Presenters' Notes for PowerPoint: Formative Assessment

	Slide # Title	Presenter Notes
1.	Formative Assessment Module	Welcome to the formative assessment module. In order to enhance your understanding of Formative Assessment, you should also participate in the <i>Learning Progressions, Interim Assessments, Summative Assessment</i> and <i>Rubrics</i> Modules.
2.	Formative Assessment is Important!	Let's begin by answering the essential question: What is formative assessment? Research shows that frequent formative assessment has the greatest positive impact on student learning. Formative assessment is more important than state assessments, nationally normed assessments, and even grade cards! That is why teachers, school administrators, and educators at every level need to understand how important formative assessments are.
3.	What is Formative Assessment?	Paul Black, professor emeritus and educational researcher, King's College London, gives us this well-known, simple definition: "When the cook tastes the soup, that's formative assessment; when the customer tastes the soup, that's summative assessment."
4.	What is formative assessment?	The Council of Chief State School Officers Formative Assessment Advisory Group gives us this definition: "Formative Assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes."
5.	What is Formative Assessment?	According to W. James Popham: "Formative assessment is a planned process in which assessment-elicited evidence of students' status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning tactics."
6.	Formative Assessment is a Planned Process	Formative assessment is a planned process . that: 1. Evokes evidence about student learning. 2. Provides Feedback about learning to teachers and to students. 3. Closes the gap between what the learner knows and desired goals.
7.	Results of Formative Assessment	What makes an assessment formative is the use of the assessment. It isn't the nature of the test that earns the label formative or summative but the use of that test's results. If the purpose of the test is to provide teachers and students with the evidence they need to make adjustments to instruction and learning then that test is playing a role in the formative assessment process. However, if the results of an assessment are used for making judgments about the success or failure of learning then that test is summative.
8.	Assessment Type	To understand Formative Assessment, we must understand what makes formative assessment different from Interim and Summative Assessments.

	Formative assessment provides moment-to-moment and day-to-day information that enables teachers to adjust their instruction as they teach and students to adjust their learning as they are taught.
	In contrast, summative assessments provide a basis for rendering final judgments – they answer the questions: Pass or fail? Proficient or not? Adequate or inadequate yearly progress? Continue or curtail funding?
	Interim assessments only provide a basis for predicting performance on the summative assessments.
	In a balanced assessment system, both summative and formative assessments are an integral part of information gathering. Depend too much on one or the other and what students are learning isn't clear.
	Formative Assessment is for the purpose of improving learning or teaching while it is going on.
9. Formative, Interim, Summative	Interim assessments fall between formative and summative assessment. They are medium-cycle, medium-scale, which means that they are administered three or four times per year and their results are aggregated to the school or district level. These assessments may serve a variety of purposes, including predicting a student's ability to succeed on a large-scale summative assessment, warning of learning deficits at the individual student level, or diagnosing gaps between different groups of students. In design and function, interim assessments can be thought of as "quasi-" or "mini" summatives. On the other hand, interim assessments definitely are <i>not</i> formative.
	Summative Assessment is carried out at the end of instruction to determine pupil learning and assign grades. Summative assessments happen too far down the learning path to provide information to make instructional adjustments and interventions <i>during</i> the learning process. It takes formative assessment to accomplish this.
	According to Black and Wiliam, first and foremost, formative assessment promotes learning. Rather than merely measuring it, formative assessment actually affects achievement.
10. Inside the Black Box	How much effect does formative assessment have on learning? The 1998 Black and Wiliam review of research studies, journal articles, and book excerpts concluded that formative assessment shows an effect size of between .40 and .70.
	This effect size is a big deal. Huge! Larger than most known educational interventions!
11. Ships	As studied by Black and Wiliam, formative assessment is all about making course corrections and even moment-to-moment adjustments. In this sense, formative assessment is to teaching and learning as steering is to driving a car. Better yet, formative assessment is to classroom teaching and learning as navigation is to a fleet of ships. In the classroom, the teacher serves as admiral of the fleet, but each student captains his or her

