

Designing a Comprehensive Assessment System

National Conference on
Student Assessment

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The WestEd Mission

WestEd is a nonprofit, nonpartisan research, development, and service agency that works with education and other communities to promote excellence, achieve equity, and improve learning for children, youth, and adults.

Presenters

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Presentation Overview

- **Assessment landscape**
- **Attributes of and practical steps for developing a comprehensive assessment system**
- **Implementation of a balanced and comprehensive assessment**
- **Making it work in districts — implementation of audit results**
- **Demonstration of the Assessment System Visualizer Tool developed by the Center on Standards and Assessment Implementation**

Current Assessment Context



Creating Opportunities under ESSA



Why Is Educational Assessment Important?



We Gather Evidence in Many Ways



Why Develop a Comprehensive Assessment System...

- To **ensure coherence** in assessments across different levels (state, district, school)
- To ensure that state and local assessment systems are **drawing data from multiple sources** for informed decision-making
- To ensure assessments **do not place undue burden** on staff and instructional time

Principles of a Comprehensive Assessment System

- Includes multiple **assessments that work in unison**
- Ensures **assessments serve specific purposes** or address specific needs
- Ensures **assessments are fair and accessible** to all students
- Ensures **assessment reflect high standards** of technical quality

Principles of a Comprehensive Assessment System

- Makes **use of existing and emerging technology** that effectively and accurately assesses students
- Provides **clear guidelines** for appropriate test administration and use
- **Designed to minimize burden** on staff capacity, instructional time, and budget

Considerations for a Comprehensive Assessment System





- Assessments generally developed for primary purpose
- Purpose lays the foundation for appropriate types of assessment
- Agreement about purpose and use is imperative
- Avoid unintended consequences with transparency and maintenance of purpose

Alignment



- **Within and across the learning continuum**
 - Vertically within the learning continuum
 - Horizontally across the different parts of the system (state, district, school)
- **All work in support of the learning goals or standards**
- **Different assessments in the system have particular roles to play to support the alignment**

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Balance



A balanced assessment system recognizes trade-offs for each assessment in a system, seeking balance between benefits/values and costs/burdens.

Examples of benefits/values:

- Information
- Meeting stakeholder needs
- Meeting program and policy needs

Examples of costs/burdens:

- Funding
- Time
- Stakeholders' perceived benefits

Recommendations for Designing a Comprehensive Assessment System

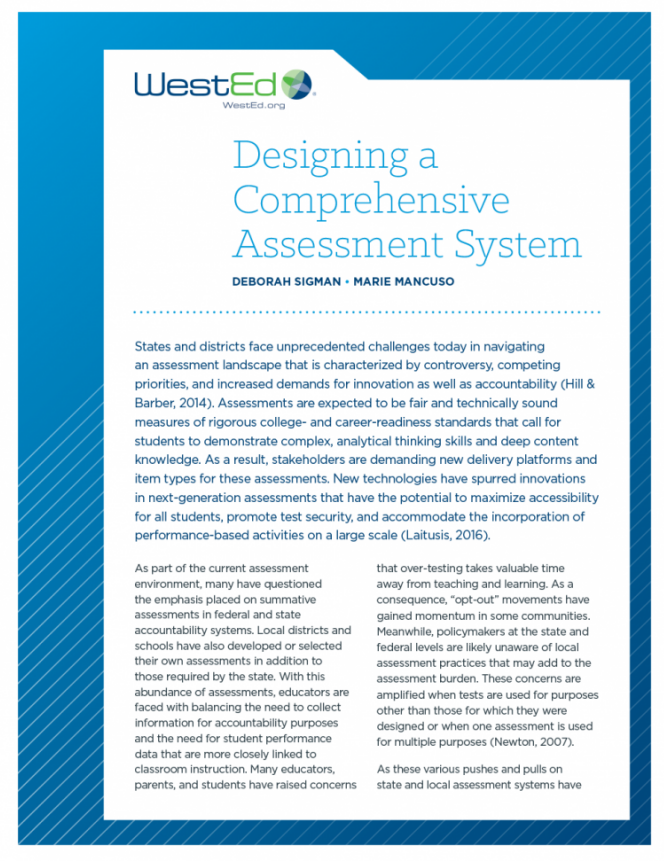
- Develop a **conceptual framework** that can be used to build common understanding of the comprehensive assessment system.
- **Engage stakeholders** in establishing principles that guide the redesign process.
- Identify and **weigh the information needs** of a wide range of stakeholders.

Recommendations for Designing a Comprehensive Assessment System

- **Keep policymakers and stakeholders informed** about the assessment system design.
- Consider contextual information and remember: **one size does not fit all.**
- **Take stock:** conduct an inventory of all measures in the current assessment system. What are the benefits/values of each assessment compared to the burdens/costs?

Designing a Comprehensive Assessment System

- Details purposes and characteristics of a comprehensive assessment system
- Outlines concrete steps that policymakers and stakeholders might consider
- Provides examples from three state education agencies engaged in creating a comprehensive assessment system
- Link to WestEd Brief: [Designing a Comprehensive Assessment System](#)





Phase I: Looking at Assessments **Used**

Fresno County's Story

Balanced Assessment Training Day 1

Setting the Stage for a Balanced Assessment System



.Know what's in place:

- Identify and eliminate gaps and redundancies (overall and for specific populations of students).
- Identify high-quality assessments that maximize instructional goals.
- Think about how each assessment contributes to the balance of the whole assessment system.
- Highlight assessments that provide results useful to teachers, students, and California's Local Control Accountability Plan (LCAP).



