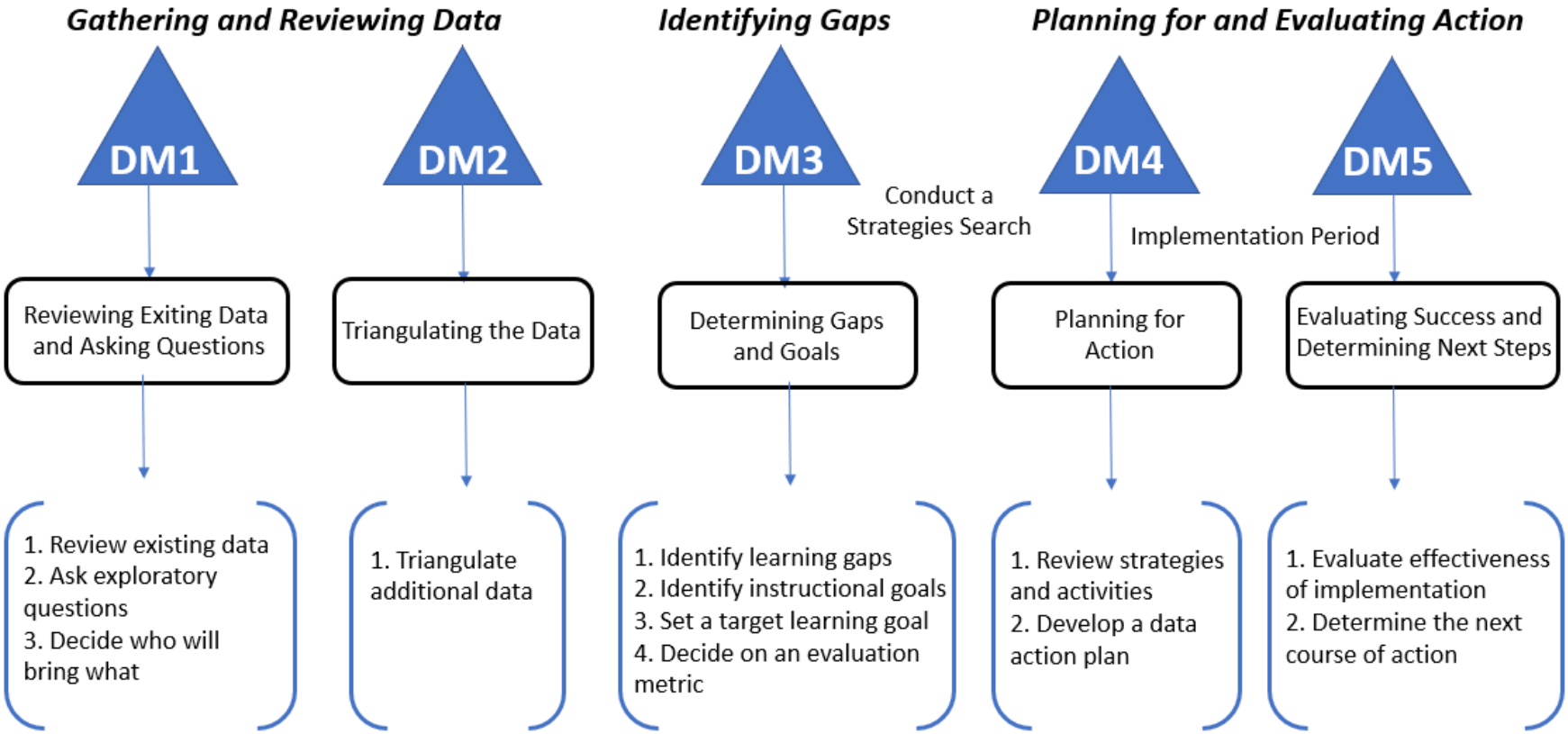
Data Action Model

Schedule of Data Meetings Using Data on Taught Topics



Venables, Daniel R. (2014). *How Teachers Can Turn Data into Action*. ASCD

Instructional Strategy Effect Sizes

Surface Learning	Deep Learning	Transfer of Learning
Wide Reading (.42) • *Read, Process, Share • Books • Articles • Web Sites • Magazines • Newspapers	**Questioning (.48)** • Why • How • Reflective Questions – which is best • Cold Call • Think/Pair/Share Write/Pair/Share • Pose, Pause, Pounce, Bounce • Four Corners	**Extended Writing (.44)** • Writing in response to text • Argumentative essay • Informative/Explanatory essay
Direct Instruction (.59) • Identify learning outcomes • Understand success criteria/expectations/I Cans • Modeling with examples • Guided Practice • Reflection on learning	**Concept Mapping (.60)** • Graphic representation • Summarizing main idea • Synthesizing major ideas, themes, relationships	**Peer Tutoring (.55)** • Teacher formed pairs • Structured approach • Mastery level matches student • Assessment of new learning • Reward for new learning
Note-taking (.59) • Identify what is most important and transferring to own words • Synthesizing then Organizing • Cornell Notes • Interactive Notebook • Graphic Organizers	**Close Reading (.63)** • Purpose and modeling • Analysis of text to determine meaning • Collaborative conversations • Independent reading • Transfer of learning	**Problem Solving (.61)** • Defining a problem • Identifying alternative solutions (creating hypothesis) • Uncover issues related to the problem • Design an intervention plan • Evaluate the outcome
Comprehension Strategy (.60) • Purpose for reading • Model using strategies • Guided practice • Build meaning using diagrams • Independent practice • Integrate reading and writing	**Self-Questioning (.64)** • Provide questions that readers can use to guide reading • Model pausing and questioning • Model types of questions	**Synthesizing across texts (.63)** • Merging new information with prior information to create deeper meaning or new perspective • Read, Investigate, and Write • Questioning, doubting, seeking resolution
