the Data Conversations that took place between you and your colleague, answer the following reflection questions.

How did having a colleague analyze your data set alter your thinking? Did it reveal anything new?

Which questions helped you and your colleague dig deeper into the data sets?

How will this experience impact your data analysis practice in the future?

Exercise 3.6: Assessment Descriptions

Norm-referenced Assessments

When the results of a standardized or a pre-made assessment are reported in the form of a percentile rank, the assessment has been normed. This occurs when a representative pool of students takes the assessment before the assessment is widely administered. These scores are distributed evenly along a bell curve, creating a “normal” group of students. Students’ performances are compared with the performance of the “normal” group.

Criterion-referenced Assessments

Criterion-referenced assessments are designed to measure a student’s level of mastery on a set of criteria, such as the Rhode Island state standards on the NECAP. Used to inform instruction and measure outcomes, criterion-referenced tests (CRTs) can be educator, district or state designed. CRTs are frequently used at the state level as end-of-course exams and year-end mastery assessments. A variety of item types can be used to assess students’ knowledge, skills, and abilities when using a CRT.

Universal Screeners

Universal screeners are usually administered three times yearly to proactively identify students who may be at risk of failure. Screeners are typically short, targeted on specific skills, and designed to identify or predict students who may be at risk. Once the level of risk is determined by the screener, appropriate interventions can be implemented and monitored.

Common Assessments or Tasks

Common assessments are given at specific points in the school year. They are assessments that are collaboratively designed by grade-level or course teams and evaluate the knowledge of students as they progress through the curriculum. The design tends to mirror district and state assessments.

Formative Classroom Assessments

Classroom formative assessment is a set of practices and strategies that enable educators to gather evidence about student learning and make immediate alterations to their instructional practice. This evidence is also used as a feedback mechanism for students to improve their own learning.

Summative Classroom Assessments

Summative classroom assessments are given periodically to gather evidence about student learning at a particular point in time. Summative classroom assessments are generally used as part of the grading process. Some examples are end-of-unit or chapter tests, end-of-term or semester exams, and essays or research papers.

Portfolio Assessments

Portfolios, a collection of individual student work, are generally used to document student learning within a specific, extended time period. While there are two major groups of portfolios used in education, product and process, there are many varieties of portfolio within each category, including Achievement, Assessment, Celebration, Competence, Growth, Performance, Project, and Showcase portfolios. Each portfolio type has specific objectives and meets specific needs.

Performance Tasks

These are items or assessments that require students to apply their understanding to complete a demonstration, performance, or product that can be judged on clear performance criteria.

Exercise 3.6: Which Assessment Could Be Used?

Directions: Read each situation. Decide which assessment tool would yield the most meaningful data for the situation. There may be more than one appropriate tool. In the space provided, explain the reason for selecting each assessment.

Assessment Types

Formative Classroom Assessment
Common Assessment or Task
Criterion-Referenced Assessment
Summative Classroom Assessment
Performance Task
Portfolio Assessment
Universal Screener
Norm-Referenced Assessment

As first-quarter parent report card conferences approach, a teacher wants to prepare her sixth grade students to discuss their writing progress with the parents.

As a critical skill to learning social studies content, a social studies teacher is focusing on improving students' comprehension of informational text. The teacher would like to measure the students' progress during the year and include this as a Student Learning Objective.

A ninth grade geography class has viewed a video about cultural diffusion. Before the teacher links that topic to cultural diasporas, she wants to ensure the students have a firm understanding of cultural diffusion.

It is the beginning of the school year and the first-grade team needs to assess skill levels of students for grouping purposes.

It is the point in the year when the district wants to determine how well students are progressing toward meeting standards.

A teacher has witnessed her 12th grade physics students recall their knowledge readily. Now she wants to see them use that knowledge by creating a model to represent a physics concept.

A sixth grade social studies teacher is approaching the end of a unit on the Civil War and wants to assess student learning as a whole.

Exercise 3.6: Which Assessment Could Be Used?

Directions: Read each situation. Decide which assessment tool would yield the most meaningful data for the situation. There may be more than one choice. In the space provided, explain the reason for selecting each assessment.

Assessment Types

Formative Classroom Assessment
Common Assessment or Task
Criterion-Referenced Assessment
Summative Classroom Assessment
Performance Task
Portfolio Assessment
Universal Screener
Norm-Referenced Assessment

As first-quarter parent report card conferences approach, a teacher wants to prepare her sixth grade students to discuss their writing progress with the parents.

Portfolio: To show growth over time with a product such as writing, this is a viable choice if they have been using the same rubric to assess the writing.

As a critical skill to learning social studies content, a social studies teacher is focusing on improving students' comprehension of informational text. The teacher would like to measure the students' progress during the year and include this as a Student Learning Objective.