Teacher Engagement

Enabling teachers to make sense of the local assessment system can build a shared understanding of what purposes the assessments serve and how the results are used.





Options to Conduct an Assessment Inventory

Two of several that are available:

- Student Assessment Inventory for School Districts (Achieve) (adopt/adapt)

. <http://www.achieve.org/assessmentinventory>

- Assessment Inventory Resource (Center on Standards and Assessment Implementation [CSAI]) (build inventory)

. <http://www.csai-online.org/sites/default/files/Assessment%20Inventory%20Resource%20and%20TAP%20Handout.pdf>



Assessment Charting Activity

- Pull up your Assessment Audit data
- Label Post-It notes with each assessment using the color scheme below
 - **Diagnostic**
 - **Common**
 - **State**
 - **Benchmark/Interim**
 - **Grades**
- If you missed some in your audit, add them now
- Place them on your chart using the following axes



Assessment Chart





Guiding Questions

- What trends or patterns do you see?
 - By grade?
 - By assessment type?
- What were the reasons assessments were added to the system?
- Why are there certain types of assessments missing?
- What is the current reality that requires/strongly encourages certain assessments?
- How are the assessments used in the district/on site?
- What would be the political fallout for adding or taking away assessments?











Phase II: Looking at Assessment Use

Fresno County's Story

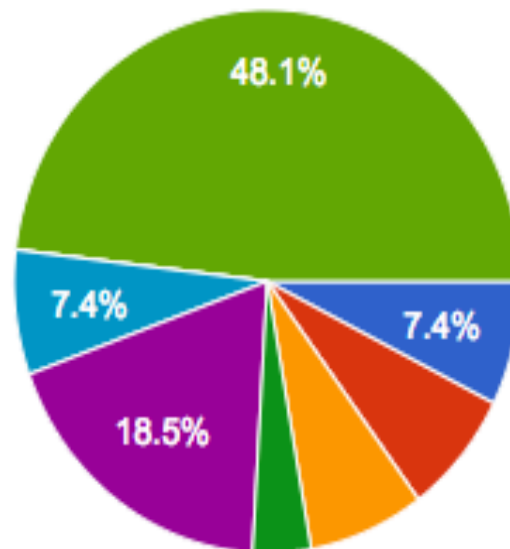
Balanced Assessment Training Day 2

First Choice



1st Choice

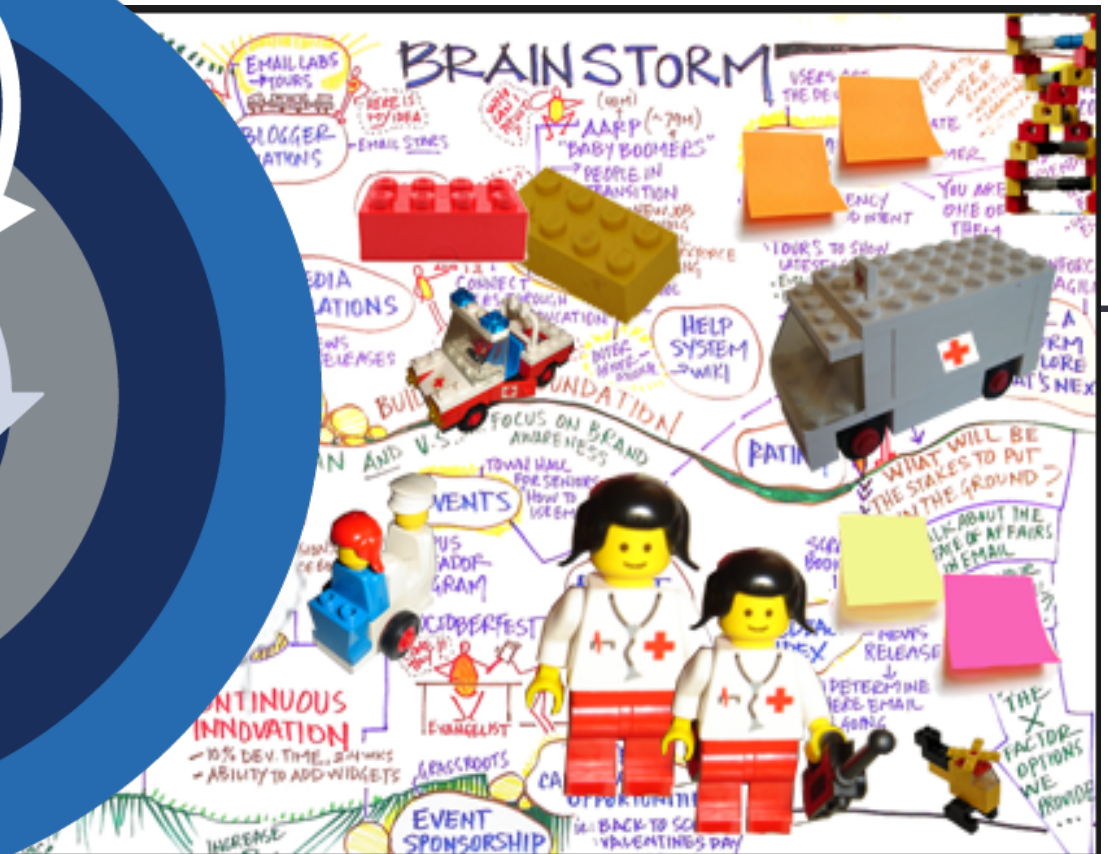
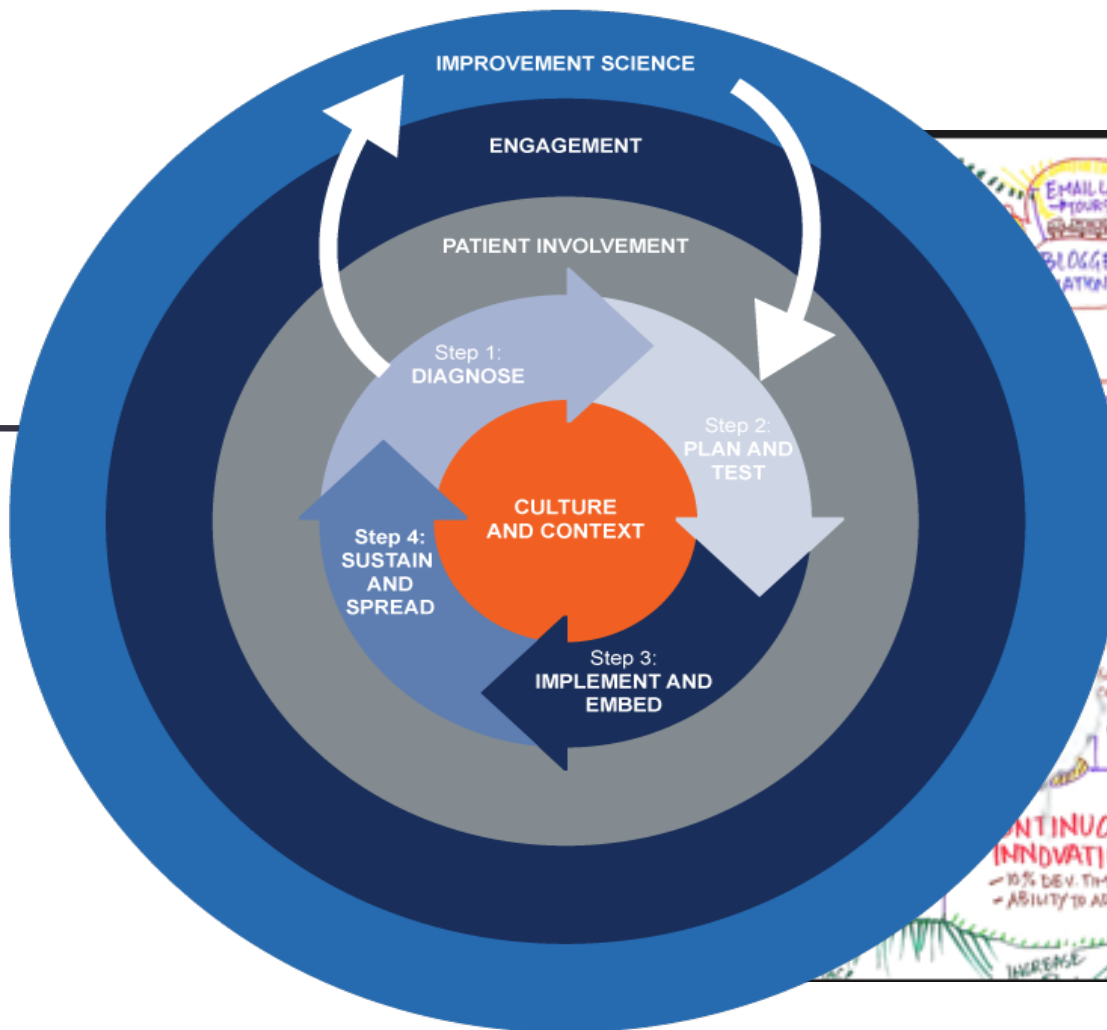
