



Balanced Assessment Systems in Action



November 13, 2023

California Educational Research Conference

Presenters



Ingrid Roberson

Assistant Director,
Research Learning

iroberson@ccee-ca.org



Dorcas Kong

Senior Specialist,
Executive Projects

dkong@ccee-ca.org



Hilary Kjaer

Director,
Teaching & Learning

hkjaer@rvusd.org



Tasha Lopez

Teacher on Special
Assignment

tlopez@rvusd.org

Agenda

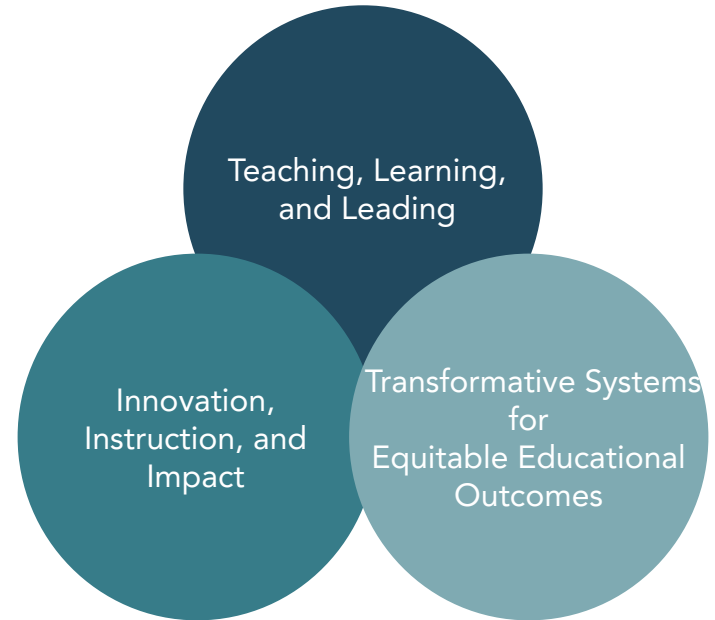
- Welcome and Introductions
- Introducing Balanced Assessment Systems
- Implementing in Rincon Valley Union School District
- Measuring for Improvement and Impact
- Spring 2024 Opportunity

Welcome and Introductions



Who is the California Collaborative for Educational Excellence (CCEE)?

- Statewide leader whose mission is to deliver on California's promise of quality, equitable education for every student
- Design and implement initiatives that facilitate the application of evidence-based continuous improvement processes within LEAs, coupled with regular collection and analysis of relevant data to support student outcomes
- Share lessons learned from our work, as well as emerging/best practices, strategies, and resources that address current high priority needs in the field



I3 Learning Networks



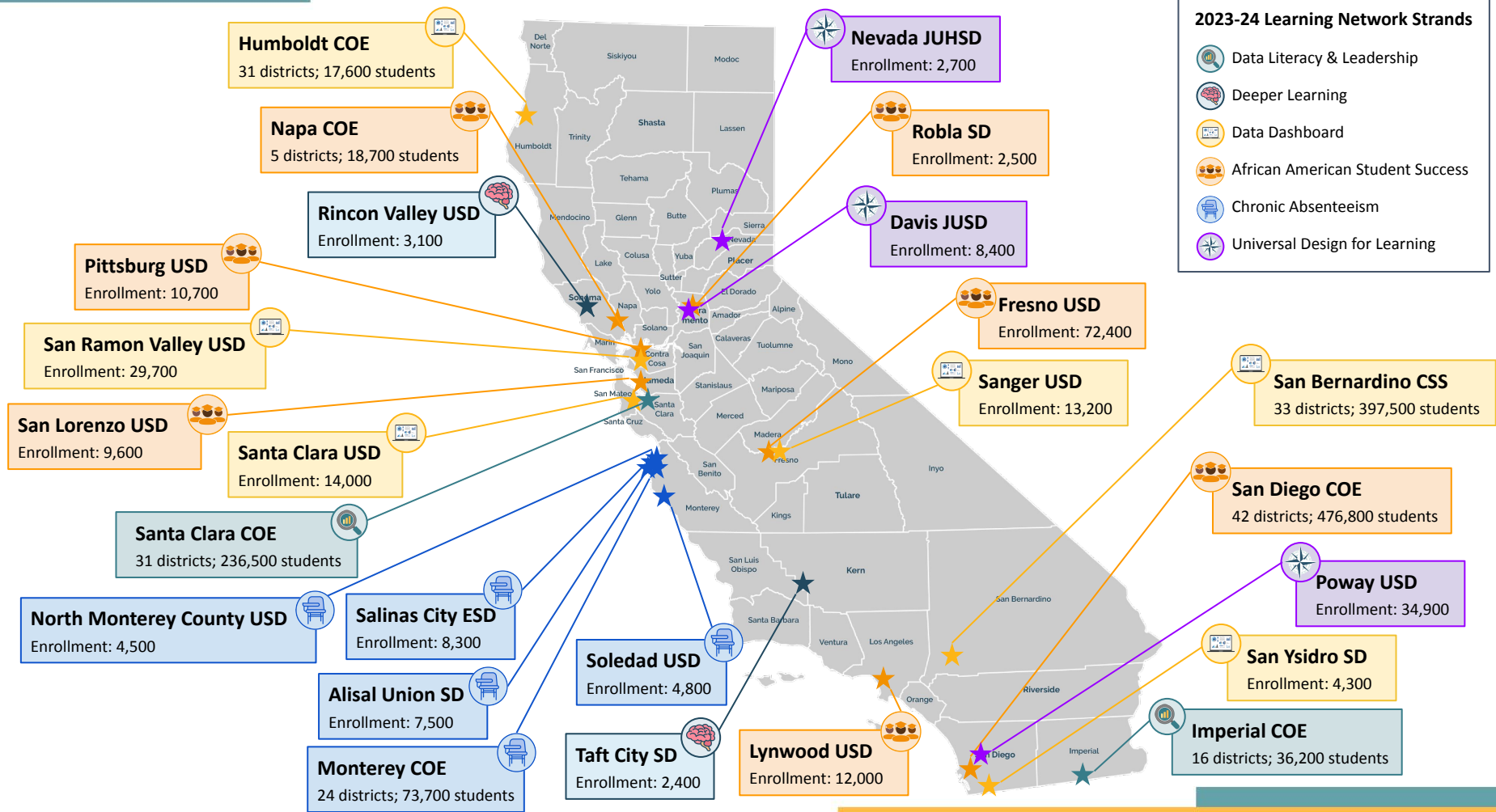
Network Facilitation: Dedicated space for LEA teams to learn from and reflect with other teams across the state as they engage in continuous improvement cycles to address their individual problems of practice around a common priority area



