Objectives

- Determining the type of assessments needed to reflect the purpose of the assessment, the audience for which the results are to be communicated, and how the information will be used.
- Informing effective formative instructional and assessment practices for teachers and students, including special education and English language learners.
- Using research and data to identify which areas of focus Georgia students struggle with the most.
- Adopting recommendations and strategies to support student learning and achievement.
- Incorporating services and products available to support districts and schools.
Formative Assessment

- Assessment FOR learning
- Not an instrument or event - PROCESS
- Collection of practices that leads to improved and/or accelerated learning
- Provides instructional data
- Identifies “gaps” in what students know and should know
- Designed to assess standards/domains for targeted instruction
- Provides active student feedback about progress and guides decisions about next steps in the learning process
- Provides information for development of professional learning and cross-grade and curricular planning
Summative Assessment

- Provides evidence of student achievement for the purpose of making a judgment about student competence or program effectiveness.
- Usually takes the form of a symbol, a letter grade or number, or a comparison to a standard such as “Distinguished” or “Proficient,” that is reported to students and parents.
- At the classroom level, it determines how much students have learned at a particular point in time, for the purpose of communicating achievement status to others.
- At the program level, an assessment is summative when results are used to make judgments such as determining how many students are and are not meeting standards in a certain subject for purposes of accountability.
Ask yourself three questions:

- **What is the purpose?**
  - Many times we expect an assessment to fulfill many needs.
  - Results can be difficult to interpret or misunderstood.

- **Who will use the information?**
  - Considering your audience is important in developing your assessment and will impact your design.

- **How will it be used?**
  - Your audience will impact the test development process and reporting design.
Achievement gains credited to formative assessment practices will not emerge unless certain conditions are met.

- The assessment is designed so that it aligns directly with the content standards to be mastered.
- All of the items or tasks match what has been or will be taught.
- The assessment provides information of sufficient detail to pinpoint specific challenges, such as misunderstandings, so that teachers can make good decisions about what actions to take, and with whom.
- The results are available in time to take action with the students and action is taken based on the results.
Building Blocks

- Blueprints
- Item and Test Specifications
- Style Guides
- Alignment to Standards and Learning Targets
- Universal Design
- Depth of Knowledge
- Bias/Sensitivity
- Item and Data Reviews
Formative assessment strategies help to answer questions critical to good instruction:

- Who is and is not understanding the content?
- What are the student’s strengths and needs?
- What misconceptions do I need to address?
- What feedback should I give students?
- What adjustments should I make to instruction?
- What differentiation do I need to prepare?

Some of the significant achievement gains attributable to formative assessment are due to enhanced questioning and dialogue techniques (Black & Wiliam, 1998).
Students

- Are your students a part of the formative process?
- Sadler (1989) found that formative assessment improved student achievement when:
  - Students are able to hold a similar concept of quality as their teachers.
  - Students are able to monitor continuously the quality of their work.
  - Students have a variety of strategies from which to draw.
- Teachers and students can ask and answer the following questions:
  - Where am I going?
  - Where am I now?
  - How can I get there?
Students

- **Where am I going?**
  - Make certain students understand the learning target(s)
  - Utilize “anchors” of varying quality

- **How can I get there?**
  - Scaffold learning by focusing on the specific learning target or misconception
  - Allow for students to revise
  - Allow students to track, reflect, and communicate about their learning

- **Where am I now?**
  - Provide specific and timely descriptive feedback
  - Help students self-assess and set learning goals
Research

- Black & Wiliam’s (1998) research on the gains realized by formative assessment practices are among the largest found for any educational intervention.
  - The achievement gains realized by students whose teachers rely on formative assessment can range from 15 to 25 percentile points, or two to four grade equivalents, on commonly used standardized achievement test score scales.
  - This score gain, if applied to performance on recent international assessments, would move the United States rank from the middle of the pack of forty-two nations tested to the top five.
  - It greatly increases the achievement of low-performing students, in some cases to the point of approaching that of high-achieving students.
Power of Formative Assessment

- Research, assessment and curriculum resources were utilized for the information shared today.
- By no means is it everything, but it can be a starting point to begin thinking about formative assessment and best practices.
- Information is communicated in terms that will provide critical information to enhance instructional practices and improve student achievement.
- A continuous cycle of data review will continue each year to determine where gains are being made and which areas of instruction still present a challenge.
Do You Know

Based on assessment data, in what two areas do students struggle most?