27 responses



- Assessment Quality Training (e.g., item & test statistics, reliability)
- Assessment Data Analysis Process
- Data Visualization
- Assessment Development
- Curriculum Mapping
- Nothing, we are good. :)
- Other
- Assessment Use (e.g., who is using and how are they using the assess...



Data Use Process





Know Thy Purpose

Questions to reflect upon:

- What is the **purpose** of each assessment?
- Do leaders, teachers, and students **understand** the purpose?
- **Who** should be looking at what assessments? (State Summative, Benchmark, Unit Tests, Formative, Diagnostic)
- **Why** should they be looking at that assessment?

Using One Test for Multiple Purposes



Mathematics Interim Assessment Blocks

IAB Name	Grade		
	3	4	5
Operations and Algebraic Thinking	✓	✓	✓
Numbers and Operations in Base 10	*	✓	✓
Fractions	✓	✓	✓
Geometry		*	*
Measurement and Data	✓	*	*
Mathematics Performance Task	✓	✓	✓

Unit Title	Pacing	Standards		
1. Addition and Subtraction within 10	5 weeks	1.OA.1 1.OA.2 1.OA.3 1.OA.4	1.OA.4 1.OA.5 1.OA.5 1.OA.7	1.OA.8 1.NBT.1 1.MD.4
2. Defining Attributes of 2-D and 3-D Shapes	2 weeks	1.G.1 1.G.2		
3. Partitioning Circles and Rectangles	2 weeks	1.G.3		
4. Addition & Subtraction within 20	3 weeks	1.OA.1 1.OA.2 1.OA.3 1.OA.4	1.OA.4 1.OA.5 1.OA.5 1.OA.7	1.OA.8 1.NBT.1 1.MD.4
5. Counting and Place Value	5 weeks	1.NBT.1 1.NBT.2	1.NBT.3 1.NBT.5	1.MD.4
6. Addition and Subtraction within 100	5 weeks	1.OA.3 1.OA.5 1.OA.7	1.NBT.1 1.NBT.2	1.NBT.4 1.NBT.6
7. Measuring length with Non-Standard Units	2 weeks	1.MD.1 1.MD.2		
8. Time	2 weeks	1.MD.3 1.G.3		





IS MY GOAL S.M.A.R.T.?

