Data Driven Instruction

St. Louis Public Schools
Dr. Kimberly A. Moody,
Instructional Leadership Officer

Objectives

- By the end of this professional learning experience teachers will have the skills and strategies to:
- ✓ Use formative assessment data to plan and prepare lessons at the beginning and over the course of a unit
- ✓ Use summative assessment data to plan and prepare lessons and activities for subsequent units

House keeping

Norms

- ✓ Be Present
- ✓ Be In The Work
- ✓ Be Respectful to the Space…Time…Agenda…Others

The Work of Teaching

- Reflect on the following quote and consider how it may be linked to data driven instructional practices.

Education in ou to find whatever there is in students that might yearn for completion, and to reconstruct the learning that would enable them autonomously to seek that completion.

—Allan Bloom

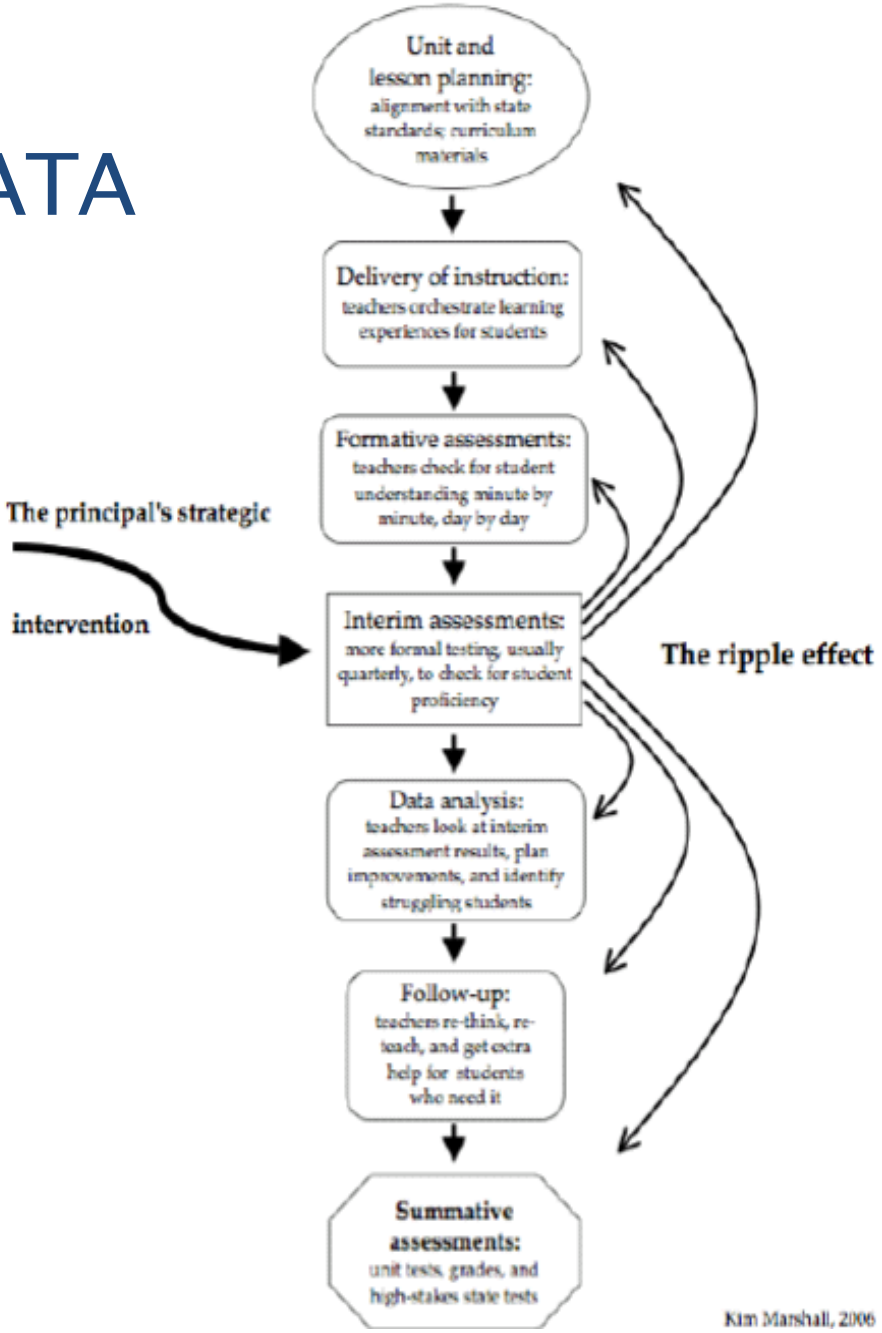
The Work of Teaching

Education in our times must try to find whatever there is in students that might yearn for completion, and to reconstruct the learning that would enable them autonomously to seek that completion.

