



# **Why Collect Data?**

**Understanding the Value and Usefulness of  
Comprehensive Assessment System Components**



**Association of Alaska School Boards  
64<sup>th</sup> Annual Conference  
November 10<sup>th</sup>, 2017  
Anchorage, Alaska**

# Why Collect Data?

## Welcome to the Information Age

Shopping Habits  
Temperatures  
Median  
Baseball Stats  
Stock Market  
Population  
Ratios  
Statistics  
Mileage  
Census  
GDP  
Health Statistics  
Internet Searches  
Economy  
Demographics  
Trends  
Housing  
Rainfall  
Households  
Unemployment  
Customers  
Purchasing  
Averages  
Sales  
Manufacturing  
Poverty  
Growth Rates  
Wages  
Fitness  
Trends

# Why Collect Data?

**“Know where to find information and how to use it. That’s the secret of success.”**

**- Albert Einstein**





# Why Collect Data?

**Education has begun collecting massive amounts of data:**

- Student Performance
- Attendance
- Graduation Rates
- Student Subgroups
- English Learners
- Teacher Qualifications
- School-by-School
- District-by-District
- State-by-State



# Why Collect Data?

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The big question is:

What are we doing with it?

# Why Collect Data?

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- ✓ Student Performance
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- District-by-District
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# Why Collect Data?

## Ways We Assess Students' Performance

Asking Questions

Quizzes

Exams

Observation

Benchmark Tests

State Tests

Federally Mandated Tests



# Why Collect Data?

## Common Alaska Student Assessments

WorkKeys                      Measures of Academic Progress - MAP

Wechsler Intelligence Scale                      AIMSweb

Performance Assessment for Alaska Students - PEAKS

STAR 360                      Alaska Developmental Profile

National Assessment of Educational Progress - NAEP

Vineland Adaptive Behavior Scale                      Woodcock Johnson

WIDA - ACCESS for EL's



# Why Collect Data?

**Some questions asked about assessment:**

- 1. Are we doing too much?**
- 2. Does assessment take away too much time from instruction?**
- 3. What are the results used for?**
- 4. Who decides what assessments to use, and why?**



# Why Collect Data?

## Two Misunderstood Aspects of Assessments

### Standardized Assessments -

The test is given multiple times with all test takers answering the same questions, or from the same bank of questions, and the scoring is applied consistently to all tests taken. This allows comparisons to be made between test takers.

# Why Collect Data?

## Two Misunderstood Aspects of Assessments

### Scaled Scores -

This is a statistical method for converting raw scores into a scale that takes into account the various difficulties of test items answered. So, if one test has slightly easier questions answered, the test taker must answer more questions correctly to get the same score as someone answering harder questions.

# Why Collect Data?

## Types of Assessment

**Normative Assessments**

**Criteria-Based Assessments**

**Program Assessments**

**Performance-Based Assessments**

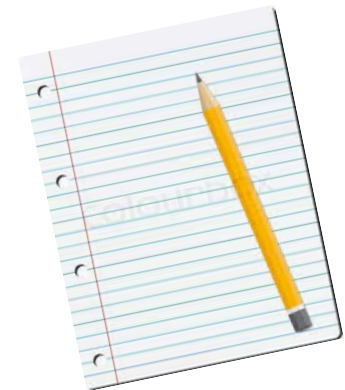
**Summative Assessments**

**Formative / Interim Assessments**

**Benchmark Assessments**

**Progress Monitoring Assessments**

**Diagnostic Assessments**





# Why Collect Data?

## Types of Assessment

### Normative Assessments -

Assessment scores based upon actual performance of groups that have taken the test. Good norm studies include hundreds of thousands of test administrations with a wide net of racial, gender, age, and demographic groups. Results are often shown as percentiles, or this is where you stand when compared to the normed group. At 75<sup>th</sup> percentile, you are 75<sup>th</sup> out of 100.

# Why Collect Data?

## Types of Assessment

### Criteria-Based Assessments -

Assessments based on set of skills and knowledge. Students get X number right and X number wrong. Results can be a percentage of right and wrong, but standardized tests often use scaled scores to account for slight differences in the tests. Scaled scores allow comparisons to be made between test takers.

# Why Collect Data?

## Types of Assessment

### Program Assessments -

The most common assessment. These are tests usually created by the curriculum publisher, or by a teacher, and are used to measure whether or not the students learned what was taught. These are always criteria-based, but can be scored in a variety of ways, i.e. % right or wrong; use of rubrics; observations; presentations; task performance; self-evaluation. The results of these tests at the classroom level are used to assign grades to a student for the class.