Goal:

Specific: What EXACTLY do you want to achieve?

Measurable: How will you know when you've achieved it?

Attainable: Is it something you have control over?

Relevant: Why is this applicable to your life?

Time-Based: When do you want to achieve your goal?



How do we use our assessment data to monitor progress and quickly make adjustments to better meet the needs of our students?



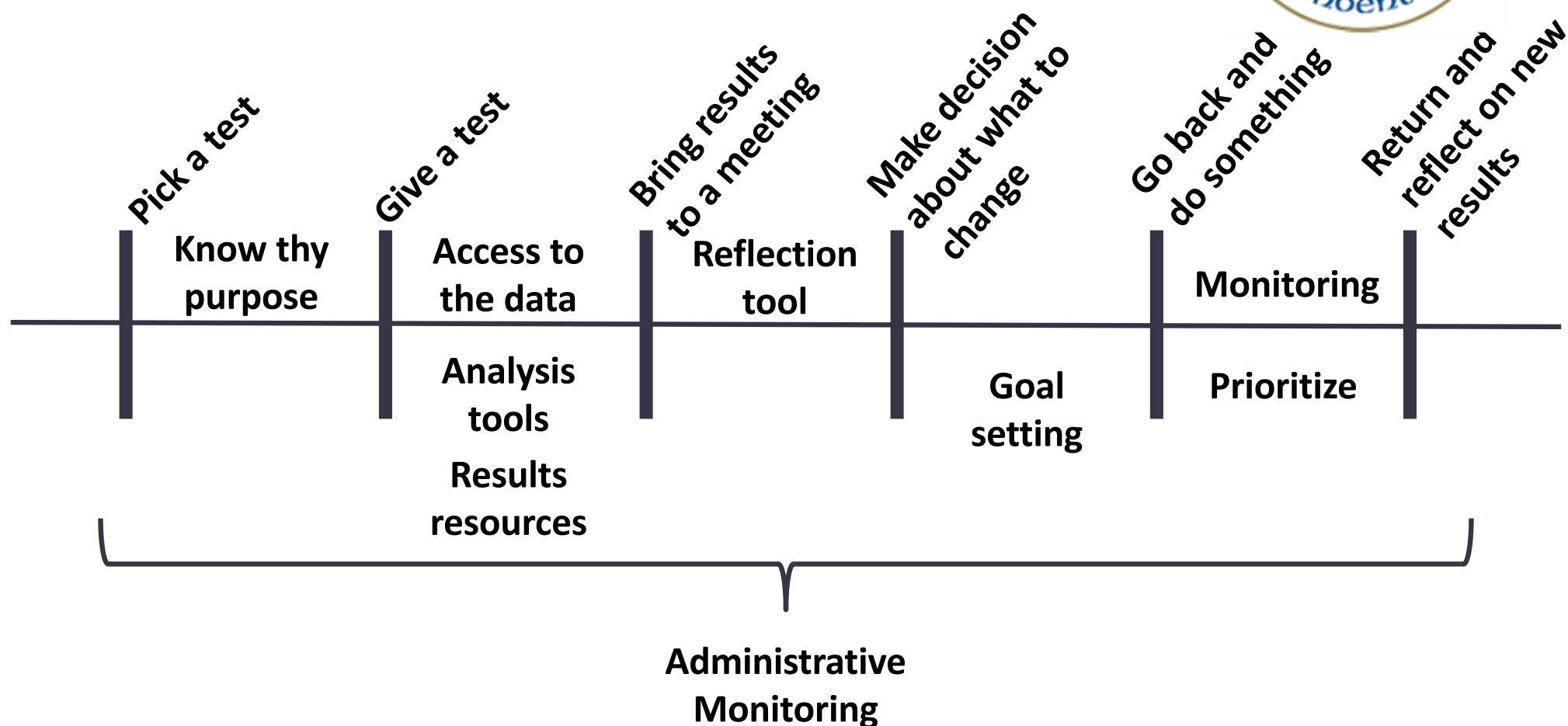


Monitoring cycle





Assessment Data Use Process



Center on Standards and Assessment Implementation (CSAI)

Assessment System Visualizer



THE CENTER ON
**STANDARDS &
ASSESSMENT
IMPLEMENTATION**

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What Is the Assessment System Visualizer?

- The Assessment System Visualizer (ASV) is an online, interactive tool to assist in the analysis of the components of state, district, school, and/or classroom assessment systems.

The ASV can:

- help answer questions about the characteristics of individual assessments and assessment systems.
- help decision-makers improve assessment systems.
- present data regarding individual assessments and assessment systems in engaging and intuitive formats.

Organize, Display, and Share Information about Your Assessment System

- Group assessments by different variables to provide information on how assessments are distributed across grades, content, etc.
- Input data collected about the assessments administered in your state, district, school, or classroom
- Create real-time data visualizations around key variables and/or questions to illuminate assessment patterns

What's the Catch?



