ALN
ASSESSMENT LEARNING NETWORK

LEARNING POINT

What conditions are necessary for successful implementation of formative assessment?

The WestEd Formative Assessment Team has identified three essential conditions that are more likely to lead to successful implementation of formative assessment by teachers:

- Understanding formative assessment as a set of practices, grounded in disciplinary learning, rather than as a test event;
- Sustaining a long-term commitment to lead formative assessment implementation; and
- Establishing a culture, structures, and supports for ongoing professional learning for teachers, principals and district leaders.

Understanding formative assessment as a set of practices, grounded in disciplinary learning, rather than a test event

To reap the documented benefits of formative assessment, educators committed to successful implementation must understand that formative assessment is intended to inform learning during the course of its development, not to measure it or sum it up.

Formative assessment does not refer to a single test event, but rather to a set of interrelated practices that have been found to improve student learning.i When learning to implement formative assessment, teachers may focus on the practices in isolation as they build their knowledge and skills. However, it is these practices, when used in combination, that render formative assessment such a powerful engine for improving learning. Notably, formative assessment is not just for teachers; students are actively involved in the assessment process.

The practical application of formative assessment in the classroom includes:

- sharing or co-creating learning goals and success criteria with students,
- obtaining evidence of learning while learning is taking place,
- timely feedback (from teachers and peers), and
- self-assessment through which students:
  - monitor their progress against established learning goals and success criteria,
  - compare their current learning state with the goal and criteria, and then
  - make judgments about the actions they can take to attain their goals.ii

Taken together, these practices have been increasingly embedded worldwide into policy and the language of quality teacher practices.iii

Experience has shown that formative assessment implementation is enhanced when teachers have strong disciplinary knowledge, including an understanding of how learning develops within the discipline, and of common misconceptions and/or naïve understandings.

Sustaining a long-term commitment to lead formative assessment implementation

Experience has shown that successful formative assessment implementation occurs when leaders make a long-term commitment to formative assessment as a core catalyst for im-

proved learning in their schools (and districts), rather than treating it as the initiative du jour. In this regard, school (and ideally district) leaders must understand formative assessment, how it contributes to learning, and what they must do to support teachers in their implementation. It is fair to say that without the commitment and active engagement of leaders, formative assessment implementation has little to no hope of getting off the ground in any meaningful and sustainable way. School and district leaders best support and sustain implementation when they:

- implement formative assessment with a critical mass of teachers within a school-site
- engage in ongoing evaluation of current expectations around instruction and assessment and make changes to remove potential obstacles to implementation (e.g., strict adherence to pacing guides or mandated use of resources that limit daily decision-making based on formative assessment evidence)
  - develop and share a clear vision—aligned to district goals—and provide district-wide learning opportunities that integrate formative assessment into existing initiatives
  - describe how formative assessment fits within the larger district assessment system.

Establishing a culture, structures and supports for ongoing professional learning for teachers, principals and district leaders

It is essential that the school culture supports all participants through the

change process teachers will experience in their daily classroom practice when implementing formative assessment. Leaders shown to be effective in building such a culture:

- support risk-taking
- model collaborative relationships characterized by respect and trust

Formative assessment practice requires teachers to think differently about the relationship between instruction and assessment, to see feedback as a central mechanism in promoting learning, and to regard students as partners in the learning and assessment process. For most teachers, these represent fundamental shifts in practice; and making these shifts takes time, commitment, and patience on the part of both teachers and leaders.

When leaders provide long-term structures and support for teachers, sustainable implementation is more effective. Experience also has shown that teachers benefit from engaging in regular professional learning com-

munities that include the following practices:

- Establishing clear meeting expectations from the outset
- Having specific times set aside to focus on formative assessment implementation
- Having a clear focus and established protocols for conducting meetings

Conclusion

The Conditions of Success and Readiness Factors (see sidebar) described here are culled from years of experience working with district leaders, school leaders, and teachers to implement formative assessment. They can guide district dialogue and site/teacher selection in ways that are most likely to be successful—both in the early stages of implementation, and as formative assessment is scaled across the district.

Footnote References

i Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2003). Berkshire, England: Open University Press.