# Why Collect Data?

## Types of Assessment

### **Performance-Based Assessments -**

**This is still a criteria-based assessment, but much more involved than a normal program assessment. These assessments are usually associated with a long-term unit or class project where individuals or groups of students have to perform an activity or produce a product that demonstrates mastery of skills and knowledge associated with the unit. These assessments are normally scored based on a lengthy rubric.**



# Why Collect Data?

## Types of Assessment

### Summative Assessments -

Assessments that evaluate student learning at the end of a defined instructional period, typically at the end of a unit, project, or academic period (end of semester), covering most skills and knowledge taught during this period. These assessments usually have high stakes, or a high point value.

# Why Collect Data?

## Types of Assessment

### **Formative / Interim Assessments -**

**Assessments given during an instructional period in order to evaluate student learning and progress. Data from these assessments inform teachers as to the effectiveness of instruction and allow for in-process adjustments to instruction and activities to enhance student learning.**

# Why Collect Data?

## Types of Assessment

### Benchmark Assessments -

The fundamental purpose of these assessments is to provide information to guide instruction. These assessments are also called screening assessments in that they test all students at grade level in order to determine students' grade level abilities. This data can then be used to determine what instruction is best suited for different groups or for individual students.

# Why Collect Data?

## Types of Assessment

### Progress Monitoring Assessments -

These assessments are used to monitor student progress on a particular skill and to evaluate the effectiveness of instruction on that particular skill. In order to evaluate instruction, these tests are given at students' instructional level. They are normally associated with some sort of intervention deemed necessary based upon the results of benchmark, or screening, assessments.



# Why Collect Data?

## Types of Assessment

### Diagnostic Assessments -

Assessments given to determine particular concepts or skills that a student has, or does not have, in order to target instruction at the proper instructional level. These assessments are often given to diagnose very particular difficulties in order to design effective instruction.

# Why Collect Data?

## Common Assessments

**PEAKS**

**NAEP**

**MAP**

**STAR 360**

**Alaska Developmental Profile**

**Woodcock Johnson**

**WIDA - ACCESS for EL's**

**AIMSweb**

## Types of Assessment

**Normative Assessments**

**Criteria-Based Assessments**

**Summative Assessments**

**Formative Assessments**

**Benchmark Assessments**

**Performance-Based Assessments**

# Why Collect Data?

## Common Alaska Student Assessments

- PEAKS** - Criteria-Based; Summative
- NAEP** - Criteria-Based; Summative
- MAP** - Normative; Benchmark
- STAR 360** - Normative; Formative; Progress Monitoring; Diagnostic
- Kindergarten Developmental Profile** - Criteria-Based; Performance-Based
- Woodcock Johnson** - Criteria-Based; Performance-Based; Diagnostic
- WIDA - ACCESS for EL's** - Criteria-Based; Performance-Based
- AIMSweb** - Normative; Benchmark; Progress Monitoring

# Why Collect Data?

## Important Assessment Questions:

1. Is it valid?
2. Is it reliable?
3. Is it fair?





# Why Collect Data?

## Validity

Does it measure what one  
is intending to measure?

# Why Collect Data?

## Validity

### Example:

To find out if a student can read at grade level.

**Valid**

1. Have student read grade level reading material out loud.
2. Record errors.
3. Ask comprehension questions.

# Why Collect Data?

## Validity

### Example:

To find out if a student can read at grade level.



1. Have student fill in the blanks in a grade level reading passage from a selection of three choices for each blank.

# Why Collect Data?

## Validity

1. Have student fill in the blanks in a grade level reading passage from a selection of three choices for each blank.

**Sample:**

When John's family goes to the (tree, beach, fireworks), they enjoy building (sand, dirt, wooden) castles.





# Why Collect Data?

## Reliability

**The degree in which an assessment produces consistent results.**

# Why Collect Data?

## Reliability

### Measuring Reliability:

1. Give the test multiple times to similar groups of students.
2. Compare results.
3. Establish a Standard Error of Measurement.

# Why Collect Data?

## Reliability

### Example:

To find out if a student can read at grade level.

Reliable

1. Have student read grade level reading material out loud.
2. Record errors.
3. Ask comprehension questions.
4. *Compare scores to typical grade level performance from a reliable scale.*

# Why Collect Data?

## Reliability

### Example:

To find out if a student can read at grade level.