- Increase utility by collecting relevant data regarding assessments and assessment systems prior to accessing the tool.
- The combination of collecting an inventory of your assessments and the built-in graphics of the ASV empowers you to make informed decisions to improve assessment systems.

Getting Started: Collect Data

Step 1: Collect Assessment Data

- The Assessment System Visualizer works on your data!
- First, collect the information about each assessment in your state, district, school, or classroom assessment system.
- Need help? See CSAI's Assessment Inventory Resource (<http://www.csai-online.org/sites/default/files/Assessment%20Inventory%20Resource%20and%20TAP%20Handout.pdf>) for guidance in collecting and organizing assessment information.
- This inventory document corresponds to the Visualizer.

Getting Started: Create an Account

Explore and visualize assessment system data
COMMUNICATE COMPLEX SYSTEMS SIMPLY AND BUILD UNDERSTANDING

Sign In

Welcome back.

EMAIL

PASSWORD

[Forgot Password](#)

Create Account

With a registered account, you can enter details about assessments you are working with and use our flexible and powerful visualizer to look for patterns and gaps.

** all fields are required*

* FIRST NAME

* LAST NAME

* EMAIL

* PASSWORD

* PASSWORD CONFIRMATION

Step 2: Create an Account

- Using the Visualizer requires creating an account.
- Go to <https://csai-visualizer.wested.org>.
- Under Create Account, enter:
 - Name, Email, Password
- Click “Create Account”.

Getting Started: Create an Account

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* EMAIL

* PASSWORD

* PASSWORD CONFIRMATION

[Create Account](#)

- Next time you come back, sign in with your email and password.
- Click “Forgot Password” as needed, and enter the email address you signed up with to get help resetting your password.
- After signing up, you will land on the “My Assessments” page.

Getting Started: Assessments

My Assessments | Visualizer | Sample Questions | Saved Visualizations

ASSESSMENT SYSTEM

Search Create New

An Assessment System is any collection of assessments that you want to compare and review for patterns. Enter details about all your assessments, then look for patterns in the Visualizer. To add individual assessments to your assessment system, select "Create New".

NAME OF ASSESSMENT ▾
No Entries

0 Found

Step 3: Enter Assessments

- Select “My Assessments”.
- Name your Assessment System.
- Add assessments by selecting “Create New”.

Getting Started: Assessments

Step 3: Enter Assessments (cont.)

- Enter data regarding the assessment.
- Note that:
 - Only the name of the assessment is required to save a record.
 - Fill in what you'd like, but keep in mind that a graph cannot be created for fields without data.
 - Hover over the “?” icon for clarification on any field.
 - Most fields are single select or multi-select from a list of options. Click or type to view choices.

The screenshot shows a 'Create Assessment' form with two columns of fields. The left column includes: NAME OF ASSESSMENT (with an example 'National Assessment of Educational Progress (NAEP)'), TYPE OF ASSESSMENT, CONTENT AREA(S) OR SUBJECT(S) TESTED, GRADE(S) TESTED, PURPOSE, STUDENT POPULATION(S), DELIVERY MODE(S), REQUIRED BY, ITEM TYPE(S), and STANDARDS ASSESSMENT IS ALIGNED TO (with an example 'Next Generation Science Standards'). The right column includes: ALIGNMENT TO STATE/LOCAL INITIATIVES, TEST FREQUENCY, INSTRUCTIONAL TIME, TESTING WINDOW, NUMBER OF STUDENTS TESTING, PRIMARY AUDIENCE FOR RESULTS, FISCAL AGENT, TOTAL ASSESSMENT COST, and PER STUDENT ASSESSMENT COST. Each field has a help icon (?) and many have dropdown menus or checkboxes. At the bottom left are 'Create' and 'Cancel' buttons.

Getting Started: Assessments

Step 3: Enter Assessments (cont.)

- Once data is entered, select “Create”.
- The assessment is ready for visualization options.

The screenshot shows a 'Create Assessment' form with two columns of fields. The left column includes: NAME OF ASSESSMENT * (text input with example 'Ex: National Assessment of Educational Progress (NAEP)'), TYPE OF ASSESSMENT (dropdown with a checkmark), CONTENT AREA(S) OR SUBJECT(S) TESTED (dropdown with a checkmark), GRADE(S) TESTED (dropdown with a checkmark), PURPOSE (dropdown with a checkmark), STUDENT POPULATION(S) (dropdown with a checkmark), DELIVERY MODE(S) (dropdown with a checkmark), REQUIRED BY (dropdown), ITEM TYPE(S) (dropdown with a checkmark, circled in red), and STANDARDS ASSESSMENT IS ALIGNED TO (text input with example 'Ex: Next Generation Science Standards'). The right column includes: ALIGNMENT TO STATE/LOCAL INITIATIVES (dropdown), TEST FREQUENCY (dropdown), INSTRUCTIONAL TIME (dropdown), TESTING WINDOW (dropdown), NUMBER OF STUDENTS TESTING (dropdown), PRIMARY AUDIENCE FOR RESULTS (dropdown with a checkmark), FISCAL AGENT (dropdown with a checkmark), TOTAL ASSESSMENT COST (dropdown), and PER STUDENT ASSESSMENT COST (dropdown). At the bottom left are 'Create' and 'Cancel' buttons.

Getting Started: Assessments

Step 3: Enter Assessments (cont.)