Black, P., Wilson M., & Yao, S-S. (2011). Roadmaps for learning: A guide to the navigation of learning progressions. Measurement: Interdisciplinary Research And Perspectives 9, Issue 2-3.

Hattie, J., & Timperley, H. (2007). The power of feedback. Review of Educational Research, 77, 81-112.

ii Absolum, M. (2010). Clarity in the classroom: Using formative assessment to build relationships.

Winnipeg, Canada: Portage and Main Press.

Heritage, M. (2012). Formative assessment: A process of inquiry and action. Cambridge, MA: Harvard Education Press.

Wiliam, D. (2011). Embedded formative assessment. Bloomington, IN: Solution Tree Press.

iii OECD (2013). Synergies for better learning; An international perspective on evaluation and assessment. OECD reviews and assessment in education. Paris, France; OECD Publishing.

Readiness Factors for Formative Assessment

A series of key Readiness Factors emerge from the conditions described here. They can help district design teams consider district readiness factors, school-site selection, and teacher selection during the initial planning for formative assessment implementation. The Readiness Factors may also provide guidance during implantation to district and school leaders as they adopt specific roles in support of teacher practice, and to support formative evaluation to identify specific areas on which to focus improvement. Consult the source document to learn more and find self-assessment tools for each Readiness Factor.

What are learning progressions?
How can they support student learning in the classroom?

What are learning progressions?

Learning progressions describe a path of increasing sophistication in student understanding in a subject matter domain. Learning progressions have been defined as the typical developmental sequence of skills and knowledge in a subject area over a span of time, based on research-conjectured hypotheses and validation studies. There are variations in the learning progressions that have been developed, however. Different types of learning progressions can be useful for different purposes.

While some types of learning progressions can inform standards and large-scale assessments, other types may be more helpful for teachers to support day-to-day student learning in the classroom (Alonzo & Steedle, 2009; Gotwals, 2012, 2017; Lehrer & Schauble, 2015). Specifically, it is important to consider the scope of the learning progression, which includes the amount of content and instructional time. In addition, the grain size of the learning progression, or the level of detail about the incremental changes in student thinking, is key to support student learning in the classroom (Alonzo, 2012; Mohan & Plummer, 2012).

Learning progressions and formative assessment

For the purposes of formative assessment, one way teachers can use learning progressions is to describe a series of incremental changes that occur in a student's thinking and skills that leads from achievement of one standard to the next in a subject matter domain. Along this pathway, there is a sequence of learning where the concepts or skills develop and deepen over time. This type of learning progression includes a series of building blocks that can be used to determine lesson-sized "chunks" of learning so that students' thinking and/or skills develop over time on the way to meeting a standard. Figure 1 shows an example of one set of building blocks for a standard for all students. Teachers may develop slightly different building blocks as needed by students at different levels of understanding.

Learning progressions include multiple building blocks

Content standards are usually substantive and too big for daily lesson planning. To plan for instruction and the formative assessment process, teachers need to describe the intermediate steps that occur in each student's thinking and ability as he or she advances in his or her learning from one standard to the next. These steps or series of changes can be thought of as "Building Blocks" (Tobiason, Chang, Heritage, & Jones, 2014). To identify a Building Block, a teacher can think about the learning steps that a student needs to take along a pathway to achieve a standard. Then, the teacher can use each Building Block to develop the related learning target(s) and success criteria. Together the Building Blocks, or learning steps, can be a form of learning progression.

How do building blocks make up a learning progression?

Building Blocks should connect to each other. They are a connected progression, not discrete or isolated instances of learning.

When teachers clarify the learning progression by outlining the Building Blocks necessary to achieve a standard, teachers are better equipped to determine the associated learning targets and success criteria for instruction. In addition, students will better understand how their learning may progress. Teachers also are better prepared to address misconceptions in student understanding— an important part of the formative assessment process.

Not all students follow the same path

Learning progressions describe "typical" learning paths. There can be outliers, and different ways in which students progress.