Hint: Think big picture!
Areas of Focus

Vocabulary
- Plays an integral role in the understanding and learning of content
- Provides access to understanding an assessment item
- Content vocabulary
- Directional vocabulary

Problem Solving
- Students should be able to:
  - identify problems that can be solved
  - explore options for solutions
  - use appropriate thinking strategies
  - manage the whole process metacognitively
Directional Vocabulary

- It is important that directional vocabulary be taught consistently across grade levels.
- Students that do not understand vocabulary are not able to access the assessment item.
  - Support your position
  - Justify
  - Describe relationships
  - Utilize strategies
  - Interpret
  - Evaluate
  - Represent
<table>
<thead>
<tr>
<th>Problem Solving</th>
</tr>
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<tbody>
<tr>
<td><strong>Students</strong></td>
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<tr>
<td>➢ Students must <strong>understand</strong> the problem.</td>
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<tr>
<td>➢ Students must be able to <strong>devise</strong> a plan.</td>
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<tr>
<td>➢ Students must be able to <strong>implement</strong> the plan.</td>
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<tr>
<td>➢ Students must be able to <strong>reflect</strong> on the problem.</td>
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<tr>
<td><strong>Teachers</strong></td>
</tr>
<tr>
<td>➢ Teachers must provide <strong>challenging</strong> problems that <strong>engage</strong> students.</td>
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<tr>
<td>➢ Teachers should have students focus on the process rather than the outcome - How do I do it? vs. Can I do it?</td>
</tr>
<tr>
<td>➢ Teachers should allow students to work <strong>collaboratively</strong>.</td>
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</tbody>
</table>
Traffic Jam

We need 18 volunteers to play a game. Don’t be shy! Put your problem solving skills to the test!
Traffic Jam

The goal of the game is to move side A to side B and side B to side A, all facing forward.
Traffic Jam

Directions

• No moving backwards.
• A person can only move forward to an empty space.
• A person can not “jump over” their own team mate.
• Only one person can move at a time.
• One spot per person, no sharing.
• If any of these rules are broken, the group must begin again.
• Start Order: A B C D _ 1234
• End Order: 1 2 3 4 _ A B C D
Traffic Jam Discussion

So what?

Lessons learned?

How does this activity relate to students and the challenges they face in the classroom?

How does this activity connect to formative instructional practices?
ELA Areas of Challenge

- Knowledge of vocabulary terms
- Lack of understanding point of view and main/central idea
- Inability to make connections
- Lack of detail
- Summarizes or copies information
- Cites from only one passage
- Lack of organization
- Difficulty with compare and contrast
- Lack of exposure to various types of documents
Mathematics Areas of Challenge

- Knowledge of **vocabulary** terms
- Lack of understanding **abstract** concepts
- Inability to make **connections**
- Difficulty in explaining reasoning of self or others
- Difficulty in making **inferences**
- Inability to apply knowledge and skills to **real-world context**
- Inability to **devise a plan** to solve a problem
- Difficulty in describing **relationships**
Making Connections

Science

- Records **investigations** clearly and accurately
- **Interprets** graphs, tables, and charts
- **Writes** clearly
- **Organizes data** into graphs, tables, and charts
- **Analyzes** scientific data via calculations and **inference**
- Recognizes the importance of **explaining data** with precision and accuracy
- Uses **models**
- **Asks** quality questions

Social Studies

- **Constructs** charts and tables
- **Draws conclusions** and **make generalizations**
- **Analyzes** graphs and diagrams
- Determines **relevancy** and/or **consistency** of information
- Uses inch to inch map scale to **determine distance** on map
- **Compares** maps with data sets (charts, tables, graphs)
- **Compares similarities and differences**
- **Identifies** issues and/or problems and **alternative solutions**
Teach students using explicit instruction on a regular basis

- Clear **modeling** of the solution
- **Thinking** the specific steps **aloud** during modeling
- Presenting **multiple examples** of the problem and applying the solution to the problems
- Providing **immediate** corrective **feedback** to the students on their accuracy

Teach students using multiple instructional examples

- Multiple examples can also be presented by systematically **varying the range** presented.
- Content can be taught first with **concrete examples**, then with **pictorial representations**, and finally in an **abstract manner**.