Visualizer
WestEd® CRESST

My Assessments | Visualizer | Sample Questions | Saved Visualizations

ASSESSMENT SYSTEM

Search Create New

An Assessment System is any collection of assessments that you want to compare and review for patterns. Enter details about all your assessments, then look for patterns in the Visualizer. To add individual assessments to your assessment system, select "Create New".

NAME OF ASSESSMENT
Summative
XXX

2 Found

- To continue adding assessments to your system, select “Create New” on the “My Assessments” page.
- To modify or delete an assessment at any time, select the pencil or “X” icon, respectively.

Getting Started: Get Visual

Step 4: Visualize Your Data

- Select “Visualizer”.
- Select variables from the pull-down menus to create graphs of one, two, three, or four variables at a time.
- Apply filters to graph specific subsets of the assessments in your whole assessment system.

SYSTEM VISUALIZER
WestEd® CRESST

My Assessments Visualizer

ASSESSMENT SYSTEM

WHAT DO YOU WANT TO KNOW ABOUT YOUR ASSESSMENTS?

I want to see my assessments by grouped by

with added information about and

filtered by | **Content Area** | **Grade** | **Purpose** | **Required by** | **Type of Assessment** |

Getting Started: Get Visual

Step 4: Visualize Your Data (cont.)

- Depending on the type of question or analysis you are interested in, you can select either a single variable or a mix of variables.
- Choose a variable to visualize your assessments. This creates a bar graph for that variable based on your data.
- If you would like to look at more data points, select a variable to group by. The page will update with additional data bars on your existing graph.
- If you would like to look at other data points alongside your bar chart, select the option(s) for added information. This will add corresponding pie charts to your screen.

Getting Started: Get Visual

Step 4: Visualize Your Data (cont.)

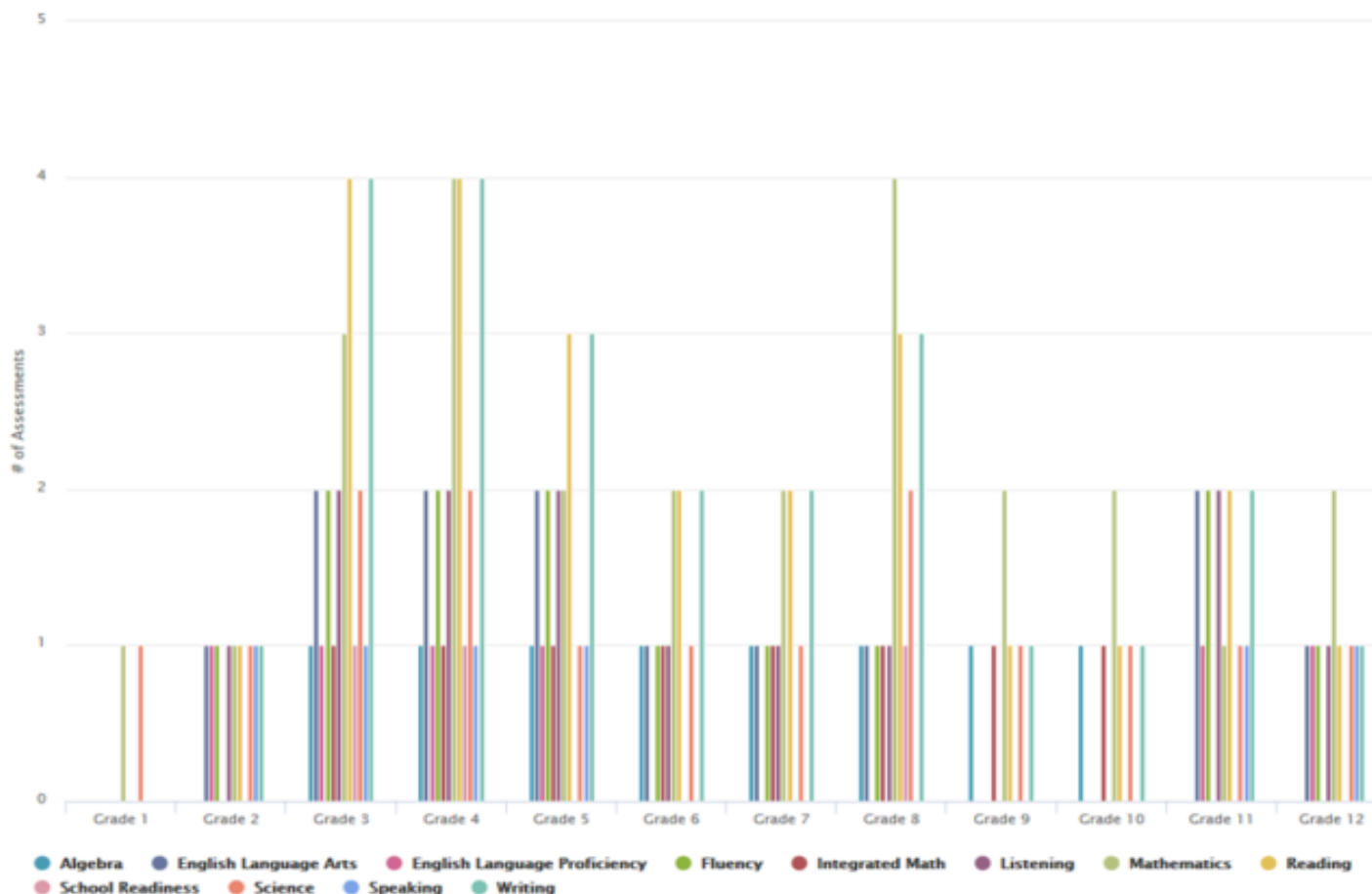
- For example, if you are interested in displaying the number of assessments administered by content area and grade, the accompanying graphs (on the next slide) will appear after selecting those variables.
- Up to four variables can be selected at the same time. To remove a variable, click on the “X” next to the variable name.
- If you are interested in further understanding how your assessments are delineated by assessment type, you can enter an additional variable to create a pie chart.
- The pie chart will display the total number of assessments that each variable applies to, but not the names of included assessments.

