REIMAGINING EDUCATION DURING COVID-19 and BEYOND

Supporting Teachers with an Effective Data Analysis Model

2020 Fall Virtual Instructional Leadership Conference October 6-7, 2020

Rena Beasley
School Effectiveness Specialists
School and District Effectiveness
rena.beasley@doe.k12.ga.us

Rebecca Gillette
School Effectiveness Specialists
School and District Effectiveness
rebecca.gillette@doe.k12.ga.us



Session Logistics

- **Handouts:** Session handouts are available for download in the handouts section on your screen and at www.gadoe.org/sdeevents
- Questions: Use the question box to type questions or comments throughout the presentation
- Feedback: We ask all participants complete the pop-up feedback survey after the close of the session
- Recording: A link to the session recording and certificate of attendance will be emailed in 24-hours
- On Demand: All sessions will be available on-demand following the conference on the <u>SDE Events and Conference webpage</u>



In the Trenches...



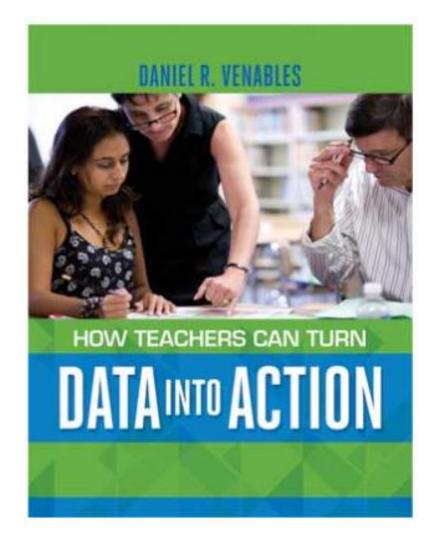
Teachers are in the trenches every day! They need a friendly, systematic and efficient plan to engage in the process of reviewing and responding to data.

Data is messy...confusing...timeconsuming and sometimes just plain scary!



Welcome.....

Resource: How Teachers Can Turn Data into Action Daniel R. Venables (2014)





Session Norms

- Remain engaged in learning.
- Respectfully share opinions.
- Ask questions for clarification to avoid making assumptions.



Before we begin...where are you?





Poll: Where Am I In The Data Team Process?

- I know how to analyze data to determine next steps and lead others.
- I know how to use a data process to analyze numbers to determine needs.
- I know how to compare data to see a difference in numbers.
- I can see the difference in data numbers, but unsure of what to do next.



Learning Intentions

Participants will understand how to guide teacher teams to:

- Identify critical gaps in learning and the corresponding instructional gaps
- Collaborate on evidence-based solutions and develop a goaldriven action plan
- Evaluate the plan's effectiveness after implementation and determine the next course of action



Success Criteria

Participants will be able to facilitate teams to:

- Review existing data and formulate exploratory questions about the implied problem
- Triangulate the data
- Identify and prioritize learning and instructional gaps
- Conduct evidenced-based strategy search
- Develop data-driven action plans
- Evaluate the success of the plan and determine next steps



Data Literacy

Formative – informs student understanding and allows opportunity to adjust instruction

Summative – evaluates prior teaching/learning

Note: The way an assessment is used determines the type of assessment. An assessment may be both formative and summative.



Sources of Data



MACRODATA

Student scores on:

- End-of-the-course/End of Grade assessments
- Common formative assessments
- Grades on projects
- District assessments
- PSAT, SAT, and ACT
- Advanced Placement (AP) exams
- DIBELS or other reading inventories
- Subject placement exams
- Computer-based modules
- Unit pre-tests

MICRODATA

Student performance:

- On quizzes and warm-up questions
- During guided practice
- During group work
- During independent practice
- On homework assignments
- On writing assignments

Student responses to:

- Teacher questions during lessons
- Checks for understanding
- Ticket-out-of-the-door responses