Have students verbalize decisions and solutions to a math problem

- Many students with learning disabilities are **impulsive behaviorally** and when faced with multi-step problem solving frequently attempt to solve the problems by guessing or avoid the problem rather than implementing a solution strategy step-by-step. **Verbalization** may help to anchor skills and strategies both behaviorally and mathematically.
Special Populations

- **Teach students to visually represent the information**
  - Students benefit more when they use a visual representation prescribed by the teacher rather than one that they self-select (D. Baker, 1992).
  - Visuals that are designed specifically to address a particular problem type are more effective than those that are not problem specific (Xin, Jitendra, & Deatline-Buchman, 2005).

- **Teach students to solve problems using multiple strategies**
  - A strategy can include steps such as “Read the problem. Highlight the keywords. Solve the problem. Check your work.”
  - For example, the teacher first models several strategies for solving a problem. However, for most of the lesson, the teacher’s task was to lead the discussion in the direction of using strategies and to facilitate the discussion of the solutions provided by the students. Each student was free to select a strategy for use, but the teacher assisted the children in discussion and reflection about the choices made.

- **Provide ongoing formative assessment data and feedback**

- **Provide cross-age peer-assisted instruction to students**
It is essential that teachers integrate the study of **academic vocabulary and grammatical structures** while simultaneously building concepts.

It is critical to integrate language and content instruction because:

- Students learn a second language more successfully when instruction focuses on academic content rather than linguistic form (Crandall, 1987).
- Studying English in isolation without also learning grade-level concepts can delay a EL student’s academic progress.
- Language acquisition occurs when input is meaningful and understandable (Krashen, 1981; Krashen, 1982).
- Lessons that use concrete objects, graphics, manipulatives, and hands-on activities clarify and reinforce new concepts (Crandall, 1987).
Integrate Language and Content

Teach content vocabulary and language structures daily.

Teach students strategies to learn and study new vocabulary (i.e., vocabulary section in subject matter notebooks, class word wall, student-made bilingual dictionaries, and/or flashcards on spiral-bound index cards with definition, examples, word used in a sentence, picture/diagram, or a native language translation).

Integrate the four language modes (listening, speaking, reading, writing) into mathematics class.

Model the process. Talk aloud while solving problems on the overhead or chalkboard to show the thinking process and common errors.

Have students explain their thinking process aloud to a classmate while solving a problem.
Modes of Instruction

- Design multi-sensory lessons (**visual, auditory, tactile, kinesthetic**). Use **visuals** whenever possible to reinforce auditory instruction (i.e., charts, graphs, manipulatives, diagrams, models, real objects).
- Use **graphic organizers** to visually represent concepts.
- Design **hands-on** activities.
- Vary groupings throughout the lesson (i.e., independent work, pair work, small groups, whole class).
- Use **real-life** problem-solving situations to teach new concepts.
- Make **interdisciplinary connections** whenever possible.
Give explicit instruction and practice in **reading and writing word problems**. Teach students to **identify key words** in word problems.

Begin class with **warm-up activities using content language** to give students practice in sentence construction.

- Write a cloze exercise (a short paragraph with key words missing) or sentence starters on the board for students to copy and complete when they enter class.
- Give students a problem to solve, and then have them write the steps they used to solve it in complete sentences.

**Post labels and vocabulary cards** around the classroom.

- Have students **paraphrase** and write complex concepts in their **own words** (individually, pairs, or whole class).
English Learners