Annotating (.63) • Interacting with the text to form meaning • Highlighting • Underlining • Making notes in margin • Circling key words • Asking questions	**Metacognitive Strategy Instruction (.69)** • Planning how to approach a learning task • Evaluating progress • Monitoring comprehension • Self-questioning	**Formal Discussions (.82)** • Accountable Talk • Fishbowl • Socratic Seminar • Debates • Round Table

Surface Learning	Deep Learning	Transfer of Learning
Summarizing (.63) • Identifying important ideas • Identifying key ideas	**Reciprocal Teaching (.74)** • Summarizing • Questioning • Clarifying • Predicting	**Transforming Conceptual Knowledge (.85)** • Developing projects • Investigating • Experimenting with ideas • Reflecting • Asking Questions • Construct Explanations • Authentic Task
Prior Knowledge (.65) • Assess prior knowledge, beliefs, attitudes • Self-assessment • Build on previous to create new	**Class Discussion (.82)** • Fishbowl • Jigsaw • Socratic Seminar • Think Pair Share • Last Word Strategy • Philosophical Chairs	**Organizing Conceptual knowledge (.85)** • Concept Maps • Diagrams • Charts • Hierarchical/Chronological • Flow Chart
Vocabulary Instruction (.67) • Definition and Contextual • Deeper Processing • 3+ Exposures	**Organizing and Transforming Notes (.85)** • Quizlet • Study Blue • Flashcard Machine • Anki • Mnemonic Devices • Mind Maps	**Identifying similarities and differences (1.61)** • Comparing • Classifying • Creating metaphors • Creating Analogies
Repeated Readings (.67) • Paired reading • Phrase reading • Echo Reading • Assisted reading • Radio reading • Oral recitation • Fluency development lesson	**Cooperative Learning (.73)** • Have background knowledge for peer discussion • Peer tutoring • Feedback	**Reflect on learning (.59)** • Sentence Stems • Student Choices • Internal Voice • Discussions • Interviews • Questioning • Logs/Journals

Hattie, John. (2009.) Visible Learning: A Synthesis of over 800 meta-analyses relating to Achievement. New York: Routledge.
Marzano, R. (2004). *Building Background Knowledge for Academic Achievement*. Alexandria, VA: ASCD