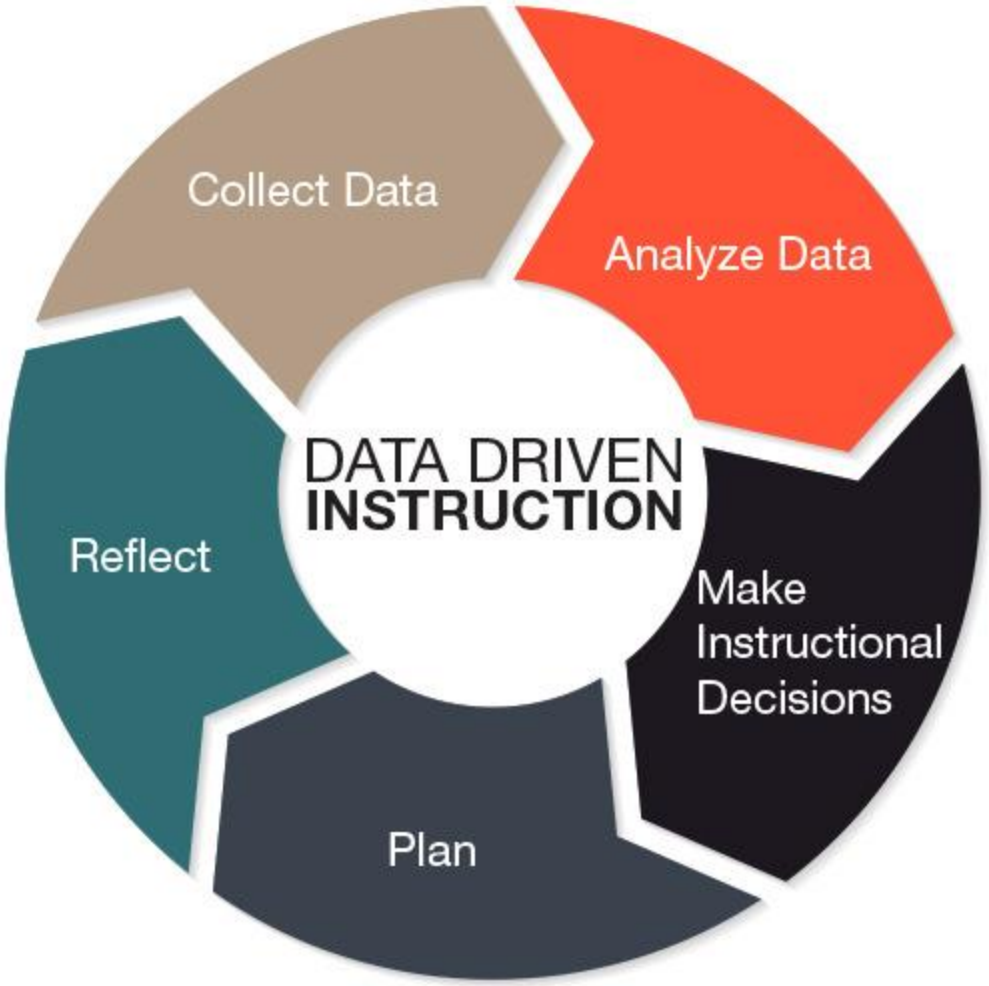
—Allan Bloom

Data driven instruction allows teacher to find out what students are missing and provide instruction that meets their needs.

THE CYCLE OF DATA DRIVEN LESSON PLANNING 2006



THE CYCLE OF DATA DRIVEN LESSON PLANNING 2017



Children's Literacy Initiative

Data Driven Lessons

- Reflect …

What does data driven lesson planning look like in your classroom/school/district?

What tools do you use to support this process?

Why Data Driven Instruction?

Collecting and using classroom data is an essential skill for any educator who wants to be sure their students are grasping lesson content.

It answers the question…

“Are my students learning what I am teaching?”