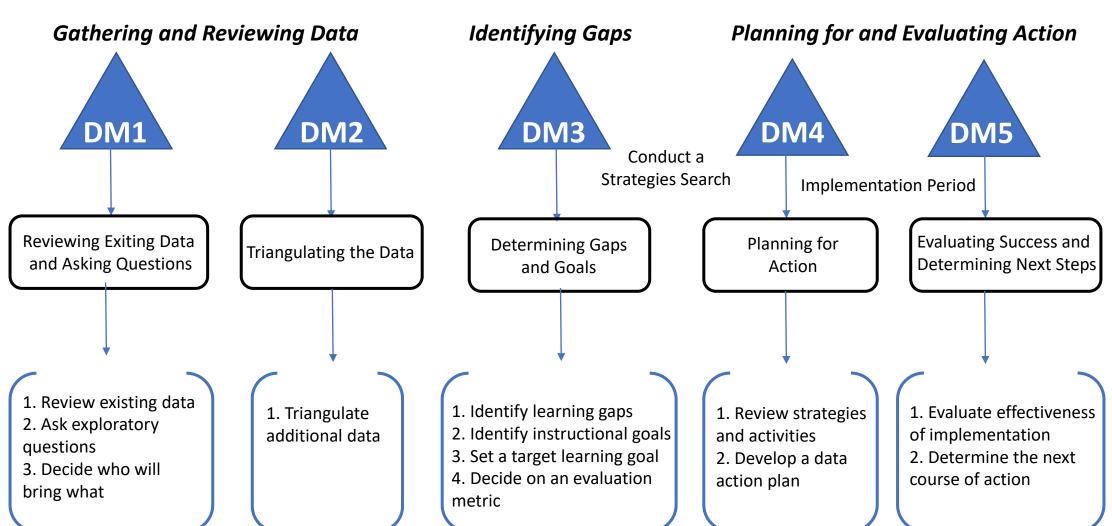
Student:

- Questions during lessons
- Explanations at the board
- Posters
- Notebooks
- Portfolios
- Reflections in journals



Data Action Model

Schedule of Data Meetings Using Data on Taught Topics



SCHEDULE OF MEETINGS USING DATA ON TAUGHT TOPICS

Data Meeting 1	Reviewing existing data and asking questions	 Review existing data. Ask Exploratory Questions. Decide who will bring what.
Data Meeting 2	Triangulation the data	1. Triangulate the data.
Data Meeting 3	Determining gaps and goals	 Identify learning gaps. Identify instructional gaps. Set a Target Learning Goal. Decide on an evaluation metric.
Data Meeting 4	Planning for action	Conduct a Strategies search; then 1. Review strategies and activities. 2. Develop a Data Action Plan.
PLC Meeting 1 - 4	Implementation period (four weeks)	 Look at student and teacher work; troubleshoot obstacles, look at texts, research.
Data Meeting 5	Evaluating success and determining next steps	 Evaluate effectiveness of implementation. Determine the next course of action.

Sample Schedule – Elementary

	August	September	October	November	December
MAP Pre-Mid-Post	Aug 17-28 Grades 3-5 (ELA, M)	Sept 2-9 K-2 (ELA, M)		Nov 16-20 Grades 3-5 (ELA, M)	Dec 2 – 9 Grades K-2 (ELA, M)
Research Simulation Tasks/Formative Writing Assessments (i.e. Write Score, GCA Writing Assessments, etc.)	Aug 25-28 Grades 3-5 (Info Writing)				Dec 3-10 Grades 3-5 (Info Writing)
K-5 <u>iReady</u> Reading & Math Benchmark Formative Assessments			October 5-7		December 7-11
Teacher Work Days -1/2 Day Data & Planning PL Days (Assessment Analysis, PL & Planning) K – GKIDS Baseline & Ongoing data, Fluency Assessments, Portfolio, 1 – 2 MAP, iReady. Fluency/Retelling Assessments, Reading Portfolio, Formative Assessments 3 – 5 MAP, iReady. Guided Reading Fluency/Comprehension Assessments Classroom Assessments	Data Collection Period	Sept 8-11 Title I ½ Day Grades 3-5 Combined Data Meetings 1-4 Review pretest data Identify learning gaps implicated Research effective strategies Create short term action plan	Oct 12 (Planning Day) Grades K-2 ½ Day Combined Data Meetings 1-4 (see activities in September) Data Collection Period Grades 3-5 DA Meeting 5/Action Plan Checks (ongoing)	Data Collection Period Grades K-5 Data Meeting 5/Action Plan Checks (ongoing)	Dec 15 - Jan 4 Title I ½ Day Grades 3-5 Combined Data Meetings 1-4 Review and triangulate data Identify learning gaps implicated Research effective strategies Create short term action plan



Fundamental Beliefs About Data

- Assessment data should be used to identify students who are or are not experiencing academic success.
- Data should be used to verify assumptions about the causes of student behavior and performance.
- School proposed changes should be supported by data.
- Data from student assessments should be used to set instructional targets and goals.
- Conducting self-assessments will continuously improve performance.