- Tap Prior Knowledge
  - Connect students’ *prior knowledge and experiences* to new learning.
  - Find out what students *already know* about a topic by making a semantic web on the board.
  - Integrate EL students’ *culture* into lessons whenever possible.
  - Give students opportunities to *share examples* from schools in their country and different ways of learning mathematics.
  - Begin a unit of study by *eliciting students’ own questions* about a topic.
<table>
<thead>
<tr>
<th>Special Populations</th>
<th>English Leaners</th>
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</thead>
<tbody>
<tr>
<td>- Vocabulary</td>
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<tr>
<td>- Modeling of the process and solution</td>
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<tr>
<td>- Think aloud</td>
<td>- Think aloud</td>
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<tr>
<td>- Multiple examples</td>
<td>- Multiple examples</td>
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<tr>
<td>- Immediate descriptive feedback</td>
<td>- Visualization</td>
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<tr>
<td>- Verbalization and visualization</td>
<td>- Multi-sensory experiences</td>
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<tr>
<td></td>
<td>- Tap into prior knowledge</td>
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<td></td>
<td>- Integrate culture</td>
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Next Steps

- Students need to know how to **read and analyze all types of documents**.
  - Historical, scientific, mathematical, argumentative, informational narrative, persuasive, etc.
  - Pick out important and relevant details to use to support the topic or claim
  - Make connections between concepts, ideas, etc.
- Students need to know how to **organize**.
- Students need to be able to **apply** their knowledge and skills.
- Vocabulary is important.
  - Be consistent across all grades and subject areas.
- Students need to be able to **understand and reflect** on the problem and **design and implement** a plan.
- Make certain your classroom assessment is aligned to the learning target(s) of the standard and **reflect the rigor**.
- It takes the entire team (Grade, Subject, School, District)!
Recommendations

- Begin to **change your culture of thinking** within the organization.
- Implement a **balanced assessment system**.
- Before developing assessments, define the **purpose of the assessment**. Too many times we expect an assessment to do more than it can.
- **Align instruction and assessment to reflect the rigor** in the learning targets/standards.
- **Develop** valid and reliable assessments. Assessment development is a **formal process**. It takes time!
- **Increase student learning, motivation and achievement** by implementing formative instructional and assessment practices.
Georgia FIP

- Online formative instructional practices tool provided by the GaDOE.
- Blended professional learning opportunity
  - Flexible online and face-to-face experiences for teachers, coaches, and leaders
- Focus on core components of formative instructional practice
  - Creating and using clear learning targets
  - Collecting and documenting accurate evidence of student achievement
  - Analyzing evidence and providing effective feedback
  - Preparing students to self-assess, reflect, and take ownership of their learning
- Aligned to Teacher and Leader Keys Effectiveness Systems

http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/GeorgiaFIP.aspx
How Can GCA Help?

- LEAD
- ENGAGE
- SERVE

...students, teachers, schools and districts
...to explore and use innovative approaches to assessment and instruction
...stakeholders to inform decision-making, guide instructional practice, and improve student learning and achievement
Assesslets

- **Formative** tools used to guide instruction as students prepare for Georgia Milestones assessments
- Include **multiple item types** like those found on Georgia Milestones assessments
- **Aligned** to Georgia Standards of Excellence reflecting the rigor of the content
- **Flexible** options for use and administration
- **Scored** by experienced GCA raters
- **Timely results** provided in the form of an **enhanced data file**, including comment codes
- Available in grades 3-8 and High School EOC courses in ELA and Mathematics
- Grades 1-2 ELA available in October 2015
Professional Learning

- **Interactive, engaging** and **reflective**
- **Experienced** facilitators with expertise in K-12 classrooms as well as assessment practices and strategies

**Topics:**
- Literacy (Students and Teachers)
- Mathematics
- Assesslet Scoring and Data Analysis
- Formative Assessment Practices
- Data Driven Decision Making

**Customized** solutions also available
Support a well-planned approach to a balanced assessment system

Provide information to make decisions grounded in valid and reliable data collected from common assessments

Ensure alignment of curriculum, instruction and assessment

May include

- Alignment to Standards and/or Performance Targets
- Evaluation of Depth of Knowledge (DOK) Classifications
- Universal Design
- Adherence to Style Guide and Item Specifications
- Bias/Sensitivity
- Item/task analysis: p-value, point biserial, KR 20, discrimination index, etc.
3-2-1

- Three things you discovered
- Two questions you still have
- One action you will take
Questions?
ADDRESS:
The Georgia Center for Assessment
1985 New Jimmie Daniel Road
Athens, GA 30606

Dr. Jeff Barker
706-542-5589
jabarker@uga.edu

Kay Elder
706-542-5599
kselder@uga.edu