Common Assessment: The district common reading assessment is designed to reflect grade-level proficiency in reading comprehension.

A ninth grade geography class has viewed a video about cultural diffusion. Before the teacher links that topic to cultural diasporas, she wants to ensure the students have a firm understanding of cultural diffusion.

Formative Classroom Assessment: Any type of quick assessment, such as Thumbs Up/Thumbs Down, Think-Pair-Share, Quick Write, etc., where the teacher can see and hear student feedback, helps guide classroom decision-making, making classroom formative assessment a good selection.

It is the beginning of the school year and the first-grade team needs to assess skill levels of students for grouping purposes.

Universal Screener: The team is assessing the entire grade for grouping purposes (during one of the key times of year screeners are given). Additionally, universal screeners expose learning gaps, and some can be quick to administer and easy to score.

A teacher has witnessed her 12th grade physics students recall their knowledge readily. Now she wants to see them use that knowledge by creating a model to represent a physics concept.

Performance: The key here is creating a model. The teacher already knows the students can perform recall tasks and wants them to stretch beyond the basics by using their knowledge in meaningful ways.

It is the point in the year when the district wants to determine how well students are progressing toward meeting standards.

Common Assessment: A district mandate, the common assessment is a measure of student progress toward meeting standards.

A sixth grade social studies teacher is approaching the end of a unit on the Civil War and wants to assess student learning as a whole.

Summative Classroom Assessment: A summative classroom assessment is meant to assess student learning over a particular point in time, either a unit or grading period.

Exercise 3.7: Webb's Depth of Knowledge

Level 1: Recall

- Requires recall of fact, information, or procedure
- Identify, state, list, define, recognize, use, measure

Level 2: Skill/Concept

- Requires engagement in mental processing beyond a habitual response. Students use information/conceptual knowledge to make decisions as to how to approach the problem or activity.
- Classify, organize, estimate, compare, infer, summarize

Level 3: Strategic Thinking

- Requires reasoning, developing a plan, following a sequence of steps, some complexity, and more than one possible answer
- Generalize, draw a conclusion, support, hypothesize, investigate

Level 4: Extended Thinking

- Requires an investigation, time to think and process multiple conditions of the problem
- Make connections, synthesize, prove, analyze, design, carry out

It's not always about the verb!

Describe one cause of the War of 1812.

Describe the similarities between the War of 1812 and the American Civil War.

Describe the impact the War of 1812 and the American Civil War have had on modern-day America.

Exercise 3.7: Webb’s Depth of Knowledge

Standard	Question	DOK												
<p>RL.8.2 Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.</p>	<p>Which lines from Selection 2 portrays the theme of the poem?</p> <ol style="list-style-type: none"> “Drowned, but it was wrong: Icarus Had swum away, coming at last to the city” “They would have answered with a shocked, uncomprehending stare” “Can the genius of the hero fall To the middle stature of the merely talented” “Constructs small wings and tries to fly To the lighting fixture on the ceiling” 													
<p>RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.</p>	<p>Constructed-Response Item: In Selection 3, evaluate the claim that time cloaking has practical applications. Be sure to consider how scientists assess the possibilities for future use and what shortcomings might be evident. Cite strong and thorough textual evidence to support your answer.</p>													
<p>06.EE.01 Write and evaluate numerical expressions involving whole-number exponents.</p>	<p>Consider the following expression: $2 + 3^2$ Evaluate the expression.</p>													
<p>05.NF.03 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers (e.g., by using visual fraction models or equations to represent the problem).</p>	<p>This table shows the number of students in different classes who are in the math club.</p> <p style="text-align: center;">Students in Math Club</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Class</th> <th>Boys</th> <th>Girls</th> </tr> </thead> <tbody> <tr> <td>Mrs. Smith</td> <td>3</td> <td>4</td> </tr> <tr> <td>Ms. Jones</td> <td>4</td> <td>6</td> </tr> <tr> <td>Mr. Brown</td> <td>3</td> <td>4</td> </tr> </tbody> </table> <ol style="list-style-type: none"> What fraction of students in the math club are boys in Mrs. Smith’s class? What fraction of the students in the math club are girls? Some more girls joined the math club, but no more boys joined. The number of girls in the math club is now $\frac{2}{3}$ of the total number of members. How many more girls joined the math club? Show your work or explain how you know. 	Class	Boys	Girls	Mrs. Smith	3	4	Ms. Jones	4	6	Mr. Brown	3	4	
Class	Boys	Girls												
Mrs. Smith	3	4												
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Mr. Brown	3	4												