Data Meeting 1 - Review Data & Ask Questions

1. Review existing data.



2. Ask "Exploratory Questions".

3. Determine additional data or artifacts needed to study the "Exploratory Questions".

4. Decide who will bring what.



Exploratory Questions

Exploratory questions:

- 1) require more information to answer
- 2) often reveal root causes and clearly identify gaps in learning
- 3) connect to instruction
- 4) born from "I wonder" statements

Wonder: I wonder why our 8th grade students are performing poorly on quadratic inequalities.

Question: How are we presently teaching quadratic inequalities and how much time do we spend? Is the student's practice aligned with the assessment format?



Exploratory Questions



Now you try...7th Grade ELA Mid-Year Assessment

Wonder: I wonder why students did better in the RL – Literary Reading strand than on the RI – Informational Reading strand.

<u>Task:</u> In the Question Box, enter an "exploratory question" aligned with learning more about the "wonder" statement above.

Hint: Remember to focus on the learning and not the students.

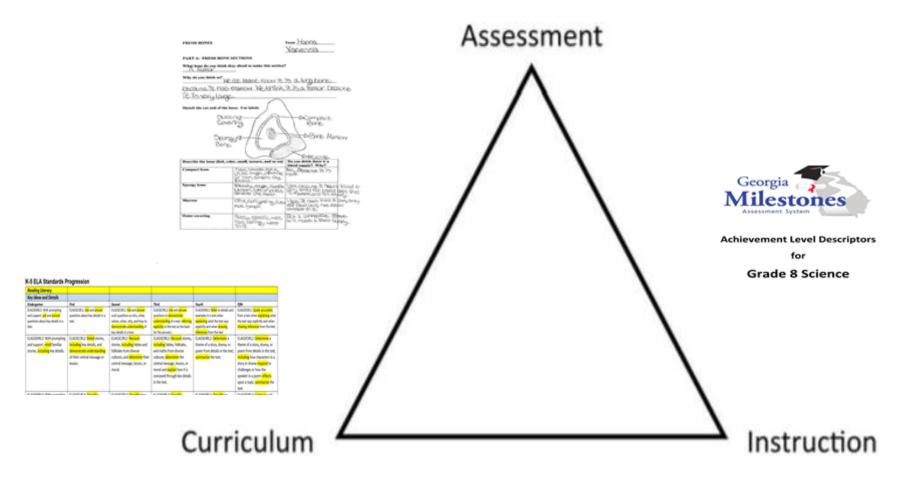


Poll Success Criteria: Review existing data and formulate exploratory questions about the implied problem

- Beginning little to no understanding
- Developing some understanding but not able to apply
- Proficient able to apply my learning
- Exemplary able to lead others in this learning



Data Meeting 2 – Triangulate the Data



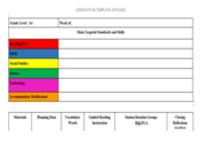
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STANDARDS FOR MATHEMATICAL PRACTICE

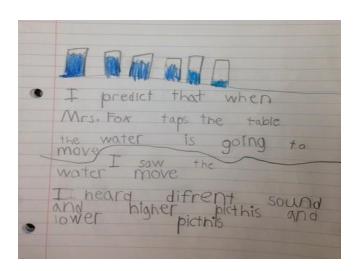
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3. Construct viable arguments and critique the reasoning of others. Studens construct and actique arguments regarding the portion of a whole as represented in the context of mal-world intuitions. Student ception why they do not always get a smaller marker when dividing with functions and decimals. Students have to reason the steps in modeling devices of functions.







Student Work



Conversations



Observations

Additional Data and Artifacts to Use When Answering Exploratory Questions

ADDITIONAL DATA REPORTS

- Item analysis of a test
- Teacher summary report
- School summary report
- Department summary report
- Student summary report by teacher
- Student summary report by subgroups (gender, race, grade level. EL, ED and SWD)
- District summary reports

TEACHER WORK ARTIFACTS

- Curriculum maps
- State/GSE standards
- Lesson and unit plans
- Tests and quizzes
- Warm-ups
- Teacher calendar/timeline
- Rubrics
- Portfolios requirements
- Writing assignments
- Labs
- Activities and games
- Homework assignments
- Reading assignments
- Teacher grade book