		own ship.
12. Studer Studer Teach Studer Peers	nt & er,	Formative assessment is a classroom-based, student-centered process of feedback between: • Student and teacher • Student and peers • Student and self
13. Teach	ers Need	According to Black & Wiliam, teachers need time to reflect upon their assessment practices and benefit from observing and consulting with other teachers about effective practices and about changes they would like to make. "Inside the Black Box" highlights three things teachers should consider.
14. Three Teach Should Consid	ers d	One: New learning should be tested within about a week of first exposure. Before beginning a unit teachers should: • target the indicators and clarify their meaning for students; • create a comprehensive list of knowledge and skills from the indicators; • define the data collection (student work) throughout a unit of study; • select appropriate products to be used in the data collection; • design rubrics that incorporate student input regarding their development and implementation; and • plan an assessment sequence.
15. Three Teach Should Consid	ers d	Two: Do the assessments yield accurate, pertinent diagnostic information? Frequent short tests are better than infrequent long ones. Teachers should be mindful of the quality of test items and work with other teachers and outside sources to collect good ones. To be truly helpful to students, formative assessment information should be focused on the task, not the student; and the student must understand the feedback.
16. Three Teach Should Consid	ers d	Three: Is the diagnostic information being used to inform and adjust instruction for individual students? If assessments are to support improvement in student learning, test results must provide sufficient understandable detail to guide students' and teachers' actions. Single scores or grades are not enough.
17. Activit	ty One	Let's take time now to review the work of Black and Wiliam by participating in Activity One.
	udent to and be	There are a variety of labels for student achievement expectations. Terms used include goals, objectives, proficiencies, competencies and standards and benchmarks or, as we will use here, curricular aims. These terms all refer to the same basic thing: What we want students to know and be able to do. The important challenge for the teacher is to clearly state achievement expectations.
	ulum,	For a teacher to clarify curricular aims for students he or she must first be able to ensure that there is alignment between the curriculum, instruction, and assessment used to help guide students through the process of learning. However, if curriculum, instruction, and assessment are misaligned, it becomes harder for students to stay on a course that leads to the standards or curricular aim. This slide is a graphic representation of alignment.

20. Illustration of Misalignment	As alignment decreases, it becomes more difficult to maintain a focus on standards. Students need to focus on specific skills and knowledge to keep curriculum, instruction, and assessment aligned with standards. This slide is a graphic representation of misalignment.
21. Highest Level of Performance Students Can Achieve	In the book <u>Student Involved Assessment for Learning</u> Rick Stiggins explains "Achievement targets define academic success. This is shown in the target we see in this slide. The center circle defines the highest level of performance students can achieve. Each consecutive outside ring on the target defines a level of performance further from the highest level. As students improve, they need to understand that they are progressing toward the bull's eye. Stiggins goes on to explain that students can hit any target that they see and that holds still for them. But if they are guessing at what success looks like success will be a random event for them.
22. Master Content Knowledge	Stiggins summarizes for us the kinds of curricular aims or targets students may encounter. These include: • Mastery of Content Knowledge • Use Knowledge to Reason and Solve Problems • Demonstrate Performance Skills • Create Products • Develop Attitudinal, Motivational Predispositions
23. Students Must Understand What is to be Measured	Students must understand what it is that they are supposed to be mastering. This is true whether the student is preparing for a single lesson or a month long unit – teachers need to describe the curricular aim in language the student can clearly understand – and student friendly versions of all curricular aims should be posted prominently in classroom.
24. IDEAS Rubric	Just because students understand what the curricular aim is doesn't necessarily mean they will understand the evaluative criteria that will be used to judge the quality of their knowledge or skill! Students need to understand exactly what the classroom targets are and how their achievement related to reaching those targets is determined. Students can't make decisions about their mastery of a curricular aim if they don't understand how their performance will be evaluated. In this slide, we have an example of how the writing trait "Ideas" can be presented to students in a way that they can understand progress toward the curricular aim "The paper is clear and focused. It holds the reader's attention. Relevant anecdotes and details enrich the central them."
25. Describe Curricular Aims	Describing how the curricular aim will be measured and providing examples of both very good and very poor assessment results will help students understand what they are supposed to be learning. And teachers need to explain why they've chosen an assessment technique to measure a curricular aim.
26. Rubrics Clarify Performance Expectations	In the book <u>Transformative Assessment</u> , Popham explains that rubrics are excellent ways to clarify performance expectations related each type of target. A "well formed rubric helps students understand what they are supposed to be learning." Rubrics or scoring guides should be provided to students at the start of instruction and referenced throughout instruction. To learn more about how to develop quality rubrics that will facilitate learning we suggest you participate in the <i>Rubrics Module</i> . This slide shows an example of a PowerPoint rubric that can be used in a 5 th grade social studies class.