Learning Lab: A network of educators across the state on the cutting-edge of innovation



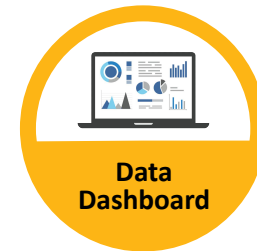
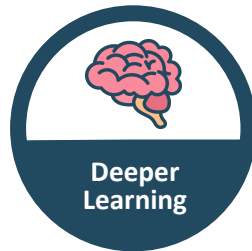
Data Monitoring & Impact: Coaching around data and assessment to enhance data literacy knowledge and skills to inform decision-making



Data Research Learning Network (DRLN)

Research & Development learning network focused on:

1. **System-level innovation:** transforming data and assessment programs and practices for accelerated learning
2. **State-level amplification:** documenting and disseminating innovative learning experiences to spread innovation ideas to other districts and counties



Introducing Balanced Assessment Systems



Open-Ended Question:

What would a balanced assessment system look like for you?

Go to

bit.ly/cera-bas1

Or use QR code



What would a balanced assessment system look like for you?

0

Nobody has responded yet.

Hang tight! Responses are coming in.



Balanced Assessment System

“Assessment in mathematics is in a period of transition, from tests of fact-based skills to multifaceted measures of sense-making, reasoning, and problem-solving.

In other words, alignment is growing between how mathematics is being taught and how it is being tested.”

([2023 Mathematics Framework](#), Ch. 12, p. 59)

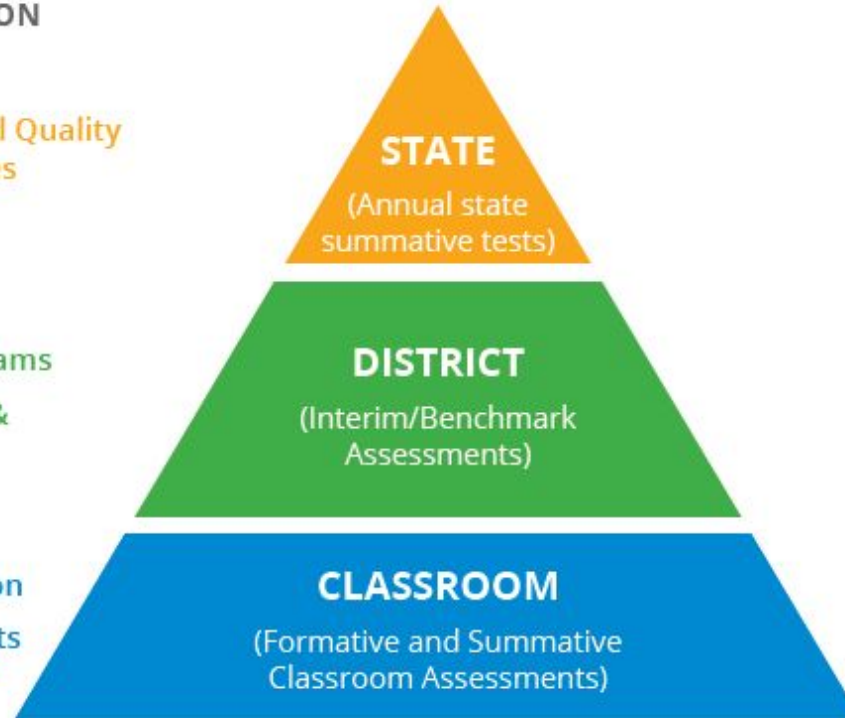
Balanced Assessment System

MAIN PURPOSES AND USES OF ASSESSMENT INFORMATION

- Evaluate Learning, School Quality (Accountability), & Policies

- Predict Learning
- Evaluate Curricula/Programs
- Inform student services & placement decisions

- Monitor/Adjust Instruction
- Inform Parents & Students about Learning Progress



Primary Assessment Purposes



Evaluation: Making summative judgments about the value or merit of something



Prediction: Making a statement about a future event; signaling need for further investigation



Diagnosis: Identifying the cause or nature of something through deeper examination



Instruction: Informing the teaching and learning process

Use Cases for *Evaluative* Purposes

| Selected Use Case | Selected Assessments |
|---|--|
| A state wants to hold schools accountable for student proficiency. | State summative tests |
| A district leader wants to know if school improvement efforts are working. | State and interim assessments that broadly reflect the range and depth of content |
| A teacher wants to know whether students meet the proficiency targets at the end of a course or unit of instruction. | Unit tests or end of course exams that closely reflect the classroom curriculum |

Use Cases for *Predictive* Purposes

| Selected Use Case | Selected Assessments |
|---|---|
| A state wants to establish annual growth targets for schools to achieve long-term proficiency goals. | Multiple years of prior state test results Interim or summative state assessment that broadly reflects annual standards and expectations |
| A district leader wants to know the percentage of grade 9 students who may be at-risk of dropping out. | |
| A teacher wants to know how students will fare on the state summative test. | |