Marzano's (Nine) High-Yield Instructional Strategies

High Yield Instructional Strategies	What the Research says:	How it looks in the Classroom:
Identifying similarities and differences **(Yields a 45 percentile gain)**	Students should compare, classify, and create metaphors, analogies and non-linguistic or graphic representations	Thinking Maps, T-charts, Venn diagrams, classifying, analogies, cause and effect links, compare and contrast organizers **QAR (Question/Answer/Relationship), sketch to stretch, affinity diagrams, Frayer model (see below)**
Summarizing and note taking **(Yields a 34 percentile gain)**	Students should learn to eliminate unnecessary information, substitute some information, keep important information, write / rewrite, and analyze information. Students should be encouraged to put some information into own words.	Teacher models summarization techniques, identify key concepts, bullets, outlines, clusters, narrative organizers, journal summaries, break down assignments, create simple reports, **quick writes, graphic organizers, column notes**, **affinity diagrams,** etc.
Reinforcing effort and providing recognition **(Yields a 29 percentile gain)**	Teachers should reward based on standards of performance; use symbolic recognition rather than just tangible rewards.	Hold high expectations, display finished products, praise students' effort, encourage students to share ideas and express their thoughts, honor individual learning styles, conference individually with students, authentic portfolios, stress-free environment, high-fives, Spelling Bee, Constitution Day, School Newspaper, etc.

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

High Yield Instructional Strategies	What the Research says:	How it looks in the Classroom:
Homework and practice **(Yields a 28 percentile gain)**	Teachers should vary the amount of homework based on student grade level (less at the elementary level, more at the secondary level), keep parent involvement in homework to a minimum, state purpose, and, if assigned, should be debriefed.	Retell, recite and review learning for the day at home, reflective journals, parents are informed of the goals and objectives, grade level teams plan together for homework distribution; SLCs; teacher email.
Nonlinguistic representations **(Yields a 27 percentile gain)**	Students should create graphic representations, models, mental pictures, drawings, pictographs, and participate in kinesthetic (hands-on) activities in order to assimilate knowledge.	Visual tools and manipulatives, problem-solution organizers, spider webs, diagrams, concept maps, drawings, charts, thinking maps, graphic organizers, sketch to stretch, storyboards, foldables, act out content, make physical models, etc.
Cooperative learning **(Yields a 23 percentile gain)**	Teachers should limit use of ability groups, keep groups small, apply strategy consistently and systematically but not overuse. Assign roles and responsibilities in groups.	Integrate content and language through group engagement, reader's theatre, pass the pencil, circle of friends, cube it, radio reading, shared reading and writing, plays, science projects, debates, jigsaw, group reports, choral reading, affinity diagrams, Students tackle TAKS word problems in groups and explain their answers**,** etc.
Setting objectives and providing feedback **(Yields a 23 percentile gain)**	Teachers should create specific but flexible goals, allowing some student choice. Teacher feedback should be corrective, timely, and specific to a criterion.	Articulating and displaying learning goals, KWL, contract learning goals, etc. Teacher can display objectives on the in-focus projector and follow-up on the mastery of the objective at the end of the lesson.

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

High Yield Instructional Strategies	What the Research says:	How it looks in the Classroom:
Generating and testing hypothesis **(Yields a 23 percentile gain)**	Students should generate, explain, test and defend hypotheses using both inductive and deductive strategies through problem solving, history investigation, invention, experimental inquiry, and decision making.	Thinking processes, constructivist practices, investigate, explore, social construction of knowledge, use of inductive and deductive reasoning, **questioning the author of a book, finding other ways to solve same math problem,** etc.
Questions, cues, and advance organizers **(Yields a 22 percentile gain)**	Teachers should use cues and questions that focus on what is important (rather than unusual), use ample wait time before accepting responses, eliciting inference and analysis. Advance organizers should focus on what is important and are more useful with information that is not well organized.	**Graphic organizers,** provide guiding questions before each lesson, think alouds, inferencing, predicting, drawing conclusions, skim chapters to identify key vocabulary, concepts and skills, **foldables,** annotating the text**,** etc.