Types of Data…

STATE LEVEL

District MAP-EOC-ACT

students receiving free/reduced lunch, students in special education

DISTRICT LEVEL	SCHOOL LEVEL	CLASSROOM LEVEL
MAP Test Scores	Student Grades	Individual Student Scores
District scores on tests like ACT & SAT	School Report Card Data	Anecdotal Observations
End of Course & AP Exams	Diagnostic/Screening Assessments.	Student Interest & Motivation

What is required for data-driven instruction?

- **Baseline data** should gives a good sense of where students are at the beginning of the year/lesson/unit; this data may even come from the prior year's state test because schools are held accountable by such tests.
- *Examples????*
- **Clear goals** for what students are expected to learn and to achieve; these goals are usually related to state standards and grade-level expectations. Goals may also be specific to improved performance on the state test, for example, raising the percentage of students scoring Proficient or higher in mathematics from 67% last year to 84% this year.
- *Examples???*

What is required for data-driven instruction?

- Regular assessments across the school year; frequent assessments provide multiple pieces of evidence about student knowledge and skills. Such assessments help to benchmark students' progress across the school year.
- **Well-focused and well-planned instruction** that is based on evidence; the data shows what students know and are able to do and what they still need to learn.
- **Summative Assessment** to identify weather you have achieved the proposed outcome of instruction.

Formative Assessments

The goal of formative assessment is to monitor student learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

- Formative Assessments help teachers and students identify strengths and weaknesses and target areas that need work at the beginning & over the course of a unit.
- Formative assessments are generally low stakes, which means that they have low or no point value. Examples of formative assessments include asking students to:
  - ✓ draw a concept map in class to represent their understanding of a topic prior to instruction.
  - ✓ submit one or two sentences identifying the main point of a reading selection.
  - ✓ student interviews or survey
  - ✓ exit slip
  - ✓ quiz
  - ✓ group questioning
  - ✓ white-board review

Summative Assessment

- The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark.
- Summative assessments are usually high stakes.
- Examples of summative assessments include:
  - ✓ a midterm exam
  - ✓ a final project
  - ✓ a paper
  - ✓ a formal recital
- Information from summative assessments can be used formatively when students or faculty use it to guide their efforts and activities in subsequent units.

4 keys to data driven instruction

ASSESSMENTS
(Formative & Summative, Transparent, Aligned, Reassess)

ANALYSIS
(Quick, User-friendly, Teacher-owned, Test-in-hand, Deep)

ACTION
(Action Plan, Ongoing, Accountability, Engaged)

Buy in to a Data-driven CULTURE
(Leadership, PD, Calendar, Build by Borrowing)

Assessment

What kinds of tests inform data-driven instruction?

- You will find that you can use a variety of tests for data-driven instruction, but all of them should be reliable, valid, and aligned to the standards, concepts, and skills students are expected to learn.
- State Tests
- Benchmark Tests
- Chapter Tests
- Unit Tests
- Quizzes
- Questioning (Cold Call, Ping Pong, Whole Class)
- Exit Slips
- Student Self Evaluation

Assessment

How do you use the tests to inform instruction?

- Start with a Class Summary of Test Results.
  - ✓The Class Summary should report results in terms of the applicable standards and should have specific information about the grade level expectations and may even what the test items addressed.
  - ✓A class Summary, you can identify strands in which students did well and those in which they had difficulty. A plan of instruction can be based on information from a Class Summary.

Analysis
Sample Class Summary

Take 2 minutes…
What needs to be retaught?
Why?

Class Summary of Test Results

Strand: Reading (64%)
Comprehension
▪ Determine a text's main (or major) ideas and how those ideas are supported with details. (80%)
▪ Distinguish fact and opinion in various texts. (71%)
▪ Find similarities and differences across texts, such as, in treatment, scope, or organization. (44%)
▪ Paraphrase and summarize text to recall, inform, and organize ideas. (65%)
Literary Concepts
▪ Identify the purposes of different types of texts, such as to inform, influence, express, or entertain. (49%)
▪ Recognize the distinguishing features of genres, including biography, historical fiction, informational texts, and poetry. (76%)
▪ Understand and identify literary terms, such as title, author, illustrator, playwright, theater, stage, act, dialogue, and scene, across a variety of literary forms (texts). (66%)

- This sample shows a small portion of a Class Summary and includes percentages of items answered correctly for each skill and the average percentage for the Strand.

Analysis

Sample Class Summary

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Take 5…
How can we reteach this?
We have to move on…
Benchmark testing is in two weeks.
What do you do?