1. Have student fill in the blanks in a grade level reading passage from a selection of three choices for each blank.



# Why Collect Data?

## Reliability

1. Have student fill in the blanks in a grade level reading passage from a selection of three choices for each blank.

**Sample:**

When John's family goes to the (tree, beach, fireworks), they enjoy building (sand, dirt, wooden) castles.



# Why Collect Data?

## Fairness

Fairness refers to freedom from bias. The test should be appropriate regardless of race, religion, gender, or age. There should be no disadvantage other than lack of knowledge and skills being measured.

# Why Collect Data?

## Fairness

### Example:

To find out if a student can read at grade level.

Fair

1. Have student read *culturally appropriate* grade level reading material out loud.
2. Record errors.
3. Ask comprehension questions.
4. Compare scores to typical grade level performance from a reliable scale.

# Why Collect Data?

## Fairness



1. Have student fill in the blanks in a grade level reading passage from a selection of three choices for each blank.

**Sample:**

When John's family goes to the (tree, beach, fireworks), they enjoy building (sand, dirt, wooden) castles.



# Why Collect Data?

## Important Assessment Questions:

1. Is it valid?
2. Is it reliable?
3. Is it fair?
4. Does it have value?



# Why Collect Data?

## Value

**Collecting information is not the goal.**

**Knowing the value of the information is important to understanding why.**

**The actions taken as a result of the data collection is the goal and purpose.**

# Why Collect Data?

## Value

**AN IMPORTANT ASPECT OF VALUE:**

**Know what the test is telling you, and  
know what it is not telling you.**



# Why Collect Data?

## Value

### ANOTHER IMPORTANT ASPECT OF VALUE:

**If the data from an assessment is not  
used by someone to inform and  
improve the education of students,  
then stop doing it!**



# Why Collect Data?

## Value at the District Level

### Use data to:

- Improve curriculum choices
- Improve teacher training
- Create achievable goals
- Inform strategic planning
- Inform budgeting
- Inform policy-making

# Why Collect Data?

## Value at the School Level

Use data to:

- Inform school improvement planning
- Inform in collaborative meetings
- Improve observations and feedback
- Determine interventions for students
- Maximize efficiencies in scheduling
- Target training in curriculum implementation and teaching practices
- Involve the community in sharing data

# Why Collect Data?

## Value at the Classroom Level

Use data to:

- Change instructional emphasis and practices
- Make changes in instructional time
- Select appropriate interventions
- Group students for efficiencies
- Pinpoint deficiencies with diagnostic tests
- Progress monitor intervention effectiveness
- Collaborate with others to share ideas and strategies
- Communicate student successes, needs to parents

# Why Collect Data?

## National Assessment of Educational Progress (NAEP)

Test in reading, math, science, and writing given to select 4<sup>th</sup> and 8<sup>th</sup> grade students across the U.S. every other year. Carefully administered testing increases its validity and reliability. Alaska tests only reading and math.



# Why Collect Data?

## NAEP

### What It Tells Us:

- One of the most respected assessments in the U.S.
- Known as the “Nation’s Report Card”
- Used to evaluate state-by-state student performance
- Provides demographic data on subgroups
- Helps measure assessment rigor between states

# Why Collect Data?

## NAEP

### What It Does Not Tell Us:

- No district or school level data
- Only reading and math are tested in Alaska
- How individual districts, schools or students are doing
- Specific data on what a state's students know or do not know

# Why Collect Data?

## Performance Evaluation for Alaska's Schools (PEAKS)

Summative statewide assessment on the Alaska State Standards for English language arts (ELA), math, and science designed by Data Recognition Corporation (DRC). Administered once a year and mandated by the Every Student Succeeds Act (ESSA).

# Why Collect Data?

## PEAKS

### What It Tells Us:

- Informs educators and the public on performance of schools on state standards
- Statewide, district, and local data on student learning
- Provides information to parents
- Assesses ELA and math for grades 3 – 10
- Assesses science in grades 4, 8, and 10
- Provides districts an overview of school and student performance that can guide decisions on curriculum, instruction, and professional development
- Used to designate schools for extra support
- Students are given one of four Achievement Levels

# Why Collect Data?

## PEAKS

### What It Does Not Tell Us:

- Writing was not assessed in 2017. It will be added in 2018.
- Detailed information on school, classroom, or student performance on each standard
- Detailed information to change classroom instructional practices
- Information on why students are struggling
- Interim progress on student learning



# Why Collect Data?

## AIMSweb & AIMSwebPLUS

An assessment tool produced by Pearson that measures student skills in reading and math against grade level targets. Results group students in tiers of performance. This tool includes benchmarking and progress monitoring tools and can be done with paper and pencil.