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

HIGH-YIELD INSTRUCTIONAL STRATEGIES

SIMILARITIES AND DIFFERENCES

There are four basic types of tasks that focus on identifying similarities and differences for knowledge development:

→Comparing
→Classifying
→Creating Metaphors
→Creating Analogies

Identifying similarities and differences

T-Chart

Looks like……...Sounds like
Cause……..Effect
Compare……...Contrast
Pro…….Con

Identifying similarities and differences

Comparison Matrix

	Name 1	Name 2
Attribute 1		
Attribute 2		
Attribute 3		

Used to show similarities and differences between two things (people, places, events, ideas, etc.).

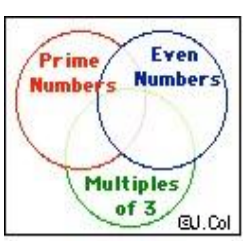
Key frame questions:

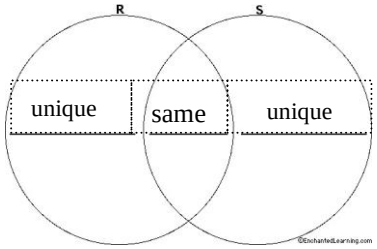
- What things are being compared?
- How are they similar?
- How are they different?

Identifying similarities and differences

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

Venn Diagrams





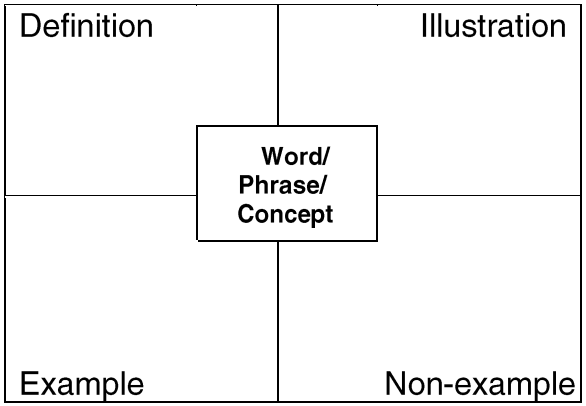
Identifying similarities and differences

Compare and Contrast Text/Character Comparison

The Life Events of: _____	Me, Too	Explanation

Identifying similarities and differences

Frayer Model



Identifying similarities and differences

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

Cause and Effect Links

A *cause* is something that makes something else happen. Out of two events, it is the event that happens first. To determine the cause, ask the question "Why did it happen?"

An *effect* is what happens as a result of the cause. Of two related events, it's the one that happens second or last. To determine the effect, ask the question " What happened?"

At times conjunctions (connecting words) are used to link the cause and effect.
Examples of common conjunctions (connecting words) are:

---

since	**as a result**	**because**	**the cause of**
therefore	**consequently**	**due to the fact**	**nevertheless**
the reason for	**thus**	**so**	**has led to**
	due to + noun phrase	**because of +noun phrase**	

Identifying similarities and differences

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

Sketch to Stretch

1. Students listen as a story, article, or poem is read to them.

2. Students draw a picture that expresses:

- how the story, article or poem makes them feel
- what they think story, article or poem story means
  - what they think the author looks like
  - anything that comes to mind during the reading

3 . Students explain their drawing to a partner/small group.

The class discusses the similarities/differences in their pictures.

Question/Answer/Relationships (QAR)

(Also related to "Book and Brain")

"Right there" (in the text) --book ques.--	**"Think and Search" (text + my thinking) --book and brain--**	**"In my head" (my thinking only) --brain ques.-- --have to infer**

Identifying similarities and differences

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

Classifying

__ate family **__at family**

Sort the word cards (or pictures) into the correct bucket.

Identifying similarities and differences

Comparing Frame

FRACTIONS and **DECIMALS** are **similar because** they both

_____

_____

_____

FRACTIONS and **DECIMALS** are **different because**

fractions _____, but **decimals** _____.
fractions _____, but **decimals** _____.
fractions _____, but **decimals** _____.

Identifying similarities and differences

Creating Analogies

Analogies help us see how seemingly dissimilar things are similar, increasing our understanding of new information.

Ex: core is to earth as nucleus is to atom.