STUDENT WORK ARTIFACTS

- Writing samples
- Corrected tests and quizzes
- Student portfolios





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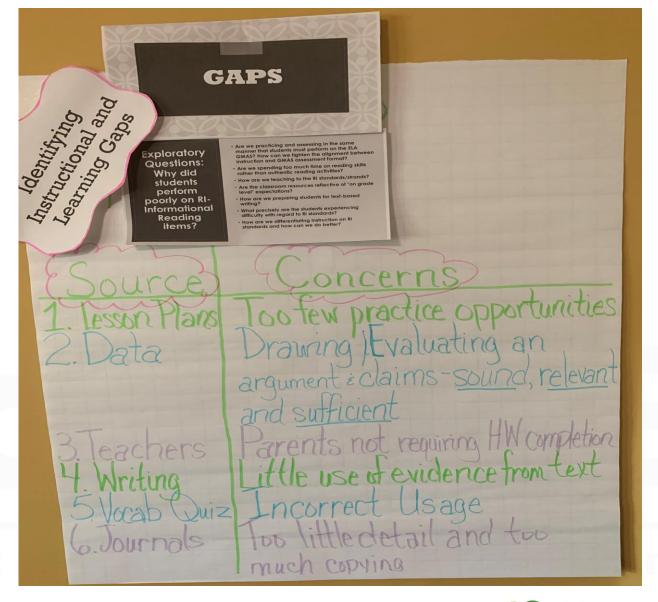
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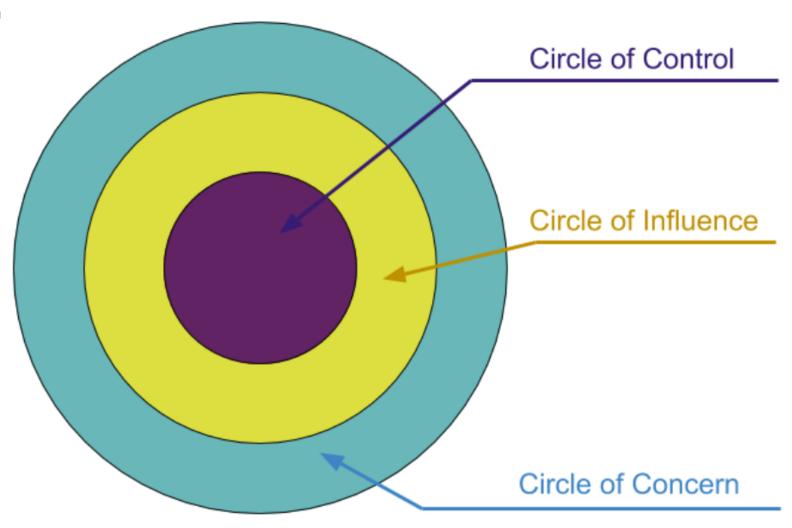
Identifying Instructional & Learning Gaps Example





Key to Success!

Focus upon the things you can influence and/or control!

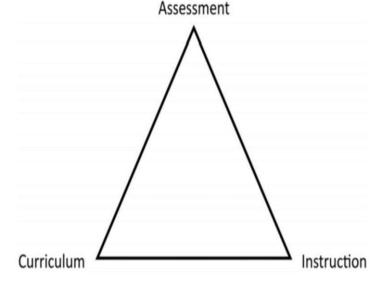




Triangulation Example

Notice – Students are not scoring well when assessed on opinion vs fact.

Wondering - In what specific ways are we currently instructing students to identify key ideas from the text that are separate from their opinions?





Triangulation Example - Curriculum

Social Studies

 Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions. (GSE) https://www.georgiastandards.org/Georgia-type-2 Standards/Documents/Social-Studies-7th-Grade-Georgia-Standards.pdf

ELA

 Cites significant and relevant textual evidence to support a complete analysis of what the text says explicitly as well as complex inferences drawn from the text. (DOE ALDs) https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Georgia-Milestones-ALD.aspx



Triangulation Example (Assessment)