27. Inventors PowerPoint Rubric	This slide shows an example of a PowerPoint rubric that can be used in a 5 th grade social studies class.
28. Teachers M Provide Students w the Building Blocks	the sequence of subskills and bodies of enabling knowledge that are the learning progressions underlying the target or curricular aim. This is important because students
29. Formative Assessment	l about what strategies they have chosen to master the learning.
for Grades	Popham advises that "teachers might suggest that the majority of approaches students adopt should be sure to include ample opportunities for a student to successfully practice whatever skill or knowledge a building block or curricular aim requires. "
30. Students as Partners	Stiggins tells us "that the greatest potential value of classroom assessment is realized when we open the process up and welcome students in as full partners I do not simply mean having students trade test papers or homework assignments so they can grade each other's work. That's strictly clerical stuff. This concept of full partnership goes far deeper Students who participate in the thoughtful analysis of quality work to identify its critical elements or to internalize valued achievement targets become better performers."
31. Activity Tw	Let's consider the student/teacher learning partnership and the important role assessment plays in that partnership by participating in Activity Two.
32. How do we plan Forma	2
Assessment	To do this we need to answer the essential question "How do we plan the formative assessment process?"
33. We need to begin with end in mind	the Process." This chart is a simple illustration of this. Wiggins and McTighe tell us to think
34. Framework Establishing Curricular Priorities	

	time test at the end of instruction."
	Wiggins and McTighe use the graphic shown in this slide to illustrate a nested framework that focuses on prioritizing curricular priorities in order to teach essential knowledge. The innermost circle represents the area on which we want to spend more of our time – the enduring understanding. The second concentric circle represents things that are important to know and be able to do. The outermost circle encompasses information that is worth being familiar with.
35. Checking for Understanding	In the book, Checking for Understanding: Formative Assessment Techniques for Your Classroom, Douglas Fisher and Nancy Frey write that "Teachers have no time to waste. We need to focus our instruction and ensure that students are learning, thinking, understanding, comprehending, and processing at high levels. We can only do this when we regularly check for understanding." Of course, it would be hard to argue with this statement. We know that it is critical to do continuous, ongoing checks for understanding and this means we need to plan an effective formative assessment process for our classrooms. Fisher and Frey explain that "Checking for understanding should become part of the routine of teaching." Checking for understanding should:
	 Align with enduring understandings. Allow for differentiated instruction. Focus on gap analysis. Lead to precise teaching.
36. Questions to Incorporate Checking for Understanding into Classroom Practice	Fisher and Frey also provide us with guiding questions to incorporate checking for understanding in classroom practice: • Do I know what misconceptions or naïve assumptions my students possess? • How do I know what they understand? • What evidence will I accept for this understanding? • How will I use their understandings to plan future instruction?
37. Model for Differentiating Instruction	Ann Tomlinson challenges educator s to differentiate instruction to meet the diverse learning needs of students. Fisher and Frey write "As noted in Tomlinson's model, assessment serves a critical role in teacher decision making. Teachers need to use a wide variety of assessment systems (and regularly check students' understanding) to know whether or not our instructional interventions, modifications, accommodations, and extensions are working. Checking for understanding presumes that students are able to demonstrate their understanding in different ways. This demands not only that products are differentiated but also that our ways of analyzing them are differentiated."
38. All of this leads us to Dr. Popham's book, Transformative Assessment.	All of this leads us to Dr. Popham's book <u>Transformative Assessment</u> . In chapter 3 Popham describes four levels of formative assessment: Level 1: Teachers' Instructional Adjustments Level 2: Students' Learning Tactic Adjustments Level 3: Classroom Climate Shift Level 4: Schoolwide Implementation