# Why Collect Data?

## AIMSweb

### What It Tells Us:

- District, school, classroom, and student level data
- Measures primary grades reading and math “indicators” of grade level performance by 3<sup>rd</sup> grade
- Measures reading rate and accuracy and compares to national norms at grade levels
- Measures math computation and conceptual skills
- Provides benchmarking data up to three times per year to screen students for possible interventions
- Provides progress monitoring to frequently measure the effectiveness of instruction

# Why Collect Data?

## AIMSweb

### What It Does Not Tell Us:

- Primary “indicators” of performance do not always predict future performance
- The most common reading indicators are Rate and Accuracy, which does not necessarily correlate to reading comprehension
- Diagnostic information on why students are struggling
- Valid and reliable data beyond 8<sup>th</sup> grade

# Why Collect Data?

## Measures of Academic Progress (MAP)

An assessment product of the Northwest Education Association (NWEA) that uses tests in reading, math, language usage, and science to evaluate student performance against national norms. MAP has a Learning Continuum that lists skills students have learned to achieve levels of performance.

# Why Collect Data?

## MAP

### What It Tells Us:

- District, school, classroom, and student level data
- Scale scores (RIT units) on performance that correlate to an extensive, up-to-date norms study
- Grade level performance, based on norms
- Typical (normed) student targets for growth
- Reading comprehension based on reading passages and answering comprehension questions
- Math computations and concepts
- Language editing skills
- Lists of skills tested and recommendations for instruction



# Why Collect Data?

## MAP

### What It Does Not Tell Us:

- Grade level performance
- RIT scores do not correlate well to other test data
- Does not test writing skills, just editing skills
- Skills tested are the Learning Continuum skills, not necessarily the same as state standards or the skills taught in the adopted curriculum
- Margin of error in 8<sup>th</sup> through 12<sup>th</sup> grades is higher than the typical projected growth
- No progress monitoring

# Why Collect Data?

## Renaissance STAR 360

An upgraded version of the STAR assessment by Renaissance Learning that is much more comprehensive than the previous versions. Benchmark and progress monitoring tests for reading, math, and early literacy provide detailed skill information and percentile rankings for students. Takes less than 20 minutes to administer.

# Why Collect Data?

## STAR 360

### What It Tells Us:

- District, school, classroom, and student level data
- Comprehensive tool with formative, progress monitoring, and some diagnostic assessments
- Compares results to national norms and predicts growth rates (Student Growth Percentile)
- Provides detailed lists of skills learned, skills needing work, and next steps
- Provides links to lessons that teach identified skills
- Customizable for individual student assessment and skill development

# Why Collect Data?

## STAR 360

### What It Does Not Tell Us:

- Tests reading and math, not writing
- Skills tested may not align with curriculum
- Lessons offered may not align with curriculum or pacing
- Attempts link to Alaska Standards, but these links are typically weak
- Further diagnostic assessments will be needed for some students

# Why Collect Data?

## WIDA – ACCESS for ELLs 2.0

Assessment developed by the WIDA consortium and chosen by Alaska to meet federal requirements for testing English Learners (EL's). Assesses each of the four language domains: Reading; Writing; Listening; Speaking. Only given to students that are designated English Learners once per year.



# Why Collect Data?

## WIDA - ACCESS

### What It Tells Us:

- Language proficiency score of EL's based on four language domains
- Satisfies federal requirement for measuring EL's
- Provides data to allow students to exit EL status
- Provides information to teachers for enhancing instruction for EL's
- Both individual and school-wide performance data
- Useful longitudinal data per student
- Provides districts with information to help evaluate their EL programs

# Why Collect Data?

## WIDA - ACCESS

### What It Does Not Tell Us:

- Formative or interim data throughout the year on student progress
- Provides scale score and proficiency level, but does not provide detailed performance on ELA standards
- Some tests as part of ACCESS are given individually and the process of test administration is very time consuming