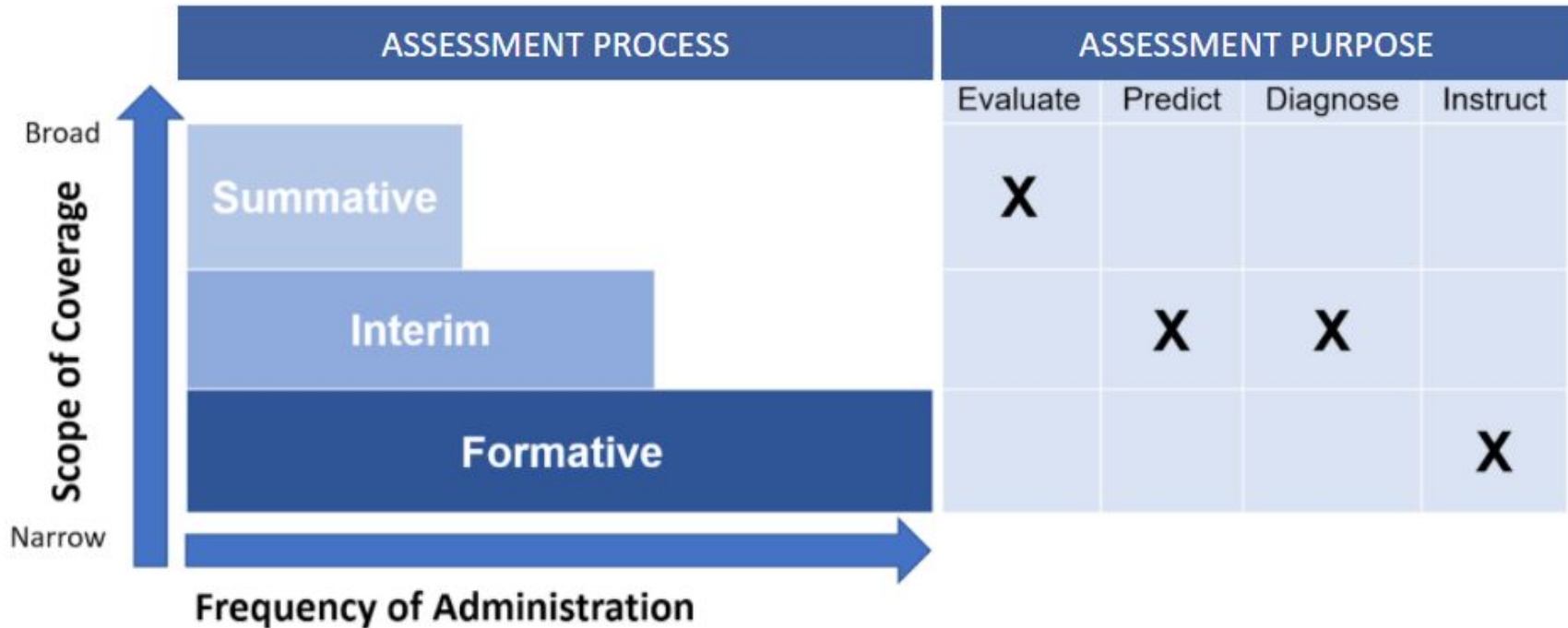
Use Cases for *Diagnostic* Purposes

| Selected Use Case | Selected Assessments |
|--|---|
| A <i>school psychologist</i> wants to understand why a student struggles to pay attention. | Behavioral assessments designed to test for the presence and severity of specific behaviors. |
| A <i>reading specialist</i> wants to know why his/her students are struggling to comprehend what they read. | Tests of phonemic awareness, phonics, vocabulary development, fluency, and/or comprehension |
| A <i>teacher</i> wants to pinpoint misconceptions that derailed several students on the latest math exam. | Classroom assessment targeting <i>one or a few fine-grained skills</i> that are essential for performing well on the math exam |

Use Cases for *Instructional* Purposes

| Selected Use Case | Selected Assessments |
|--|---|
| A teacher wants to know how well her students can apply what they learned in today's mini-lesson. | Targeted questioning to elicit thinking; classroom assessment ; survey poll |
| A student wants feedback on his research proposal in science. | Teacher feedback ; self- and peer-assessment |
| A student wants to improve her persuasive essay for the local newspaper. | Teacher feedback ; self- and peer-assessment |

Matching Assessment Process & Purpose



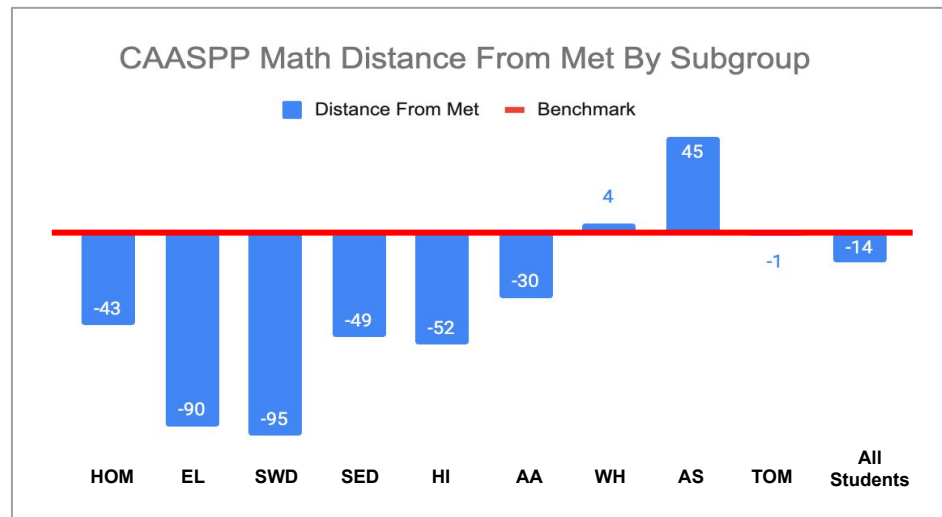
Implementing in Rincon Valley Union School District



Rincon Valley Union School District

- 3,000 TK-6 learners, at seven elementary schools
- 200+ learners at charter middle school campus & Home Study program

| | |
|-------------------------------|-------|
| White | 48.5% |
| Hispanic | 30.5% |
| Asian/ Pacific Islander | 7.1% |
| African American | 2.5% |
| Two or More | 7.1% |
| English Learners | 18.0% |
| Students with Disabilities | 16.0% |
| Free and Reduced | 30.0% |



What Brought Us Here



CAC 2022



Math Committee



Teacher Survey



Formative Assessment



DRLN Project Overview



Innovation Idea:

- Pilot comprehensive math formative assessment practices at two of our elementary school sites, Whited Elementary and Madrone Elementary
- Provide foundational training on both formative assessments and mathematical learning progressions



Anticipated Impact:

- Strengthened universal math instructional practices
- More collegial, data-centered conversations
- Improved student outcomes
- New model for strategic planning

OGAP Learning Progressions

“...a systemic and intentional formative assessment system in mathematics grounded in the research on how students learn mathematics.”