I want to see my assessments by Content Area or Subject Tested grouped by Grade Tested with added information about Type of Assessment and Select an Option filtered by Content Area Grade Purpose Required by Type of Assessment

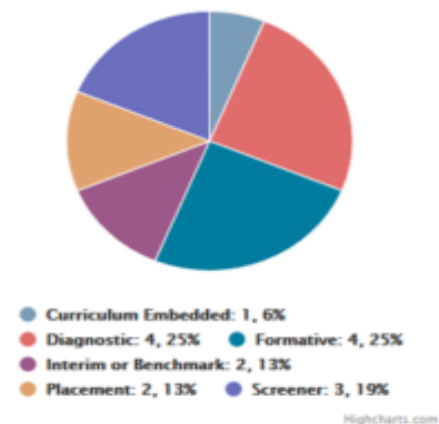
VISUALIZATIONS *Have a blank chart ?*

Download Print Save Share

Assessments by Content Area(s) or Subject(s) Tested and Grade(s) Tested



Type of Assessment



Getting Started: Get Visual

Step 4: Visualize Your Data (cont.)

- Details on each assessment included in the visualization can be found in “View the Data”, located at the bottom of the page.
- The information presented in “View the Data” adjusts based on the variables selected.

VIEW THE DATA

NAME	CONTENT AREA OR SUBJECT TESTED	GRADE TESTED	TYPE OF ASSESSMENT
General Education Assessments	English Language Arts	Grade 3	Diagnostic, Formative
NGSS	Mathematics, Science	Grade 1, Grade 2, Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade 10, Grade 11, Grade 12	Diagnostic, Formative, Screener
Texas ELA and ELP	English Language Arts, English Language Proficiency, Fluency, Listening, Reading, Speaking, Writing	Grade 2, Grade 3, Grade 4, Grade 5, Grade 11, Grade 12	Diagnostic, Formative, Interim or Benchmark, Placement, Screener
Texas MATH	Algebra, Integrated Math, Mathematics, Reading, Writing	Grade 3, Grade 4, Grade 5, Grade 6, Grade 7, Grade 8, Grade 9, Grade 10	Curriculum Embedded, Diagnostic, Formative, Interim or Benchmark, Placement, Screener
Texas for Science	Mathematics, Reading, School Readiness, Science, Writing	Grade 3, Grade 4, Grade 8	

Getting Started: Get Visual

Step 4: Visualize Your Data (cont.)

- Filters can be used to narrow down the data being displayed.
- When you select and add a filter to your graph, your graph will only display the filtered data.
- Filter categories are located beneath the variable selection options.

I want to see my assessments by grouped by

with added information about and

filtered by	Content Area	Grade	Purpose	Required by	Type of Assessment
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Getting Started: Get Visual

Step 4: Visualize Your Data (cont.)

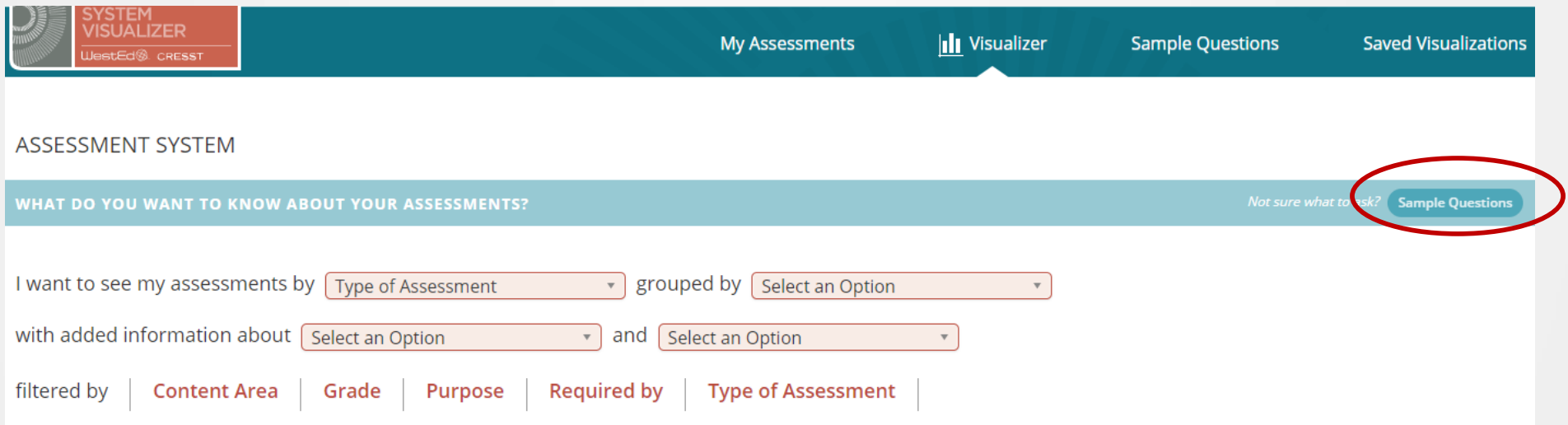
- Selecting a filter category will present options that can be applied to graphs.
- For example, selecting “Content Area” presents you with the different content areas that assessment data graphs can be further filtered by.
- Applying filters to the visualization can be helpful for creating graphs that are more specific to your particular question.