Thermometer ***...is to...***Temperature
as
odometer ***...is to...***speed

(Both measure things)

Identifying similarities and differences

Adapted from: Marzano, R., Pickering, D., Pollock, J. (2001). *Classroom Instruction that Works: Research-based Strategies for Increasing Student Achievement*. Alexandria, Va.: ASCD

Georgia Department of Education

Educating Georgia's Future

Professional Learning & Data Meeting Schedule - Elementary Sample

	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 iReady Reading & Math Benchmark Formative Assessments			**October 5-7**		**December 7-11**
Teacher Workdays **1/2 Day Data & Planning PL Days** **(Assessment Analysis & Planning)** **K**: GKIDS, 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 Data Meeting 5 Action Plan Checks (ongoing)	Data Collection Period Grades K-5 Data Meeting 5 Action Plan Checks (ongoing)	**Dec 15 - Jan 4** Title 1 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
Embedded Action Plan/System Professional Learning Topics	Lexile/Text Complexity/Stretch Bands	Close Read	Responding to Text/Writing	Number Talks	FAL Math Assessment Tasks

Georgia Department of Education

Educating Georgia's Future

Professional Learning & Data Meeting Schedule - Elementary Sample

	January	February	March	April	May
MAP Pre-Mid-Post		**Feb 9 –12** Grades 3-5 (ELA, M,)		**April 27 – April 30** Grades K-2	
Research Simulation Tasks/Formative Writing Assessments (i.e. Write Score, GCA Writing Assessments, etc.)		Feb 2-5 Grades 3-5 (Info Writing)			
Grades K-5 iReady Reading & Math Benchmark Formative Assessments Grades			**March 2-5**		**May 3-6**
Teacher Workdays **1/2 Day Data & Planning PL Days** **(Assessment Analysis & Planning)** **K:** GKIDS, 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	**Jan 4** (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)	**Feb 22-26** Title 1 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	Data Collection Period Grades K-5 Data Meeting 5 Action Plan Checks (ongoing)	Data Collection Period GAA/GKIDS/GMAS Assessment Windows	Data Collection Period & State Testing Data Review Begins - GAA, GKIDS, GMAS, ACCESS **Note:** State data is further analyzed and adjustments in action plans occur during post-planning and summer retreats.
Embedded Action Plan/System Professional Learning Topics	Per current year data	Per current year data	Per current year data	Per current year data	Per current year data

Georgia Department of Education

Educating Georgia's Future

Professional Learning & Data Meeting Schedule - Middle Sample

	August	September	October	November	December
MAP Pre-Mid-Post	**Aug 17-28**			**Nov 16-20**	
Research Simulation Tasks/Formative Writing Assessments (i.e. Write Score, GCA Writing Assessments, etc.)	**Aug 25-28 (Info Writing)**				**Dec 3-10 (Info Writing)**
iReady Reading & Math Benchmark Formative Assessments			**October 5-7**		**December 7-11**
Teacher Workdays 1/2 Day Data & Planning PL Days (Assessment Analysis, PL & Planning) MAP, iReady, Writing Portfolios/Assessments, CFA Classroom Assessments	**Data Collection Period**	**Sept 8-11** Title I ½ Day **Combined Data Meetings 1-4** • Review pretest data • Identify learning gaps implicated • Research effective strategies • Create short term action plan	**Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**Data Collection Period** DA Meeting 5/Action Plan Checks (ongoing)	**Dec 15 - Jan 4** Title I ½ Day **Combined Data Meetings 1-4** • Review and triangulate data • Identify learning gaps implicated • Research effective strategies • Create short term action plan
Embedded Action Plan/System Professional Learning Topics	Lexile/Text Complexity/Stretch Bands	Close Read	Responding to Text/Writing	Number Talks	GSE 3 Act & FAL Math Assessment Tasks