OGAP Additive Reasoning Progression – Addition

Additive Strategies

- Traditional: $18 + 27 = 45$
- Area Model: $18 + 27 = 45$
- Number Line: $18 + 27 = 45$
- Base Ten Blocks: $18 + 27 = 45$

Transitional Strategies

- Area Model: $18 + 27 = 45$
- Number Line: $18 + 27 = 45$
- Base Ten Blocks: $18 + 27 = 45$

Early Transitional Strategies

- Area Model: $18 + 27 = 45$
- Number Line: $18 + 27 = 45$
- Base Ten Blocks: $18 + 27 = 45$

Counting Strategies

- Mental counting strategies: $18 + 27 = 45$
- Count on from larger: $18 + 27 = 45$

OGAP Multiplication Progression

Multiplicative Strategies – Algorithms

- Partial Products: $18 \times 27 = 486$
- Traditional: $18 \times 27 = 486$
- Distributive Property: $18 \times 27 = 486$
- Known or Derived Fact: $18 \times 27 = 486$

Transitional Strategies

- Area Model: $18 \times 27 = 486$
- Number Line: $18 \times 27 = 486$
- Base Ten Blocks: $18 \times 27 = 486$

Early Transitional Strategies

- Area Model: $18 \times 27 = 486$
- Number Line: $18 \times 27 = 486$
- Base Ten Blocks: $18 \times 27 = 486$

Additive Strategies

- Repeated addition with or without a model: $18 \times 27 = 486$

Early Additive Strategies

- Counting by ones: $18 \times 27 = 486$

Non-Multiplicative Strategies

- Add or subtract factors: $18 \times 27 = 486$
- Uses incorrect operation: $18 \times 27 = 486$

OGAP Division Progression

Multiplicative Strategies – Algorithms

- Partial Quotients: $486 \div 18 = 27$
- Traditional: $486 \div 18 = 27$
- Distributive Property: $486 \div 18 = 27$
- Known or Derived Fact: $486 \div 18 = 27$

Transitional Strategies

- Area Model: $486 \div 18 = 27$
- Number Line: $486 \div 18 = 27$
- Base Ten Blocks: $486 \div 18 = 27$

Early Transitional Strategies

- Area Model: $486 \div 18 = 27$
- Number Line: $486 \div 18 = 27$
- Base Ten Blocks: $486 \div 18 = 27$

Additive Strategies

- Repeated addition with or without a model: $486 \div 18 = 27$

Early Additive Strategies

- Counting by ones: $486 \div 18 = 27$

Non-Multiplicative Strategies

- Add or subtract factors: $486 \div 18 = 27$
- Uses incorrect operation: $486 \div 18 = 27$

OGAP Ratio and Proportion Progression (12.1.2019)

Proportional Strategies

- Traditional: $3:4 = 6:8$
- Area Model: $3:4 = 6:8$
- Number Line: $3:4 = 6:8$
- Base Ten Blocks: $3:4 = 6:8$

Transitional Strategies

- Area Model: $3:4 = 6:8$
- Number Line: $3:4 = 6:8$
- Base Ten Blocks: $3:4 = 6:8$

Early Transitional Strategies

- Area Model: $3:4 = 6:8$
- Number Line: $3:4 = 6:8$
- Base Ten Blocks: $3:4 = 6:8$

Additive Strategies

- Repeated addition with or without a model: $3:4 = 6:8$

Early Additive Strategies

- Counting by ones: $3:4 = 6:8$

Non-Multiplicative Strategies

- Add or subtract factors: $3:4 = 6:8$
- Uses incorrect operation: $3:4 = 6:8$

OGAP Resources: bit.ly/rvusd-ogap

OGAP Additive Framework



OGAP Additive Framework

July 2021
ogapmathc.com

Depending upon the strength of additive reasoning, students may move up and down between additive, transitional, counting, and non-additive reasoning and strategies as they interact with new topics or new contexts.

Problem Contexts

Counting
Quantities
Patterns
Additive Situations
Add to
Take from
Put together/Take apart
Compare
Concepts/Properties
Properties and Relationships
Magnitude
Base 10/Place Value
Concepts
Strategies

Problem Structures

Types of Items
Contextual
Non-contextual

Complexity of Addends
Single digit
Multiple digit
Multiples of 10, 100, 1000

Representations
Number Paths
Number Lines
Base 10
Ten Frames
Dot Images

Properties and Relationships
Relationship between addition and subtraction
Commutative property
Associative property
Identity

Meanings for Subtraction
Difference
Removal
Distance
Missing addend

Number of steps
Single step
Multi-step

Addends
Two addends
Three or more addends
Compositions of 10
Relationship between addends

| | Result Unknown | Change Unknown | Start Unknown |
|--------------------------------|--|--|---|
| Add To | Two bunions sat on the grass. Three more bunions hopped there. How many bunions are on the grass now? $2 + 3 = ?$ | Two bunions were sitting on the grass. Some more bunions hopped there. Then there were five bunions. How many bunions hopped over to the first one? $2 + ? = 5$ | Some bunions were sitting on the grass. Three more bunions hopped there. Then there were five bunions. How many bunions were on the grass before? $? + 3 = 5$ |
| Take From | Five apples were on the table. I ate two apples. How many apples are on the table now? $5 - 2 = ?$ | Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 - ? = 3$ | Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? - 2 = 3$ |
| Put Together/Take Apart | Total Unknown Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$ | Both Addends Unknown Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? $5 = ? + 5$ $5 = 1 + 4$ $5 = 2 + 3$ $5 = 3 + 2$ | Addend Unknown Five apples are on the table. Three are red and the rest are green. How many apples are green? $3 + ? = 5$ $5 - 3 = ?$ |
| Compare | Difference Unknown ("How many more?" version) Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? $2 + ? = 5$ $5 - 2 = ?$ | Bigger Unknown ("Version with 'more'") Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? $2 + ? = 3$ $3 + 2 = ?$ | Smaller Unknown ("Version with 'fewer'") Julie has three fewer apples than Lucy. Lucy has five apples. How many apples does Lucy have? $5 - ? = 3$ $3 + ? = 5$ |