# Why Collect Data?

## Types of Assessment

**Normative Assessments**

**Criteria-Based Assessments**

**Performance-Based Assessments**

**Progress Monitoring Assessments**

**Summative Assessments**

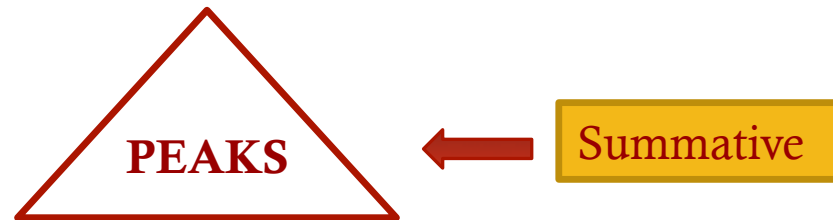
**Formative Assessments**

**Diagnostic Assessments**

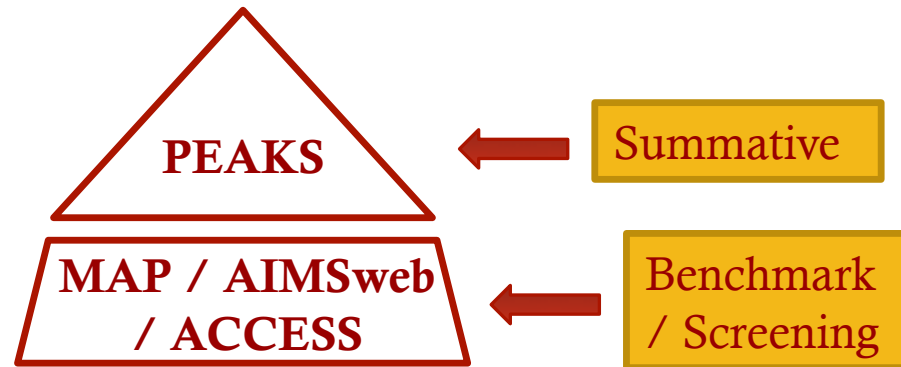
**Interim Assessments**

**Program Assessments**

# Why Collect Data?

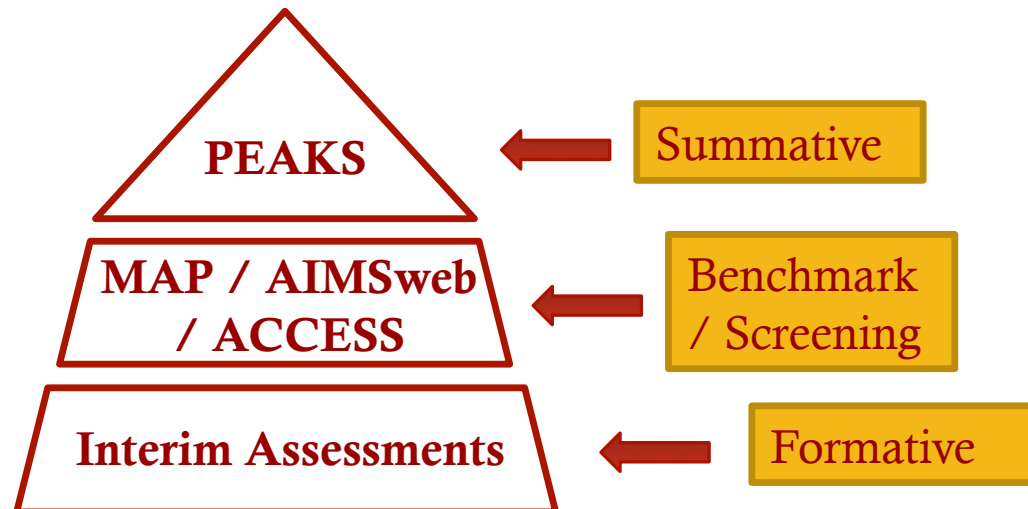


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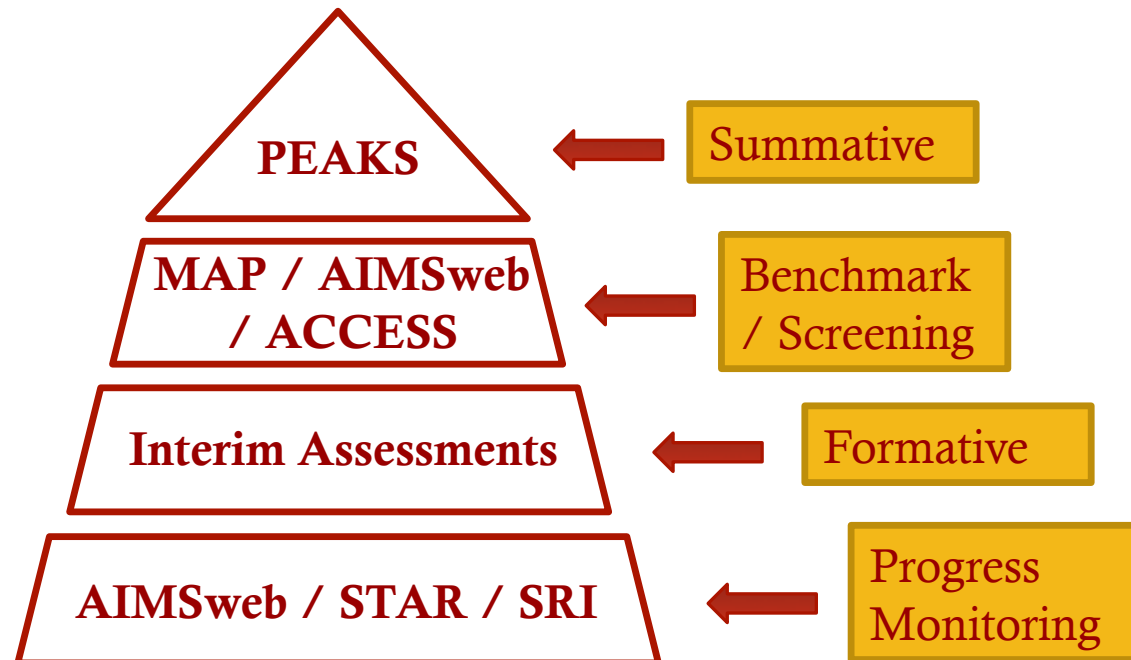