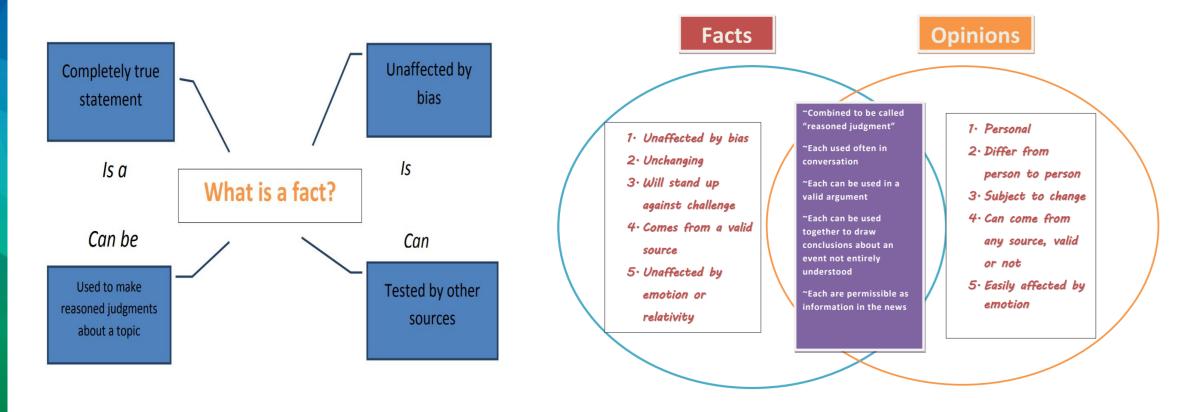
When you want to hang the American flag over the middle of a street, suspend it vertically with the blue field, called the union, to the north and east-west street. When the flag is displayed with another banner from crossed staffs, the American flag is on the right. Place the staff of the American flag in front of the other staff. Raise the flag quickly and lower it slowly and respectfully. When flying the flag at half-mast, hoist it to the top of the pole for a moment before lowering it to mid-pole. When flying the American flag with banners from states or cities, raise the nation's banner first and lower it last. Never allow the flag to touch the ground.

What is the main idea of this passage?

- a. The Flag should be flown differently depending on the circumstances.
- b. The Flag has fifty stars on it.
- c. Flying the Flag inappropriately is against the law.
- d. Citizens like to fly the flag for many different occasions.



Triangulation Example (Instruction)





Instructional Resources

7th Grade Curriculum Map



Seventh Grade Curriculum Map

Sample Units

Unit 1: Connecting Themes

🔼 Unit 2: Southwest Asia Today 💾 Source Set

Unit 3: Impact of the Environment and Economy on Southwest Asia

🔼 Unit 4: Origins of Modern Southwest Asia 💾 Source Set

🔼 Unit 5: Southern and Eastern Asia Today 💾 Source Set

🔼 Unit 6: Impact of the Environment and Economy on Southern and Eastern Asia 💾 Source Set

Unit 7: Historical Background of Southern and Eastern Asia

🔼 Unit 8: Africa Today

🔼 Unit 9: Impact of the Environment and Economy on Africa 📲 Source Set

🔼 Unit 10: Connecting Africa's Past with Africa's Present 💾 Source Set

https://www.georgiastandards.

org/Georgia-

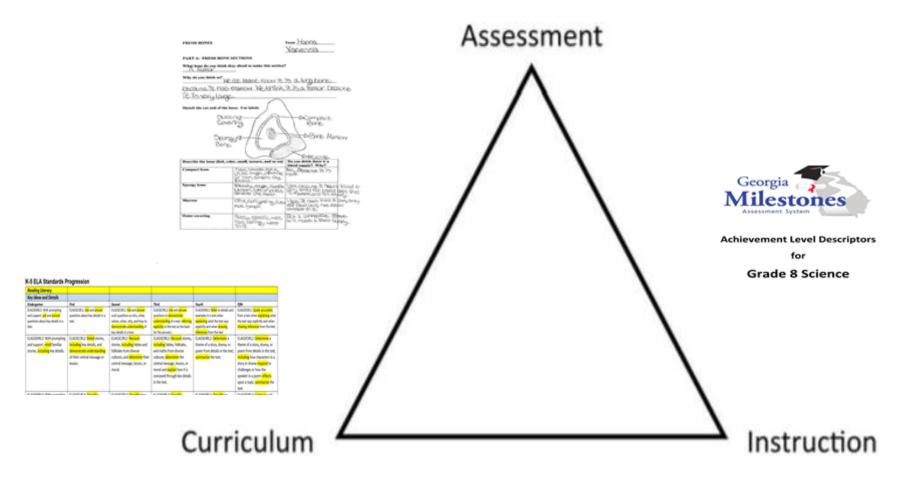
Standards/Pages/Social-

Studies-Grade-7.aspx

7th Grade Modern World Studies Frameworks for the Georgia Standards of Excellence in Social Studies

Sample Instructional Activities/Assessments Environmental Issues on Southeast Asia In N' Out Description: 1. Students will need copies of the article found on the following website to complete this activity. https://www.fairobserver.com/region/central_south_asia/environmental-issues-southeast-asia/ 2. Using the directions below for the activity, students will read the article (found from downloading the document above) to consider the influences and contributions that the environment has on Southern Asia. SS7G10 Explain the impact of environmental issues across Southern and Eastern Asia. **GSE Standards and** a. Explain the causes and effects of pollution on the Chang Jiang (Yangtze) and Ganges Rivers. b. Elements Explain the causes and effects of air pollution and flooding in India and China. Literacy Standards: L6-8RHSS2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions L6-8RHSS6: Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Data Meeting 2: Triangulate the Data