K 1 2



This product was funded by the National Science Foundation (DRL-1620888). OGAP Additive Framework © 2021 is licensed under CC BY-NC-ND 4.0 for non-commercial use only. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>



Additive Reasoning Progression – Addition

Additive Strategies

Traditional US Algorithm

$$\begin{array}{r} 18 \\ +27 \\ \hline 45 \end{array}$$

Partial Sums

$$\begin{array}{r} 18 \\ +27 \\ \hline 30 \\ +15 \\ \hline 45 \end{array}$$

Uses properties
Associative Property
 $7 + 2 + 8 + 7 = (2 + 8) + (7 + 7)$
Commutative Property
 $6 + 7 = 7 + 6$
Flexible composition
 $18 + 27 = 20 + 25 = 45$

Fact Fluency
Fact Recall
 $6 + 7 = 13$
Derived Facts
 $6 + 6 = 12$
 $6 + 7 = 13$
Using 10s
 $6 + 7 = 6 + 4 + 10 + 3 = 13$

Transitional Strategies

Efficient Use of a Model

$$\begin{array}{r} 18 + 27 \\ \hline 30 + 15 \\ \hline 45 \end{array}$$

Early Transitional Strategies

Adding inefficiently with or without a model

Adding on by tens

$$\begin{array}{r} 18 + 10 = 28 \\ 28 + 10 = 38 \\ 38 + 2 = 40 \\ 40 + 5 = 45 \end{array}$$

Counting Strategies

Mental counting strategies:

- Count on from first
- Count on from larger

Early Counting Strategies

Direct modeling and counting from 1 with model (count 3 times)

Non-Additive Strategies

- Uses incorrect operation
- Models problem situation incorrectly
- Guesses

Not enough information
Uses procedures incorrectly

Underlying Issues/Errors

- Does not consider reasonableness of solution
- Error in counting, calculation, place value, property, equation, or model
- Units inconsistent or missing



This product was funded by the National Science Foundation (DRL-1620888). OGAP Additive Framework © 2021 is licensed under CC BY-NC-ND 4.0 for non-commercial use only. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>



Base Ten Number Progression

QUANTITY: How Many? RELATIVE MAGNITUDE: How Big? How Close?

Application of Base Ten

- Flexible use of Base Ten understanding to solve problems
- Multiplicative understanding of place value
 $235 = (2 \times 100) + (3 \times 10) + (5 \times 1)$
- Use of Base Ten for flexible and efficient computational strategies
- Extension of Base Ten understanding to decimal and negative numbers

Number Composition by Place Value Parts

Uses place value and number relationships to compare and consider relative magnitude

$200 + 30 + 5 = 235$
 $200 = 20 \text{ tens}$
 $30 = 3 \text{ tens}$
 $23 \text{ tens and } 5 \text{ ones}$

Unitizing with Composite Units

Unitizes to locate and compare numbers

63 is 4 more than 59

Early Unitizing (Sees quantities in groups when ones are visible)

Composes and decomposes quantities in groups

Early Counting (Treats quantities as collections of ones)

Counts by ones to locate and compare numbers

Counting

Counts with one-to-one correspondence

Perceptual comparing

Not Counting or Comparing

- Guesses
- Not enough info.
- Misinterprets problem situation or task

Underlying Issues/Errors

- Doesn't consider reasonableness of solution
- Sequence error
- Error in units
- Model error
- Equation error



This product was funded by the National Science Foundation (DRL-1620888). OGAP Additive Framework © 2021 is licensed under CC BY-NC-ND 4.0 for non-commercial use only. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>

Measuring Improvement and Impact



Our Tools



**Learner
Survey**



**Teacher
Survey**



**Walkthrough
Protocol**

Learner Survey



Noticings

- Learners discuss multiple strategies for solving problems
- Learners overall feel very positive about the math instruction that they receive from their teachers ([Halo Effect?](#))
- Learners do not self-assess or assess the work of their peers often

Wonderings



- What kinds of strategies are discussed in the classroom, and whether the strategies discussed are put into use, or just talked about?
- How are learners getting feedback from peers?
- What kind of formative assessment is happening in the classroom?

I know what the teacher expects me to learn in class every day.

☐ Yes ☐ No

I ask others for help when I don't understand something.

☐ Yes ☐ No

Learner Surveys

- Grades 3-4: bit.ly/rvUSD-34survey
- Grades 5-6: bit.ly/rvUSD-56survey

Teacher Survey & Walkthroughs: Four Domains



**Starts & Ends
of Lessons**



**Eliciting Evidence
of Student
Understanding**



**Peer- and
Self-Assessment**




Use of Evidence

[illegible]

Walkthroughs

"In Rincon Valley, walkthroughs open the doors of classrooms so that all teachers can learn from one another and grow together in the practice of teaching. The goal of all of our work is to better serve all learners."



Rincon Valley USD
Excellence in Education

Walk-Through Protocol

Walk-Through Participant:


Teacher Name:

Date & Time In/Out:

Focus of the Observation:

- ☐ Start of Lesson
- ☐ End of Lesson
- ☐ Eliciting Evidence of Understanding

Notes on doing: can language



Group Debrief: Feedback for the Teacher

What were strong points of the lesson, teaching strategies, and/or student engagement?

| What we noticed: | | What we wondered about: |
|------------------|---------|-------------------------|
| Teacher | Student | |
| | | |