Exercise 3.7: Webb’s Depth of Knowledge Response Guide

Standard	Question	DOK												
<p>RL.8.2 Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.</p>	<p>Which lines from Selection 2 portrays the theme of the poem?</p> <p>a. “Drowned, but it was wrong: Icarus Had swum away, coming at last to the city”</p> <p>b. “They would have answered with a shocked, uncomprehending stare”</p> <p>c. “Can the genius of the hero fall To the middle stature of the merely talented”</p> <p>d. “Constructs small wings and tries to fly To the lighting fixture on the ceiling”</p>	2												
<p>RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.</p>	<p>Constructed-Response Item: In Selection 3, evaluate the claim that time cloaking has practical applications. Be sure to consider how scientists assess the possibilities for future use and what shortcomings might be evident. Cite strong and thorough textual evidence to support your answer.</p>	3												
<p>06.EE.01 Write and evaluate numerical expressions involving whole-number exponents.</p>	<p>Look at this expression: $2 + 3^2$ What is the value of the expression?</p>	1												
<p>05.NF.03 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers (e.g., by using visual fraction models or equations to represent the problem).</p>	<p>This table shows the number of students in different classes who are in the math club.</p> <p style="text-align: center;">Students in Math Club</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Class</th> <th>Boys</th> <th>Girls</th> </tr> </thead> <tbody> <tr> <td>Mrs. Smith</td> <td>3</td> <td>4</td> </tr> <tr> <td>Ms. Jones</td> <td>4</td> <td>6</td> </tr> <tr> <td>Mr. Brown</td> <td>3</td> <td>4</td> </tr> </tbody> </table> <p>1. What fraction of students in the math club are boys in Mrs. Smith’s class?</p> <p>2. What fraction of the students in the math club are girls?</p> <p>3. Some more girls joined the math club, but no more boys joined. The number of girls in the math club is now $\frac{2}{3}$ of the total number of members. How many more girls joined the math club? Show your work or explain how you know.</p>	Class	Boys	Girls	Mrs. Smith	3	4	Ms. Jones	4	6	Mr. Brown	3	4	3
Class	Boys	Girls												
Mrs. Smith	3	4												
Ms. Jones	4	6												
Mr. Brown	3	4												

Exercise 3.7: Assessment Review

Examine your own assessment and identify the standards assessed and Depth of Knowledge of the questions. Record here.

Standard	Question	DOK
Additional Assessment Item: Create one additional assessment item that aligns with a standard and a specific DOK level. Consider how you might increase the level of rigor on the item.		
Standard	Question	DOK

Exercise 4.7: Student Goal Setting Sheet

Name: _____ Date: _____

What work am I looking at? (test, homework, class work, essay, project, etc.):

Current Score/Grade: _____

What did I do successfully?	What was somewhat challenging?
What did I really struggle with?	What are my questions?

Learning Needed:

Three things I can do to improve for next time:

Exercise 4.7: Student Goal Setting Sheet (Student 1)

Name: Oliver (2nd grade)

Date: 11/15/13

What work am I looking at? (test, homework, class work, essay, project, etc.):

Addition Math Facts Test

Current Score/Grade: 10/15

<p>What did I do successfully?</p> <ul style="list-style-type: none">• Adding 1s• Adding 2s	<p>What was somewhat challenging?</p> <ul style="list-style-type: none">• Adding 9s
<p>What did I really struggle with?</p> <ul style="list-style-type: none">• Adding doubles• My time was slow	<p>What are my questions?</p> <ul style="list-style-type: none">• How can I go faster?

Learning Needed:

Three things I can do to improve for next time:

Exercise 4.7: Student Goal Setting Sheet (Student 2)

Name: Casey (7th grade)

Date: 12/15/13

What work am I looking at? (test, homework, class work, essay, project, etc.):

Unit Test – single variable equations

Current Score/Grade: 7/10

<p>What did I do successfully?</p> <ul style="list-style-type: none"><i>I can substitute for x in single variable equations.</i>	<p>What was somewhat challenging?</p> <ul style="list-style-type: none"><i>I missed square roots on question 8. I forgot that the square root can be a negative number.</i>
<p>What did I really struggle with?</p> <ul style="list-style-type: none"><i>I missed order of operations on question 4. I didn't multiply before adding.</i><i>I missed dividing by fractions. I forgot to invert my fraction on question 5.</i>	<p>What are my questions?</p> <ul style="list-style-type: none"><i>How can I continually remind myself to invert the fraction with dividing?</i>

Learning Needed:

Three things I can do to improve for next time:

Exercise 4.7: Student Goal Setting Sheet (Student 3)

Name: Juan (9th grade)

Date: 12/15/13

What work am I looking at? (test, homework, class work, essay, project, etc.):

Essay on "The Lord of the Flies"