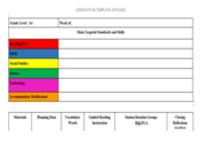
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3. Construct visible arguments and critique the reasoning of others. Studens construct and artique arguments regarding the portion of a whole as represented in the context of mal-world intuitions. Studens copions why they do not always get a smaller marker when dividing with fractions and internals. Studens have to reason the steps in mobiling drivator of fractions.





Putting the Pieces Together – What's Missing?



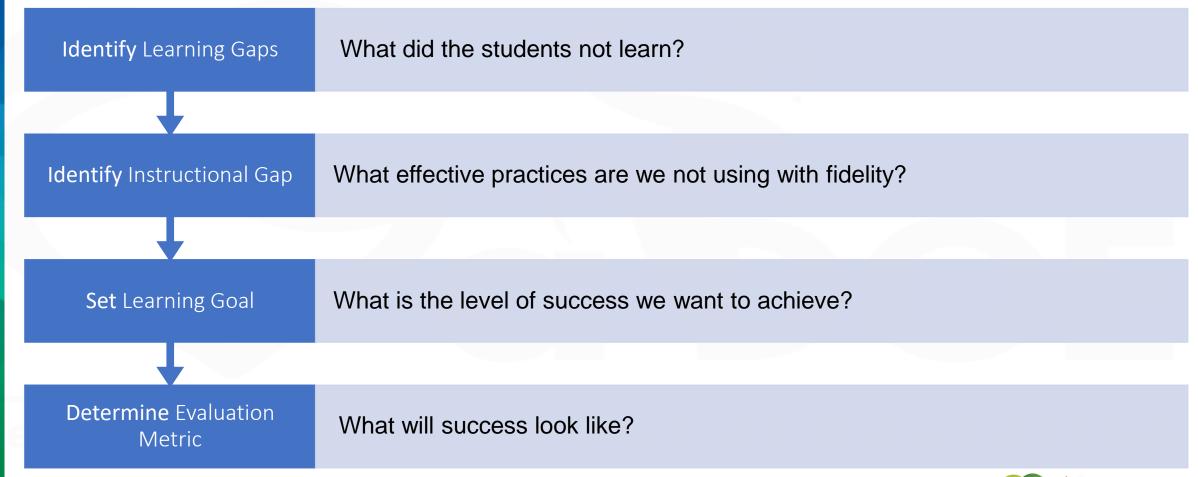


Poll Success Criteria: Triangulate the data

- Beginning little to no understanding
- Developing some understanding but not able to apply
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Data Meeting 3 – Determine Gaps & Goals

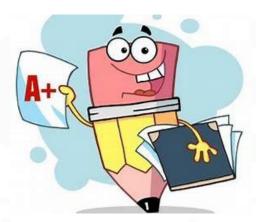




Determine Evaluation Metric

Once the learning goal is set, the final task for the teacher team is to decide how to measure if the goal was met. The teacher team must decide on an evaluation metric for their goal **before** they begin to accomplish it. The evaluation metric can be written, oral or digital in format. Some commonly used evaluation metric sources include a:

- teacher-designed or textbook test
- single portion of a standardized or common assessment
- quiz or mini e-quiz such as a polls
- team or individual culminating project or presentation





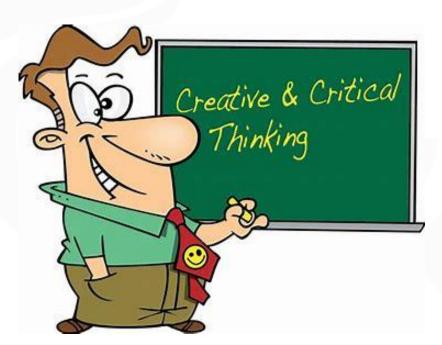
Goal: The % of 7th grade students meeting or exceeding the standard to demonstrate the understanding of operations with fractions will increase by 30 percent.

Evaluation Metric

Data Source	Metric of Success
Culminating Performance Task	70% of students scoring level 3 on rubric
Specific items on unit assessment	70% of students would respond with 70/80% accuracy based on total number of items for skill



Determine Evaluation Metric



Remember, the point of the evaluation metric is to determine if the learning goal has been achieved.