Self Reflection: What I'm thinking about or considering for my own practice

Walkthrough/Reflection Protocol:

bit.ly/rvusd-walkthrough

Surveys & Walkthroughs

Next Steps



**Starts & Ends
of Lessons**

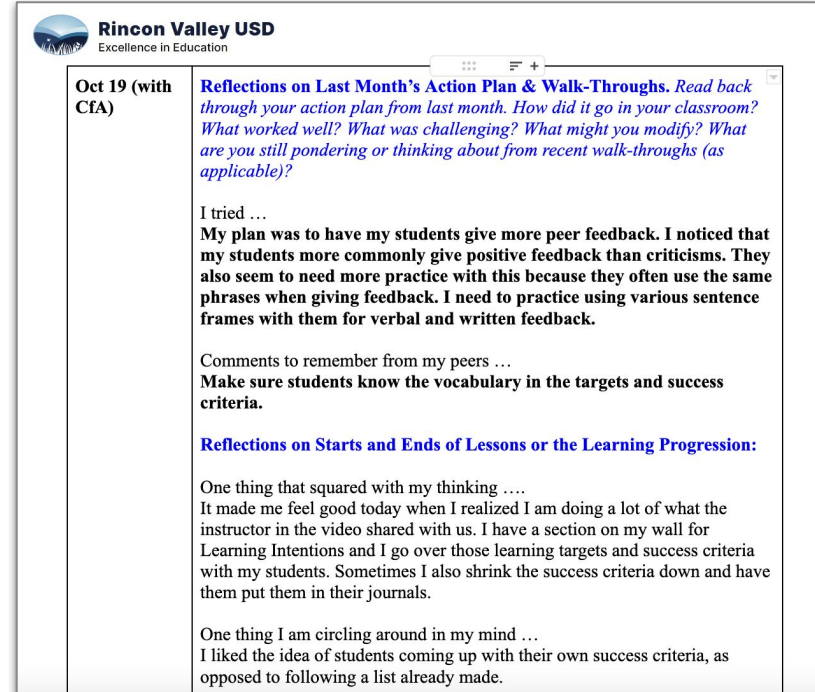


**Peer- and
Self-Assessment**

Teacher Action Plans

The purpose of this document is three-fold:

1. To record reflections, learnings, insights, and questions that might arise during any of the learning community meetings
2. To track action plans over the course of the year
3. To note any feedback you get when you share how things have been going as you implement formative assessment practices in your classroom or to note ideas that you want to try based on what others have shared or you observed during walkthroughs



Rincon Valley USD
Excellence in Education

Oct 19 (with CfA)

Reflections on Last Month's Action Plan & Walk-Throughs. *Read back through your action plan from last month. How did it go in your classroom? What worked well? What was challenging? What might you modify? What are you still pondering or thinking about from recent walk-throughs (as applicable)?*

I tried ...
My plan was to have my students give more peer feedback. I noticed that my students more commonly give positive feedback than criticisms. They also seem to need more practice with this because they often use the same phrases when giving feedback. I need to practice using various sentence frames with them for verbal and written feedback.

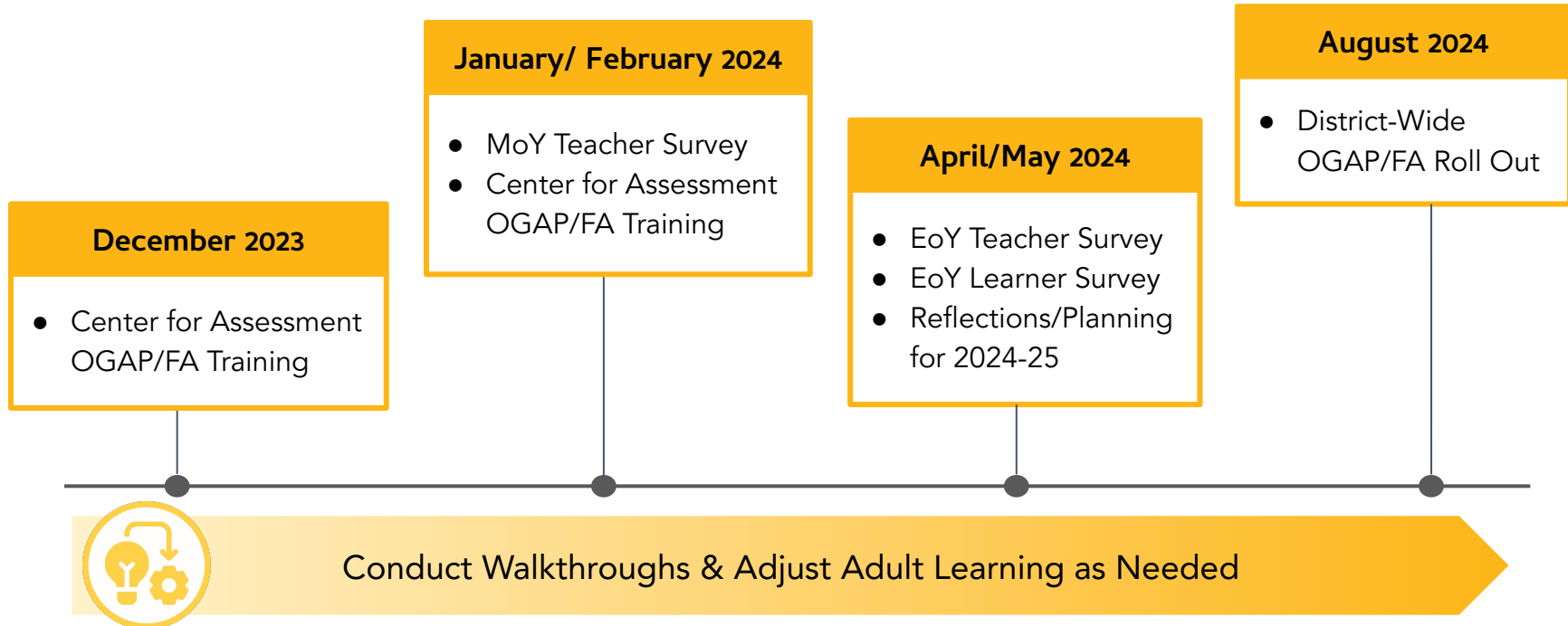
Comments to remember from my peers ...
Make sure students know the vocabulary in the targets and success criteria.