Georgia Department of Education

Educating Georgia's Future

Professional Learning & Data Meeting Schedule - Middle Sample

	January	February	March	April	May
MAP Pre-Mid-Post		**Feb 9 –12**		**GMAS EOG April 6 – 27 GMAS EOC April 29-30**	**GMAS EOC May 4-11**
Research Simulation Tasks/Formative Writing Assessments (i.e. Write Score, GCA Writing Assessments, etc.)		**Feb 2-5 (Info Writing)**			
iReady Reading & Math Benchmark Formative Assessments Grades			**March 2-5**		**May 3-6**
Teacher Workdays 1/2 Day Data & Planning PL Days (Assessment Analysis, PL & Planning) MAP, iReady, Writing Portfolios/Assessments, CFA Classroom Assessments	**Jan 4** (Planning Day) **Combined Data Meetings 1-4 continued from December if needed.** **Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**Feb 22-26** Title I ½ Day **Combined DA Meetings 1-4** • Review and triangulate data • Identify learning gaps implicated • Research effective strategies • Create short term action plan	**Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**Data Collection Period** GAA/GMAS Assessment Windows	**Data Collection Period & State Testing Data Review Begins - GAA, GMAS, ACCESS** **Note:** State data is further analyzed and adjustments in action plans occur during post-planning and summer retreats.
Embedded Action Plan/System Professional Learning Topics	Per current year data	Per current year data	Per current year data	Per current year data	Per current year data

Professional Learning & Data Meeting Schedule – High Sample (accommodates block schedule)

	August	September	October	November	December
USA Test Prep Benchmark Pre-Mid-Post	**Aug 11-14**		**Oct 6-9**		**Winter GMAS Dates: Dec. 2-16**
Research Simulation Tasks/Formative Writing Assessments (i.e. Write Score, GCA Writing Assessments, etc.)	**Aug 18-20 (Info Writing)**		**Oct 13-15 (Info Writing)**		
Teacher Planning Days 1/2 Day Data & Planning PL Days (Assessment Analysis, PL & Planning) USA Test Prep, Writing Portfolios/Assessments, CFA Classroom Assessments, Winter/Mid-Month EOC Data	**Data Collection Period** **Aug 3** (Planning Day) **Yearlong/Summer EOC Data Summary & SIP Review** **Aug 26-28** Title I ½ Day **Combined Data Meetings 1-4** • Review pretest data • Identify learning gaps implicated • Research effective strategies • Create short term action plan	**Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**Oct 27 - 30** Title I ½ Day **Combined Data Meetings 1-4** • Review and triangulate data • Identify learning gaps implicated • Research effective strategies • Create short term action plan	**Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**Data Collection Period** **Winter GMAS Analysis Begins**
Embedded Action Plan/System Professional Learning Topics	Lexile/Text Complexity/Stretch Bands	Close Read	Responding to Text/Writing	Strategy Talks (Strategy/Math Voc. Building utilizing Number Talk practices)	GSE 3 Act & FAL Math Assessment Tasks

Georgia Department of Education

Educating Georgia's Future

Professional Learning & Data Meeting Schedule – High Sample (accommodates block schedule)

	January	February	March	April	May
USA Test Prep Benchmark Pre-Mid-Post	**Jan 5-14**		**March 2-5**	**Spring GMAS Dates: April 27 - 29**	**Spring GMAS Dates: May 4 - 11**
Research Simulation Tasks/Formative Writing Assessments (i.e. Write Score, GCA Writing Assessments, etc.)	**Jan 20-22 (Info Writing)**		**March 9-11 (Info Writing)**		
Teacher Planning Days 1/2 Day Data & Planning PL Days (Assessment Analysis, PL & Planning) USA Test Prep, Writing Portfolios/Assessments, CFA Classroom Assessments, Winter/Mid-Month EOC Data	**Jan 4** (Planning Day) **Winter EOC Data Summary Review** **Jan 27-29** Title I ½ Day **Combined Data Meetings 1-4** • Review pretest data • Identify learning gaps implicated • Research effective strategies • Create short term action plan	**Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**March 16-18** Title I ½ Day **Combined Data Meetings 1-4** • Review pretest data • Identify learning gaps implicated • Research effective strategies • Create short term action plan	**Data Collection Period** Data Meeting 5 Action Plan Checks (ongoing)	**Data Collection Period & State Testing Data Review Begins - GAA, GMAS, ACCESS** **Note**: State data is further analyzed and adjustments in action plans occur during post-planning and summer retreats.
Embedded Action Plan/System Professional Learning Topics	Per current year data	Per current year data	Per current year data	Per current year data	Per current year data