TO LEARN MORE

- **Building Blocks, Learning Goals, and Success Criteria: Planning Instruction and Formative Assessment for K-8 Math Standards.** From the College and Career Ready Standards to Teaching and Learning in the Classroom: A Series of Resources for Teachers. *Center on Standards and Assessments Implementation.* Tobiason, G., Chang, S., Heritage, M., Jones, B., & Herman, J. (2014). www.csai-online.org/resource/581

- **Building Blocks, Learning Goals, and Success Criteria: Planning Instruction and Formative Assessment for K-12 English Language Arts and Literacy Standards.** From the College and Career Ready Standards to Teaching and Learning in the Classroom: A Series of Resources for Teachers. Center on Standards and Assessments Implementation. Lozano, M., Mancevice, N., Jones, B., Heritage, M., Chang, S., & Tobiason, G. (2013). www.csai-online.org/sites/default/files/resources/3040/ELA_BuildingBlocksOfCCRS.pdf

- **Enhanced Learning Maps: Insights for Instruction.** The path to achievement is not linear. Center for Assessment and Accountability Research and Design, The University of Kansas. enhancedlearningmaps.org/sites/default/files/documents/elm_brochure.pdf

- **Formative Assessment: What Do Teachers Need to Know and Do?** Margaret Heritage, Kappan, 2007, tinyurl.com/Heritage-Kappan

There is not one path that all students will always follow in their learning. Due to differences in students' prior knowledge, experience, and skill, there will be differences as they work through these changes in understanding from the end of one standard to the next. Thus, students may follow different learning paths and take different amounts of time as they progress in their learning.

How do learning progressions support quality teaching and learning?

When the teacher thinks of learning targets for a lesson as part of a broader trajectory of learning and presents this sequence to students, it helps to communicate the purpose of learning this particular knowledge and skill, at this particular time, in this particular way. Teachers can clarify to students how this learning will build on past learning toward a broader learning goal.

Awareness of different learning paths helps the teacher to:

- understand how to connect the learning target for a given lesson to previous and future learning
- identify specific concepts and skills for student learning
- determine learning targets and success criteria
- connect instruction to learning goals
- collect relevant evidence of student understanding
- provide feedback to students about the next step in their learning
- identify and address individual student learning needs

Summary

Learning progressions are an important tool in the formative assessment process to help teachers and students connect prior knowledge to new learning as they move from less sophisticated to more sophisticated understandings.

- The teacher asks, "What steps do students need to make along the pathway of learning this standard?"
- A guiding question for the student is, "Now that I know X, what do I need to learn next to achieve the standard?"

Learning progressions can help teachers and students to make connections to the broader purpose of learning. In turn, students are able to take on greater ownership and become more active partners in their learning.

Figure 1: Example of a series of building blocks that compose a learning progression

Standard: Interpret products of whole numbers, e.g., interpret 5 X 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 X 7 (CCSS Math Content 3. OA).

Building Blocks of a Standard *	Learning Goal (Learning Target)	Success Criteria
Block 1 Practice repeated addition of objects arranged in rectangular arrays with progressively more rows and columns (beyond 5 rows and 5 columns). EX 7+7+7+7 and 2+2+2+2+2+2+2+2	Understand that a row in an array tells how many in the group and the column tells how many groups.	Count the number in a group and the number of groups. Explain what happens when one more row and one more column are added to the array.
Block 2 Move between symbolic (2+2+2+2) and concrete (four groups of 2 objects) representations of the same repeated addition number sentence.	Understand that repeated addition can be represented with a number sentence or with a concrete representation (e.g., manipulatives arranged in an array).	Write a number sentence from a given concrete representation of repeated addition. Explain the correspondence between their number sentence and the given representation. Correctly model a given number sentence about repeated addition with a concrete representation. Explain the correspondence between their concrete representation and the given number sentence.
Block 3 Describe repeated addition like 2+2+2+2 as "the number 2, added four times," and then, "four times 2."	Recognize the structure of repeated addition and understand that repeated addition can be expressed as the number of times a number repeats.	Create accurate number sentences using repeated addition, from a given set of objects. Make a pictorial representation of their number sentence. Describe the number of repeats in a concrete representation (e.g., "I have 6 repeats of this set of 3 things"). Correctly and precisely use the vocabulary "times" to express the number of repeats.

*See the cited reference for the complete list of Building Blocks for this standard.