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		We'll focus on Level 1: Teachers' Instructional Adjustments.
		Popham writes that at Level 1 "Teachers collect evidence by which they decide whether to adjust their current or immediately-upcoming instruction in order to improve the effectiveness of that instruction." He goes on to explain that "formative assessment can be regarded accurately as a process intended to make a teacher's instructional means more effective . "
		The first step is to identify when to administer a formative assessment.
39.	The first step is to identify when to administer formative assessment.	At this point the teacher should review the learning progression developed for the curricular aim. Remember learning progressions are specifically intended to isolate the requisite building blocks (subskills and bodies of enabling knowledge) that students will need to master on their way to mastery of the target curricular aim.
		Remember Wiggin's and McTighe's Framework? Consider what is important to know and do to reach enduring understanding of a curricular aim and that will help you determine when to use formative assessment.
40.	O	Our second step is to select the appropriate assessment to use. If we choose the wrong assessment procedure we will draw invalid inferences and our instruction won't match students' learning needs.
	Our second step is to select the appropriate assessment to	There is an advantage to using shorter rather than longer tests. But any test used at this level of formative assessment must contain enough items to provide teachers with adequate information about students' mastery. Too few items will lead to invalid inferences.
	use.	Be careful! Don't forget to keep in mind Fisher's and Frey's advice that our methods of assessment should be differentiated so that students can demonstrate their understanding in different ways.
41.	Select Proper Assessment Methods	In the book <u>Student Involved Assessment FOR Learning Stiggins</u> explains that selecting proper assessment methods for a particular target is a validity issue. This is why we include a module about validity in this project. If an assessment isn't valid it isn't going to provide the information the teacher and student need about learning.
42.	Eight Types of Formative Assessment Practices	Almost all students and teachers participate in these eight types of formative assessment practices that incorporate these four assessment methods: 1. Criteria & Goal Setting 2. Teacher Observation 3. Questioning 4. Grading 5. Self-Assessment 6. Peer Assessment 7. Student record-keeping
		8. Formative Use of Summative Tests We are going to review what the research tells us will make each of these practices more effective assessments for learning.

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	Criteria and goal setting with students engages them in instruction and the learning process by creating clear expectations.
43. 1. Criteria and Goal Setting	In order to be successful, students need to understand and know the learning target/goal and the criteria for reaching it. Establishing and defining quality work together and determining what should be included in criteria for success are all examples of this strategy.
	Using student work, classroom tests, or exemplars of what is expected helps students understand where they are, where they need to be, and an effective process for getting there.
	Observations assist teachers in gathering evidence of student learning to inform instructional planning.
44. 2. Teacher	Observations go beyond walking around the room to see if students are on task or need clarification.
Observation	Observations assist teachers in gathering evidence of student learning to inform instructional planning.
	This evidence can be recorded and used as feedback for students about their learning or as anecdotal data shared with them during conferences.
	Questioning strategies should be embedded in lesson/unit planning. Asking better questions allows an opportunity for deeper thinking and provides teachers with significant insight into the degree and depth of understanding. Questions of this nature engage students in classroom dialogue that both uncovers and expands learning.
45. 3. Questioning	Questions limited to factual answers are not necessarily going to increase students' understanding. But the use of open-ended questions or problem solving tasks can set the scene for a lesson and evoke broad discussion or act as prompts for small-group discussions.
	Asking simple questions such as "Why do you think that?" or "How would you express that?" can provide opportunities to extend students' thinking by providing immediate feedback on their work.
46. 4. Teacher's	Teachers' written and oral comments evaluating students' work should identify what has been done well and what still needs improvement and also give guidance on how to make that improvement.
Written and Oral Evaluation	It is a good idea to give a score or grade only after a student has responded to the teacher's comments. The evaluation of students' work should not be a competitive judgment but a distinctive step in the process of learning.
	If teachers' fail to provide feedback prior to giving a numerical score or grade, students won't learn how to improve their work, and a learning opportunity is lost.