Evaluation metrics can appear in many different forms, but they must be specific.



Example Data Meeting 3 – Determine Gaps & Goals

Identify Learning Gap How to create inferences about the text Identify Instructional Teaching inferencing vs teaching predicting Gap The percent of 5th graders meeting or exceeding the standard for inferencing will increase by Set Learning Goal 20 percent. **Determine Evaluative** 70% of students are scoring 70% or higher on the weekly formative assessments Metric



Success Criteria: Determine an Evaluation Metric to assess success

- Beginning little to no understanding
- Developing some understanding but not able to apply
- Proficient able to apply my learning
- Exemplary able to lead others in this learning



SCHEDULE OF MEETINGS USING DATA ON TAUGHT TOPICS

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Data Meeting 4	Planning for action	Conduct a Strategies search; then 1. Review strategies and activities. 2. Develop a Data Action Plan.
PLC Meeting 1 - 4	Implementation period (four weeks)	 Look at student and teacher work; troubleshoot obstacles, look at texts, research.
Data Meeting 5	Evaluating success and determining next steps	 Evaluate effectiveness of implementation. Determine the next course of action.

Data Meeting 4 – Planning for Action

Conduct a Strategy Search; then...

- 1. Review strategies to identify which ones have greatest impact on learning (See Planning Protocol Rubric)
- 2. Develop a Data Action Plan



Eclectic Study Leads to Better Selection of High Impact Strategies



PLANNING PROTOCOL RUBRIC DM4

DIMENSION	1	2	3	4
Alignment to Standards	Briefly or not at all aligned	Somewhat aligned	Mostly aligned	Completely aligned
Impact on Learning	Low impact	Medium-low impact	Medium-high impact	High Impact
Student Engagement	Low student engagement likely	Moderate engagement for some students	Moderate engagement for most students	High engagement for most students
Depth of Knowledge	Recall	Skill/concept	Strategic reasoning	Extended reasoning
Technology Integration	Opportunities to integrate technology overlooked	Use of some technology	Effective and prominent use of technology	Effective and innovative use of technology
Teacher Friendliness		High maintenance (lots of materials and prep work)	Low maintenance (few materials and/or little prep work)	
Rigor and Relevance	Teacher works	Students work	Students think	Students think and work

Poll Success Criteria: Conduct evidencedbased strategy search

- Beginning little to no understanding
- Developing some understanding but not able to apply
- Proficient able to apply my learning
- Exemplary able to lead others in this learning



ACTION PLAN TRACKING SHEET DM 4 (Teacher Level)

GOAL:

Instructional Tactic: (be specific) What will be done?	Tactic Method Specifically how will it be done?	Action Party Who will do it?	Frequency How often will this task be done?	Completion Date	Verifying Artifacts Which artifacts will serve as evidence that the instructional tactic has been implemented?
Evaluation Metric					

Example: ACTION PLAN TRACKING SHEET DM 4 (Teacher Level)

GOAL: 85% of teachers will implement gradual release with fidelity

6					
Instructional Tactic: (be specific) What will be done?	Tactic Method Specifically how will it be done?	Action Party Who will do it?	Frequency Ho w often will this task be done?	Completion Date	Verifying Artifacts Which artifacts will serve as evidence that the instructional tactic has been implemented?
Teachers will plan lesson using instructional strategy – gradual release	Math and Reading lessons will be broken into the specific components	3rd – 5th grade teachers	3 days a week	Feb 22	Lesson Plans and Collaborative Minutes
Teachers will model gradual release lessons in collabs	One teacher will model, and others will provide feedback	Grade level chairs will lead and then one person will follow at the beginning of each collab	2 days a week	Mar 16	Collaborative minutes and video lessons
Teachers will complete peer obs	Checklist will be used for feedback	3rd-5th grade teachers	Once observation per person for first round	March 30	Checklist, Feedback
Evaluation Metric 85% of teachers will score level 4 on implementation rubric					

PLC Meeting 1-4: Implementation Cycle

Action Research at Its Best!