- A summary review reveals that students struggle with finding similarities and differences across texts (Comprehension) and…
- Identifying the purposes of different types of texts, such as to inform, influence, express, or entertain (Literary Concepts).

Action

Plan—Identify Strengths, Challenges & Critical Needs

- Target areas where students are having difficulty. This is basically a sorting exercise to identify…
  - ✓strengths—areas in which the class as a whole did quite well
  - ✓challenges—areas in which the class did fairly well but were not strong
  - ✓critical needs—areas in which the class did not perform well

Action
Plan- Focus on specific needs

- Focus on specific needs. After identifying the Critical Needs strands, drill down within a strand. Look at the grade-level expectations and do an item analysis of the skills and concepts. Identify the following:
  - ✓ Are there specific areas in which students have difficulty?
  - ✓ What are the weakest areas?

Action

Plan- Create an instructional plan

- Modeling
- Think-Aloud
- Peer Teaching Error Analysis
- Motivation Instruction
- Frequent Monitoring of Levels(hand signals)
- Multi-Sensory Approaches
- Multiple Intelligences
- Direct Teaching of Precise Vocabulary of the Standards
- I Do/We Do/You Do
- Graphic Organizer
- Purposeful Grouping
- Adjusting Lesson Delivery (Based on student interest, skill level, preference, learning rate)
- Kagan Strategies
- TLAC Strategies
- Chunking
- Multimedia Presentation

Action

Reteach

- **Develop the concepts.** This lays a foundation on which students can build their understanding. This is often done using manipulatives, pictorials, or real-life contexts.
- **Begin with what students already know.** New concepts are easier to master when they are anchored to information students already know.
- **Build fluency.** Students are given opportunities to practice newly learned skills and concepts.
- **Relate concepts to problem solving or applications.** When students apply what they have learned to other classroom situations and to real-life situations, they are more likely to retain what they have learned.
- **Encourage students to explain their reasoning.** When students explain their understanding of concepts to others, they clarify their own thinking.
- **Provide for high levels of engagement.** The more students practice and apply skills and concepts in meaningful ways, the more they learn. Incorporate the social nature of learning. While whole-group instruction and individual work are important, so are partner work and small-group work.
- **Make use of visuals and graphic organizers.** Pictures, charts, story maps, and other visual aids help learners connect to and retain inform