Reflections on Starts and Ends of Lessons or the Learning Progression:

One thing that squared with my thinking
It made me feel good today when I realized I am doing a lot of what the instructor in the video shared with us. I have a section on my wall for Learning Intentions and I go over those learning targets and success criteria with my students. Sometimes I also shrink the success criteria down and have them put them in their journals.

One thing I am circling around in my mind ...
I liked the idea of students coming up with their own success criteria, as opposed to following a list already made.

2023-24 Year-at-a-Glance



**Do you have a Balanced
Assessment System?**



Formative Assessment Practice

“...a **planned, ongoing process** used by all students and teachers **during learning and teaching** to **elicit and use evidence of student learning** to **improve student understanding** of intended disciplinary learning outcomes and support students to become self-directed learners.”

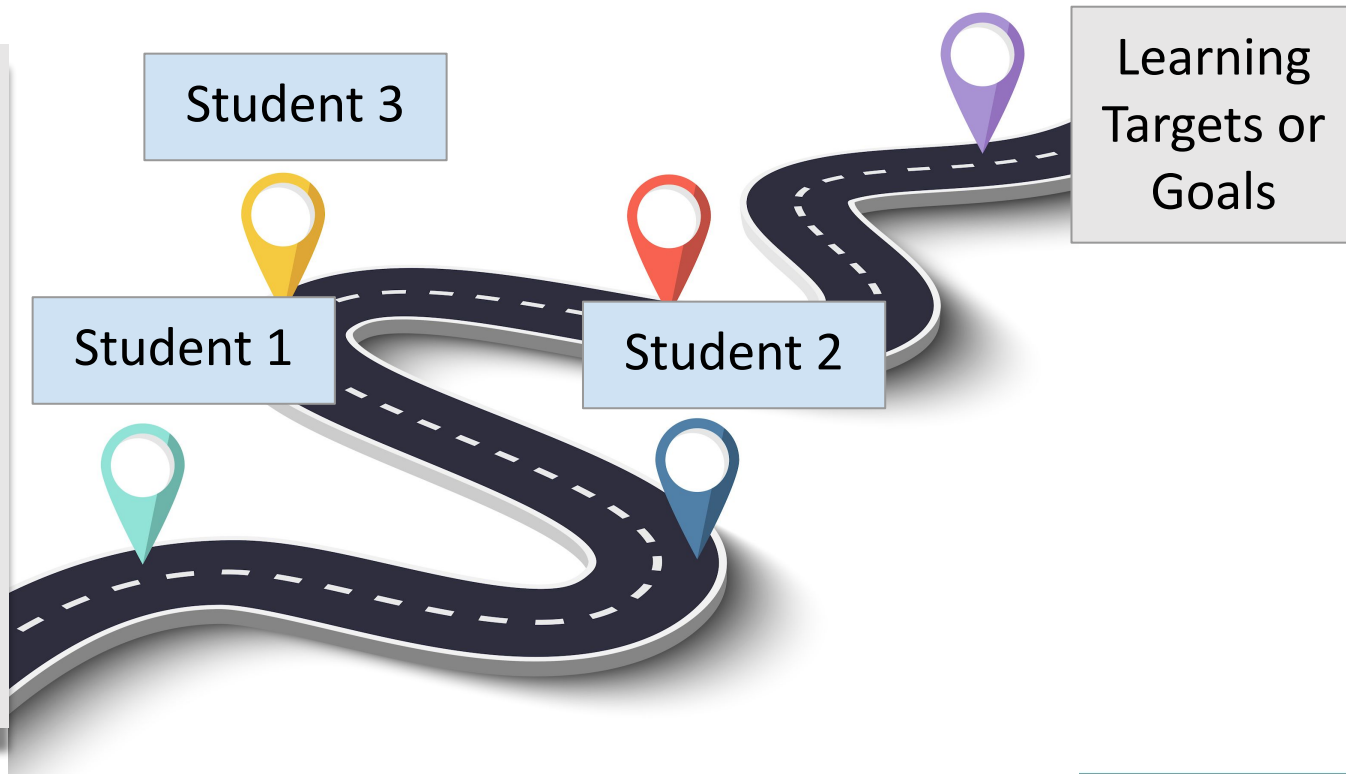
Council of Chief State School Officers (2018, p. 2). [Revising the Definition of Formative Assessment](#).

Formative Assessment Practice

| | Where the learner is going | Where the learner is now | How to get there |
|---------|---|---|--|
| Teacher | Clarifying, sharing, and understanding learning intentions and success criteria | Engineering effective discussions, tasks, and activities that elicit evidence of learning | Providing feedback that moves learning forward |
| Peer | | Activating students as learning resources for one another | |
| Learner | | Activating students as owners of their own learning | |

Feedback

Feedback from the teacher, peers, or the student themselves supports **accelerated learning** or closing the distance/gap between where a student is currently and where they need to go.



Feedback

| Quality and Type of Feedback | Source of Feedback | Purpose of Feedback |
|--|--------------------|--|
| Related to the learning targets and success criteria | Teacher | Inform instruction (monitor and adapt) |
| Actionable, descriptive, and specific | Student | Adjust student learning goals |
| Appropriate to the student's zone of proximal development (i.e., Goldilocks principle – not too far out ahead, not too far behind, but just right) | Peer | Motivate and improve student learning |

Learning Progressions

*“Nationwide, the average U.S. fifth grade classroom contained students across seven different grade levels **before** the pandemic, according to research from NWEA. In the wake of the pandemic, that spread is now estimated to nine grade levels.”*

(Edsource article, August 2023)

Poll

Reflecting on your school/district/COE, how balanced do you think your assessment systems are?

Go to

bit.ly/cera-bas1

Or use QR code



Reflecting on your school/district/COE, how balanced do you think your assessment systems are?