filtered by	Content Area	Grade	Purpose	Required by	Type of Assessment
<input type="checkbox"/> Algebra (0)		<input type="checkbox"/> Foreign Language (0)		<input type="checkbox"/> Physical Education (0)	<input type="checkbox"/> Technology (0)
<input type="checkbox"/> Biology (0)		<input type="checkbox"/> Geography (0)		<input type="checkbox"/> Reading (5)	<input type="checkbox"/> U.S. History (0)
<input type="checkbox"/> Civics (0)		<input type="checkbox"/> Health (0)		<input type="checkbox"/> School Readiness (0)	<input type="checkbox"/> Visual Arts (0)
<input type="checkbox"/> Economics (0)		<input type="checkbox"/> Integrated Math (0)		<input type="checkbox"/> Science (5)	<input type="checkbox"/> World History (0)
<input type="checkbox"/> English Language Arts (6)		<input type="checkbox"/> Listening (1)		<input type="checkbox"/> Social Studies (2)	<input type="checkbox"/> Writing (1)
<input type="checkbox"/> English Language Proficiency (0)		<input type="checkbox"/> Mathematics (8)		<input type="checkbox"/> Speaking (1)	<input type="checkbox"/> Other (0)
<input type="checkbox"/> Fluency (0)		<input type="checkbox"/> Performance Arts (0)			

Getting Started: Get Visual

Step 4: Visualize Your Data (cont.)

- Optional: review the Sample Questions provided to help you analyze and discover strengths, weaknesses, or patterns in your assessment system.



The screenshot shows the 'SYSTEM VISUALIZER' interface. The top navigation bar includes 'My Assessments', 'Visualizer' (active), 'Sample Questions', and 'Saved Visualizations'. Below the navigation bar, the 'ASSESSMENT SYSTEM' section is visible. A teal bar contains the text 'WHAT DO YOU WANT TO KNOW ABOUT YOUR ASSESSMENTS?' and a button labeled 'Sample Questions' which is circled in red. Below this bar, there are several dropdown menus for filtering and grouping data. The first row shows 'I want to see my assessments by' followed by a dropdown menu set to 'Type of Assessment', and 'grouped by' followed by a dropdown menu set to 'Select an Option'. The second row shows 'with added information about' followed by a dropdown menu set to 'Select an Option', and 'and' followed by another dropdown menu set to 'Select an Option'. At the bottom, there is a 'filtered by' section with a row of buttons: 'Content Area', 'Grade', 'Purpose', 'Required by', and 'Type of Assessment'.

SYSTEM VISUALIZER
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My Assessments Visualizer Sample Questions Saved Visualizations

ASSESSMENT SYSTEM

WHAT DO YOU WANT TO KNOW ABOUT YOUR ASSESSMENTS? *Not sure what to ask?* **Sample Questions**

I want to see my assessments by grouped by

with added information about and

filtered by | **Content Area** | **Grade** | **Purpose** | **Required by** | **Type of Assessment** |

Getting Started: Get Visual

[My Assessments](#)[Visualizer](#)[Sample Questions](#)[Saved Visualizations](#)

What do you want to know about?

Select a question to start graphs with those variables.

> Time to Administer

▼ Content Area



What **TYPES OF ASSESSMENTS** are students taking in **CONTENT AREA** that are **ALIGNED TO** standards ?



What **DELIVERY MODE** **CONTENT AREA** assessments are students taking in **GRADE(S)** ?



What **CONTENT AREA** assessments include **ITEM TYPES** ?



What **CONTENT AREA** assessments are for **PURPOSE** in **GRADE(S)** ?



What **TYPES OF ASSESSMENTS** for **CONTENT AREA** are funded by **FISCAL AGENT** for the purpose of informing **PRIMARY AUDIENCE** ?

> Type of Assessment

> Delivery Mode

> Purpose of Assessment

> Grade(s)

Getting Started: Share Your Work

Step 5: Sharing

The ASV allows you to:

- Download all charts on a page together or individually, in PNG image or PDF formats.
- Print the whole page or an individual chart.
- Save a specific configuration of charts on the Visualizer, bookmarked to access again in your “Saved Visualizations”.

Getting Started: Share Your Work

Step 5: Sharing (cont.)

The ASV allows you to:

- Share the URL of a specific visualization page of your data with others so that you can collaborate without requiring everyone to create an account.
 - An account is not required to view, download, print, or share a shared chart.
 - If a non-account holder is interested in saving the visualization online in the ASV, he or she will be required to create an account, then return to the chart page and click “Save”.

Creating Meaningful Visualizations

- Meaningful visualizations tell the story of what patterns, trends, or relationships exist within your data.
- Gather and enter as much information as possible about your assessment system so you have the most data to explore.
- Adding more assessments and more details increases the number of questions you can answer about your assessment system.
- Use the Sample Questions to identify and understand what kinds of questions the ASV can help you answer, and adapt those questions to your own situation.

Need Help?



- If you have any questions about the Assessment System Visualizer, please contact the Center on Standards and Assessment Implementation at csai@wested.org.