Current Score/Grade: 22/30

<p>What did I do successfully?</p> <ul style="list-style-type: none">• <i>Stated main idea in first paragraph and restated in conclusion</i>• <i>Included thesis statement</i>• <i>Capitalized sentences and proper nouns</i>	<p>What was somewhat challenging?</p> <ul style="list-style-type: none">• <i>Didn't state main idea for body paragraphs</i>• <i>Didn't provide enough examples or quotes in body paragraphs</i>
<p>What did I really struggle with?</p> <ul style="list-style-type: none">• <i>Sentence fragments</i>• <i>Didn't use quotations correctly</i>	<p>What are my questions?</p> <ul style="list-style-type: none">• <i>How do I avoid sentence fragments?</i>

Learning Needed:

Three things I can do to improve for next time:

Exercise 4.7: Data Conversation Practice Worksheet

Type: (circle) Teacher to Teacher

Administrator to Teacher

Teacher to Parent

Teacher to Student

Before you begin:

What is the purpose of the Data Conversation? _____

What is the first question you will ask (using Positive Presumptions)? _____

Positive Presumptions	Paraphrasing	Data References
Tally	Tally	Tally
Comments/ Notes	Comments/ Notes	Comments/ Notes
Conversation Stopper		

Exercise 3.8: Characteristics of Effective Checks for Understanding

Characteristics	Matches Characteristics?
Measures only one standard or one aspect of a standard	
Uses an item type that is appropriate for the standard	
Helps diagnose a common error or misconception for the topic	
Uses varying levels of cognitive complexity (DOK)	
Can be completed in the time available	
Encourages student effort	

Check-for-Understanding Scenarios

RL.3.4 Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.

After reading an excerpt, the teacher handed students a copy of said excerpt. She then asked students to highlight the phrases/words within the text that helped them understand the unknown word.

MA.8.EE.2 Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes.

At the close of a lesson on evaluating the square root of perfect squares, a math teacher wrote on the board the equation $x^2 = 64$ and the following responses:

- a. $x = 32$
- b. $x = 64^2$
- c. $x = 128$
- d. $x = \sqrt{64}$

Using an electronic student response system, students were given a few minutes to work out the problem and asked to select the appropriate response.

Answer D is correct and the remaining three choices are based on common errors students make with square root problems.

WHST.9-10.2b

Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

A 10th grade social studies class completed a lesson analyzing causes of the Civil War. The teacher has provided students with an exit ticket that articulates both the topic and audience of an informative writing text: The North is responsible for starting the Civil War. The exit ticket asks students to provide at least three pieces of evidence they would include in their informative writing (were they to write about this very topic) that support this topic. Students are encouraged to select “relevant facts,” “extended definitions,” “concrete details,” “quotations,” or “other information/examples appropriate” from their lesson readings and resources.

Strategize 3.5: 9-Grid Matrix

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

Strategize 3.5: 12-Grid Matrix

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

Turnkey Plan Worksheet

Analyze: 2.8 Data Analysis Questions and 2.9 Applying Data Analysis Questions

The Team

Who will facilitate this turnkey exercise?

How do educators currently determine what questions to ask when analyzing data?

What practices are currently in place?

What is at stake?

What might people have to let go of in order to engage in this type of questioning? This may include longstanding practices and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school three years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Strategize: 3.5 Using Two Data Sets to Create Groups for Differentiation

The Team

Who will facilitate this set of turnkey exercises?

How do educators currently create small groups?

What practices are currently in place?

What is at stake?

What might people have to let go of in order to engage in this type of flexible grouping? This may include longstanding practices and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school three years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Strategize: 3.6 & 3.7 Assessment Literacy

The Team

Who will facilitate this set of turnkey exercises?

How do educators currently select and evaluate assessments?

What practices are currently in place?

What is at stake?

What might people have to let go of in order to engage in this type of evaluation and selection of assessments? This may include longstanding practices and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school three years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan Worksheet

Data Conversations: 4.7 Data Conversations with Students

The Team

Who will facilitate this set of turnkey exercises?

How do educators currently engage in Data Conversations with Students?

What practices are currently in place?

What is at stake?

What might people have to let go of in order to engage in Data Conversation with Students?
This may include longstanding practices and deeply held, sometimes limiting, beliefs.

What will success look like?

If someone were to walk through your school three years from now, after this piece of the work has taken root, what would they see?

Turnkey Plan

School Name: _____ District Name: _____ Date: _____

Topic	Time Frame	Facilitator	Participants	Location	Expected Outcome	Data Collection
Data Analysis Questions Exercise 2.8 & 2.9 Analyze p. 47						
Assessment Literacy Exercise 3.6 & 3.7 Strategize p. 38						
Data Conversations with Students Exercise 4.7 Data Conversations p. 39						
Types of Small Groups Exercise 3.4 Strategize p. 23						

Using Two Data
Sets to Create
Groups for
Differentiation
Exercise 3.5
Strategize p. 29