- 1. Looking at Teacher Work
- 2. Looking at Student Work
 - a) Tuning Protocol

(https://www.schoolreforminitiative.org/download/tuning-protocol/)

b) Notice and Wonder Protocol





Poll Success Criteria: Develop data-driven action plans

- Beginning little to no understanding
- Developing some understanding but not able to apply
- Proficient able to apply my learning
- Exemplary able to lead others in this learning

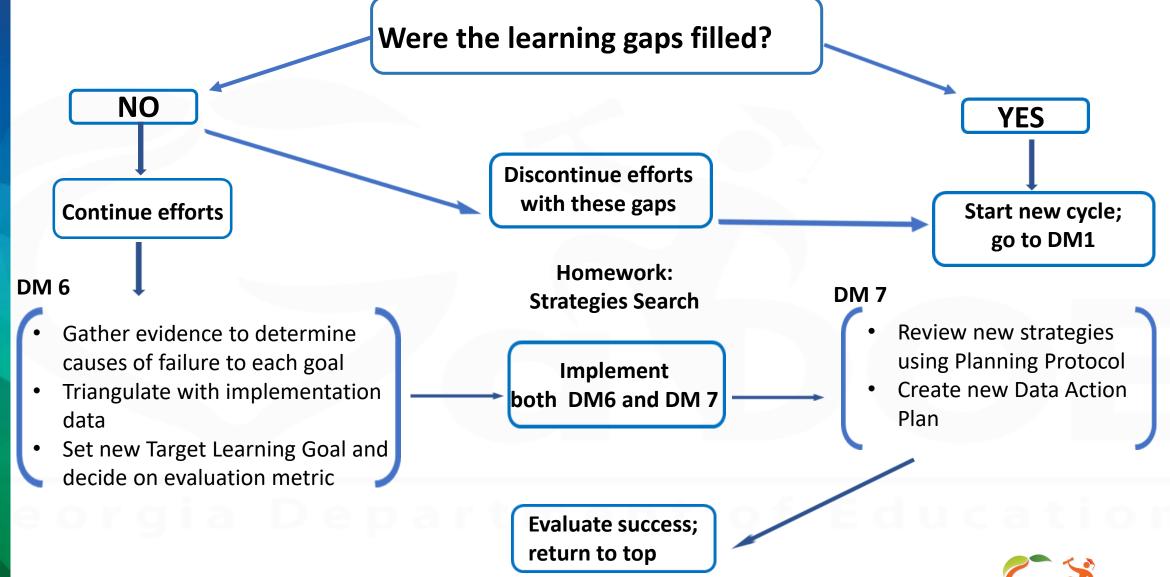


Data Meeting 5 – Evaluating Success & Determining Next Steps

- 1. Evaluate the Success of Plan
- 2. Determine Next Steps



Flowchart to Determine Next Course of Action DM5



Poll Success Criteria: Evaluate the success of the plan and determine next steps

- Beginning little to no understanding
- Developing some understanding but not able to apply
- Proficient able to apply my learning
- Exemplary able to lead others in this learning



SCHEDULE OF MEETINGS USING DATA ON TAUGHT TOPICS

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Data Meeting 4	Planning for action	Conduct a Strategies search; then 1. Review strategies and activities. 2. Develop a Data Action Plan.
PLC Meeting 1 - 4	Implementation period (four weeks)	 Look at student and teacher work; troubleshoot obstacles, look at texts, research.
Data Meeting 5	Evaluating success and determining next steps	 Evaluate effectiveness of implementation. Determine the next course of action.

In Summary....Success Criteria

Participants will be able to facilitate teams to:

- Review existing data and formulate exploratory questions about the implied problem
- Triangulate the data
- Identify and prioritize learning and instructional gaps
- Conduct evidenced-based strategy search
- Develop data-driven action plans
- Evaluate the success of the plan and determine next steps



After I self-reflect, what do I do next?

My Reflection	My Possible Next Steps
I know how to analyze data to determine next steps and lead others in the process.	Use data process with leadership team and teach them how to lead data teams in their content areas.
I know how to use a data process to analyze numbers to determine needs.	Begin small. Lead your admin team (P, AP, coaches) through the process of analyzing data then create an action plan for the area that you are analyzing. Next, admin team works together to lead the leadership team through the same process.
I know how to compare data to see a difference in the numbers.	Complete a root cause process to determine exact need. Begin researching possible instructional strategies to address need. Create an action plan.
I can see the difference in data numbers, but I am unsure of what those numbers are telling me to do.	Begin with Meeting 1 of the data team process to start the dialogue about what the data is telling you.

Session Feedback

The Georgia Department of Education believes in continuous improvement and would appreciate your feedback to ensure the presentations we provide are of the highest quality and meet the needs of the specific audience.

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Dr. Rena Beasley rena.beasley@doe.k12.ga.us

Dr. Rebecca Gillette rebecca.gillette@doe.k12.ga.us