Balanced



Somewhat balanced



Somewhat not balanced



Not balanced



Spring 2024 Opportunity



Balanced Assessment System Project Partner



- Educational non-profit
- Works mainly with states or large districts around the design, implementation, and/or evaluation of their assessment and accountability systems

www.nciea.org



Dr. Carla Evans



Dr. Caroline Wylie



Laura Pinsonneault



Dr. Scott Marion

Balanced Assessment System (BAS) Pilot Goal & Design

Create tools and resources that support the **evaluation of local assessment system quality** and **can be implemented in a locally paced and independent manner** across the diversity of California schools and districts



Micro-Course



Toolkit

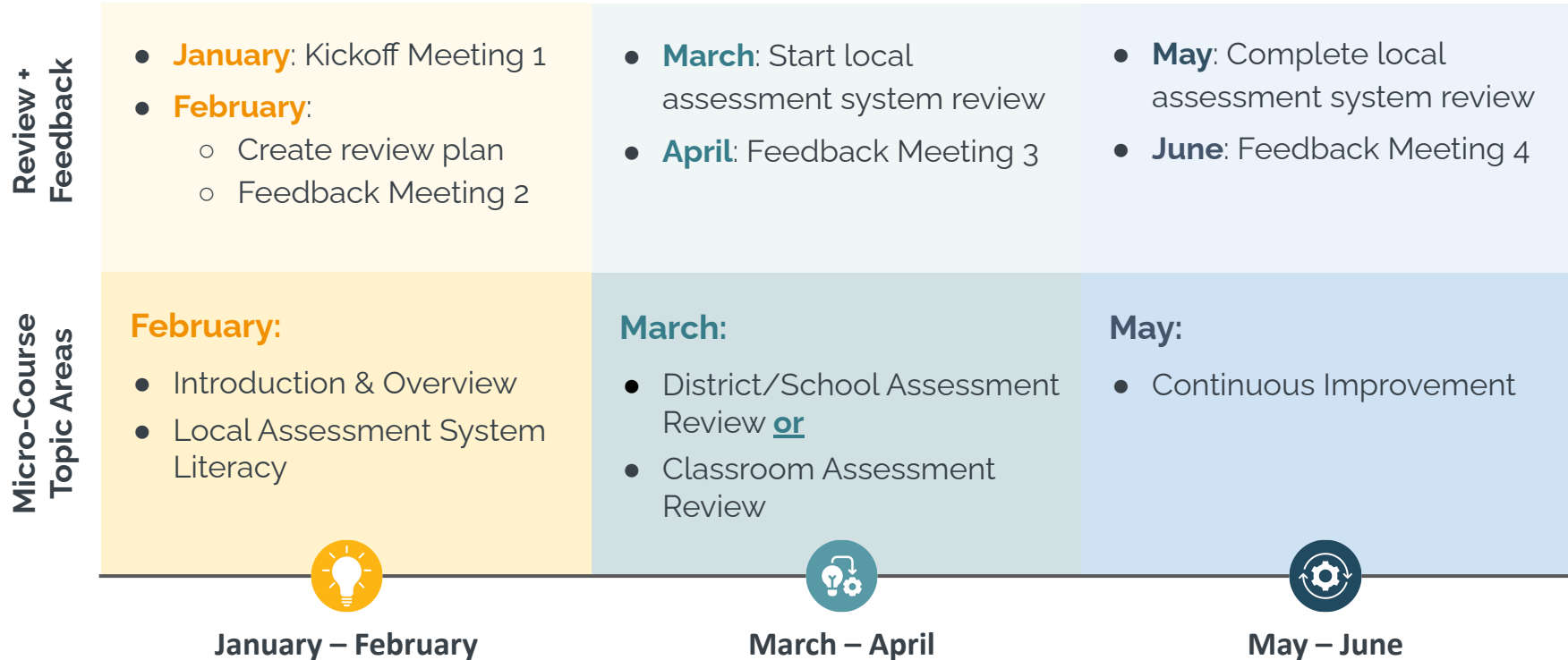


Research &
Development



Expert Coaching

2024 Pilot Timeline



Considerations



What's the commitment?

- Six-month pilot from January to June 2024
- Create review plan & conduct local assessment system review
- Watch modules in the micro-course and engage with the associated tools
- Participate in four feedback meetings to provide input on each step of the process



How do I know if my LEA is a right fit for this pilot?

- LEA wants to conduct a review of its current systems of assessment
- Team members in various roles (e.g., district leaders, site leaders, teachers) who are willing to engage in this work

Next Steps

Interested in learning more?

- Watch the informational session from October 16th posted on [CCEE's website](#).

Ready to sign up?

- Complete the [interest and readiness survey](#) by **November 21, 2023**. LEAs will be selected and notified by the end of November based on project goals and LEA readiness.



bit.ly/bas-ready

CCEE Featured Resources

- [CCEE Learning Networks](#)
- Data Research Learning Network (DRLN)
 - [Rincon Valley USD](#) – Learn more about their DRLN Innovation Idea and explore the resources that are coming out of their work!
 - [DRLN Phase 1 Brief](#)
- [Microlearning Modules](#)



Rincon Valley Union School District CCEE California Collaborative for Educational Excellence


Balanced Assessment Systems in Action


2023 CERA Conference

Presenters:

- Ingrid Roberson, Assistant Director of Research Learning, CCEE, iroberson@ccee-ca.org
- Dorcas Kong, Sr. Specialist of Executive Projects, CCEE, dkong@ccee-ca.org
- Hilary Kjaer, Director of Teaching and Learning, Rincon Valley USD, hkjaer@rvusd.org
- Tasha Lopez, Teacher on Special Assignment, Rincon Valley USD, tlopez@rvusd.org

Resources:

 Session slides: bit.ly/cera-ccee-bas

 Rincon Valley USD Tools: bit.ly/drln-rvusd

- Teacher & Student Surveys: bit.ly/rvusd-ts-surveys
- Walkthrough & Debrief Protocol: bit.ly/rvusd-walkthrough
- Ongoing Assessment Project (OGAP) Resources: bit.ly/rvusd-ogap

Balanced Assessment System (BAS) Pilot

- Watch the recorded informational session: bit.ly/bas-info
- BAS Pilot Recruitment Flyer: bit.ly/bas-flyer
- Ready to sign up? Complete the Interest and Readiness Survey by November 20, 2023: bit.ly/bas-ready

Other Resources

- CCEE Website: ccee-ca.org
- CCEE's Data Research Learning Network: <https://bit.ly/ccee-drln>
- Formative Assessment Micro-Courses: bit.ly/CCEE-FA

Questions