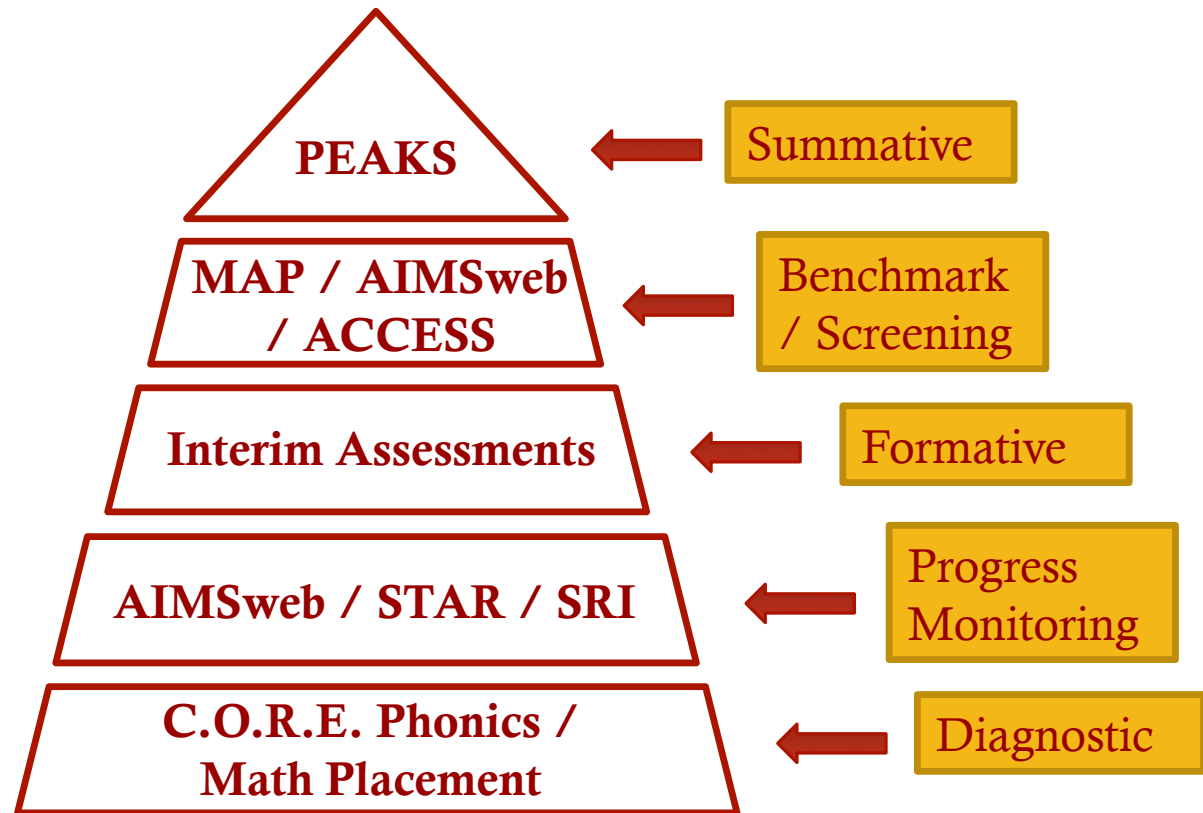
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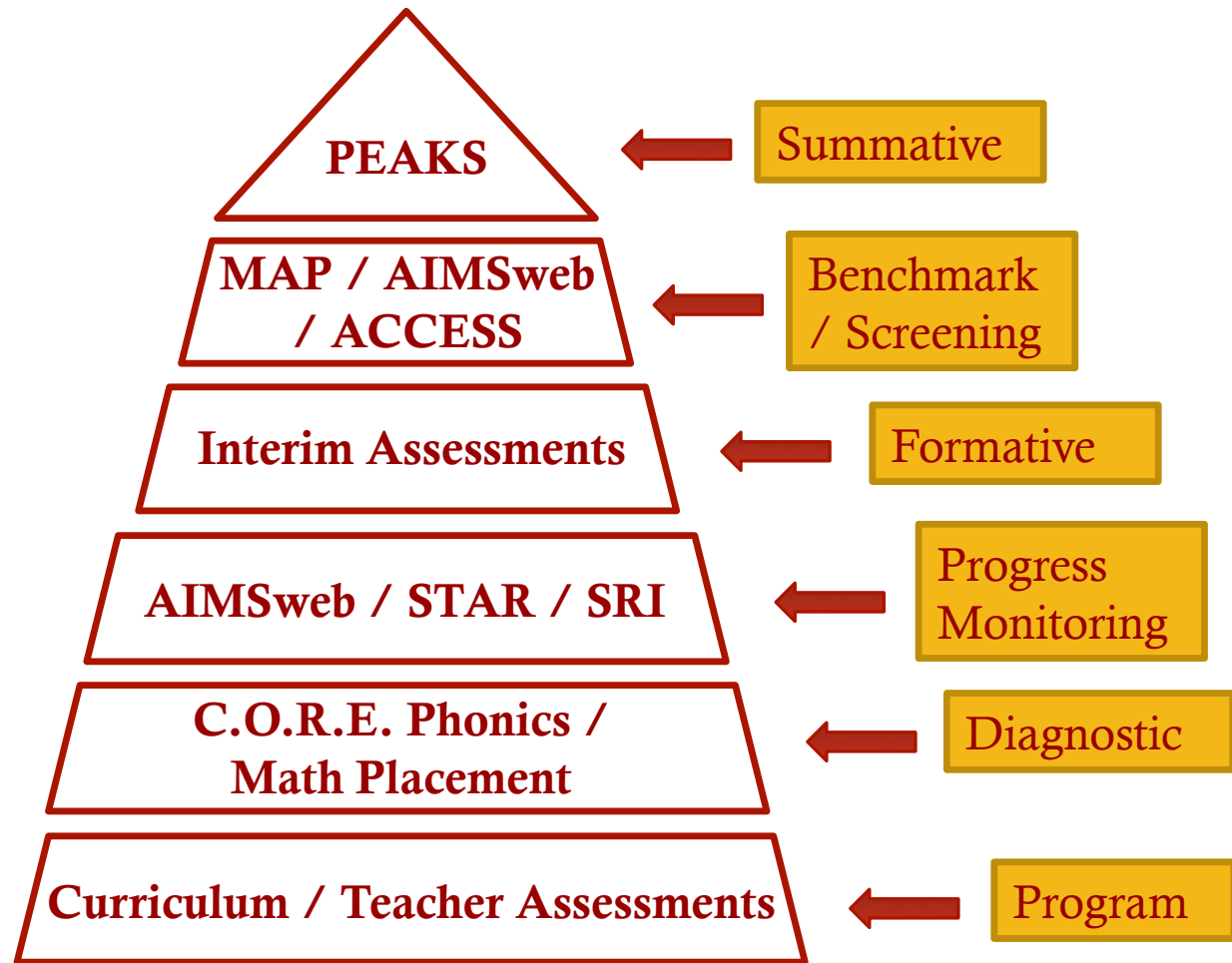
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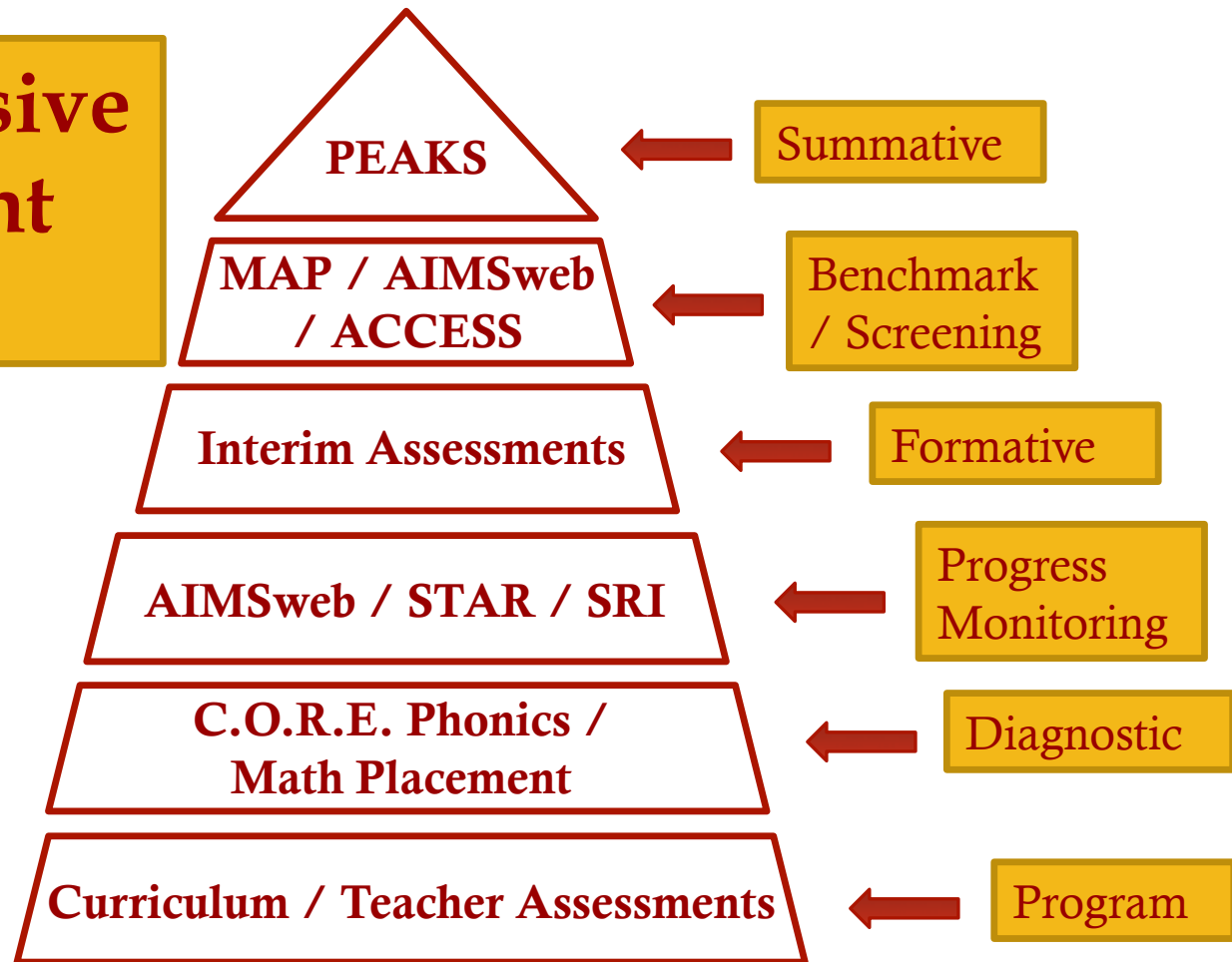


# Why Collect Data?



# Why Collect Data?

## Comprehensive Assessment System





# Why Collect Data?

## A Way Forward With Assessments

**Understand what the needs are.**



# Why Collect Data?

## A Way Forward With Assessments

Create a Comprehensive  
Assessment System.



# Why Collect Data?

## A Way Forward With Assessments

**Ensure assessments have value.**



# Why Collect Data?

## A Way Forward With Assessments

Use collaboration to determine actions to be taken as a result of the data.



# Why Collect Data?

## A Way Forward With Assessments

Continually review all aspects of the assessment system and make changes as the needs arise.





# Why Collect Data?

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**Expect Educational Excellence**  
*“Consulting, Collaborating, Presenting & Analysis”*

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