Action

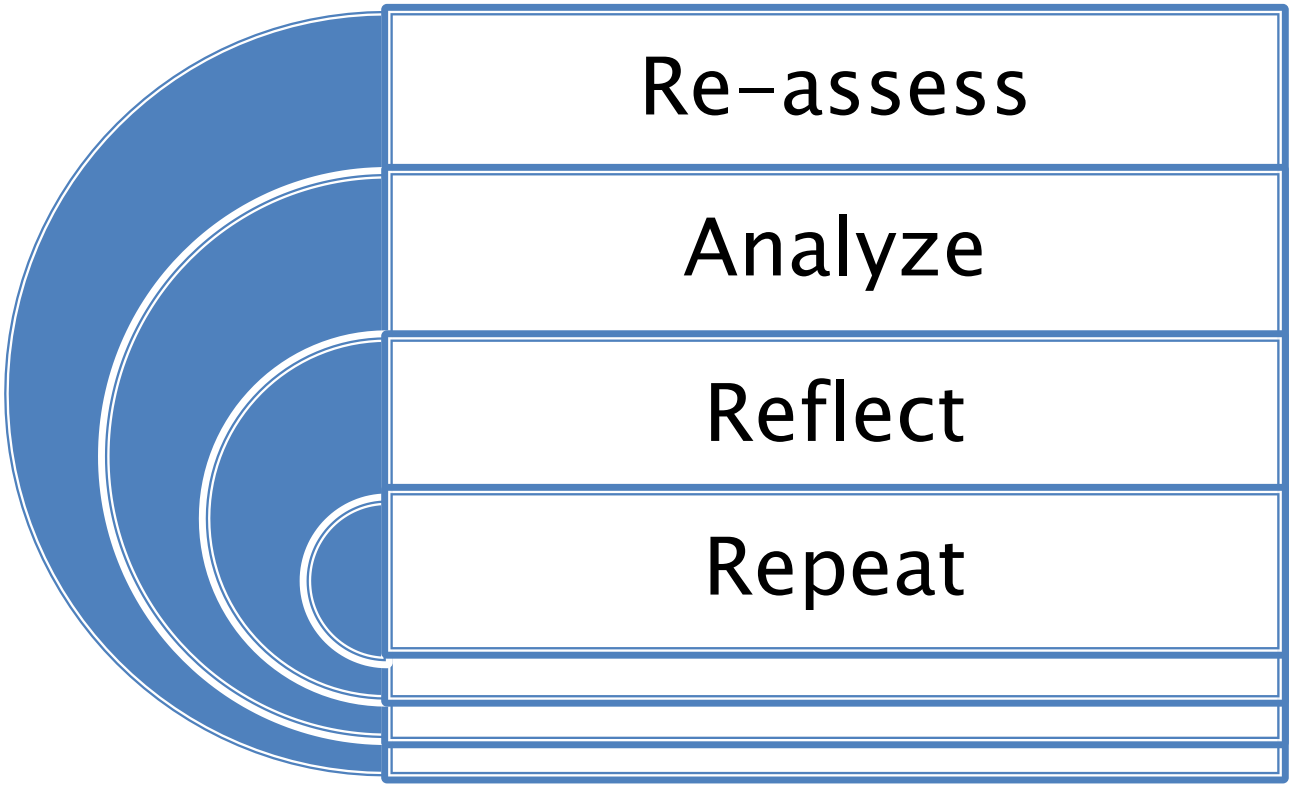
Reteach

But I don't have time to reteach!

- Keep it simple while selecting, using, and sticking to a specific re-teaching strategy for a session. Select quick ways to engage students in meaningful re-teaching activities while keeping up with prescribed curriculum pacing.

Action

Re-Assess, Analyze, Reflect & Repeat the Process



Culture

- All elements of a school's culture, including student aspirations and a code of conduct that promotes positive learning behaviors, benefit from the use of student learning data. Improving instruction is nearly impossible without it. The data-driven cycle of assessment, analysis, and action, which is indispensable for increasing student achievement, must be deeply embedded in the school's culture and a top priority for schoolwide improvement. http://www.ascd.org/ascd-express/vol5/508-fenton.aspx

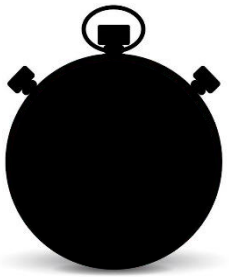
Culture

Assessment Analysis Sheet & Instructional Plan

Content Area:	Teacher/Grade:	Date:

Standard Analysis	Analysis of WHY Students Did Not Learn Standards	Instructional Plan: What actions (instructional practices) are necessary to help students achieve mastery? How & when will you structure whole-group instruction to address the standard?	
(Whole-Class Instruction) What standards warrant more time for whole-class instruction (or review)?	What gaps in instruction (or formative assessment) might have contributed to the lack of student learning for the standard?	Modeling Think-Aloud Peer Teaching Error Analysis Motivation Instruction Frequent Monitoring of Levels(hand signals) Multi-Sensory Approaches Multiple Intelligences Direct Teaching of Precise Vocabulary of the Standards	I Do/We Do/You Do Graphic Organizer Purposeful Grouping Adjusting Lesson Delivery (Based on student interest, skill level, preference, learning rate) Kagan Strategies TLAC Strategies Chunking Multimedia Presentation

Brain Storm



- Take a look at the Assessment Analysis Sheet & Instructional Plan in your folder. How can this tool be used support the data driven instructional process in your classroom/school/district?
- Can it support a data driven culture?
- What other tools can we use to support a data driven culture?
- How can data driven instruction in a data driven culture impact student success?

Assessment Analysis Sheet & Instructional Plan

Content Area:	Teacher/Grade:	Date:

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Collaborate & Share

- Consider your reflections from the brain storming session.
- Discuss your ideas with your table group.
- Consider the following question:

  How can data driven instruction in a data driven culture impact student success?

- Collaborate to come up with collective answers to present to the whole group.

Reflection & Questions

Thank You

Dr. Kimberly Moody
Instructional Resource Officer
St. Louis Public Schools
Phone: 314-231-3720
Cell: 314-250-4913
Email: kimberly.moody@slps.org

Resources

- https://www.cmu.edu/teaching/assessment/basics/formative-summative.html
- https://www.utoledo.edu/aapr/assessment/pdfs/15-April-1_PrinciplesofDataDrivenAssessment.pdf
- https://www.cli.org/blog/what-is-data-driven-instruction/
- www.ascd.org/ascd-express/vol5/508-fenton.aspx