47. 5. Self Assessment	Self assessment is essential to learning. Students can achieve a learning goal only if they understand that goal and can also assess what they need to do to reach it. Self-assessment is thus essential to learning.
48. 6. Peer Assessment	 Peer assessment is valuable because students may accept criticisms of their work from one another that they would not take seriously if the remarks were offered by a teacher. In practice, peer assessment turns out to be an important complement to self-assessment. Peer work is also valuable because the interchange will be in language that students themselves naturally use and because students learn by taking the roles of teachers and examiners of others. When students do not understand an explanation, they are likely to interrupt a fellow student when they would not interrupt a teacher. In addition to this advantage, peer assessment is also valuable in placing the work in the hands of the students. The teacher can be free to observe and reflect on what is happening and to frame helpful interventions.
49. 7. Student Record Keeping	Student record keeping helps students better understand their own learning as evidenced by their classroom work. Student record keeping helps students better understand their own learning as evidenced by their classroom work. This process of students keeping ongoing records of their work not only engages students, it also helps them, beyond a "grade," to see where they started and the progress they are making toward the learning goal.
50. 8. Formative Use of Summative Assessment	Summative tests should become a positive part of the learning process. Through active involvement in the testing process, students can see that they can be the beneficiaries rather than the victims of testing, because tests can help them improve their learning. Students can prepare for exams by creating their own test questions and answers based upon the same targets that will be on the summative test. Writing test questions and/problems with answers helps students gain an understanding of the assessment process and further refine their efforts for improvement. Students benefit from reworking test answers in class through peer and self analysis of incorrect answers. Students' use of peer and self-analysis facilitates understanding of their test results. This may include providing opportunities for students to rework examination answers in class.
51. Our third step is to decide what instructional adjustments should be made.	The third step is to decide what instructional adjustments should be made. To do this the teacher must determine a required level of individual student performance and a required level of total group performance . This requires a predetermined adjustment trigger be established prior to collecting assessment evidence from students. Popham provides us with these examples: To increase instruction: "If at least 90% of my students don't earn scores of 90 percent or better on Thursday's formative quiz, I'll add a new review lesson on Friday." To decrease instruction:

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	"If at least 95 percent of my students correctly answer at least 8 of tomorrow's 10-item quiz on Topic X, I will delete next week's planned Topic X review lesson."
52. Our fourth step is to make adjustments in instruction.	The fourth step is for teachers to make adjustments in instruction. This is the time for making decisions that lead to more precise and effective teaching. What is done at this step will be up to the individual teacher and will depend on that teachers' level of experience and expertise. Popham advises us to "revisit the original learning progression created for the curricular aim or building block. In reviewing that progression were certain subskills or bodies of enabling knowledge overlooked? Are there any building blocks that are not really essential and may be confusing students?
	Think about McTighe's and Wiggin's framework: What is important for students to know and be able to do?
53. Activity Three	Let's begin the process of planning formative assessment by participating in Activity Three.
54. The Process of Formative Assessment	We've considered Level 1 Formative Assessment described in Dr. Popham's book Transformative Assessment . Now let's think about applying the process of formative assessment by reviewing highlights of the sequel, Transformative Assessment in Action . Dr. Popham reemphasizes that "Formative assessment is more about teaching than it is about testing. At bottom, it is an instruction-enhancing process. It really is." In Chapter 1, Popham goes on to provide a framework for "ways to turn formative assessment talk into formative assessment action."
55. Five Potential Applications of Formative Assessment	There are five potential applications of formative assessment: 1. To make an immediate instructional adjustment. 2. To make near future instructional adjustment. 3. To make a last-chance instructional adjustment. 4. To make a learning tactic adjustment. 5. To promote classroom climate shift.
	Application 1 is "For Immediate Instructional Adjustments."
56. Application 1	Using Application 1, a teacher gathers data, analyzes it, decides whether or not to change instruction at that moment, in that class session. Immediate instructional adjustments can be based upon 1) teacher-administered assessment procedures, such as short quizzes, or 2) student reported levels of understanding.
,,	Using immediate instructional adjustment, a teacher diagnoses, addresses, and corrects students' misconceptions instead of letting those misconceptions remain for another day when they will probably be far more difficult to remedy. However, while this is clearly useful, it requires that the teacher think ahead about what students will misunderstand and prepare suitable instructional responses ahead of time to address those misunderstandings.
57. Application 2	Application 2 is "For Near-Future Instructional Adjustments."

future instructional adjustment. To do this, a teacher will need to use learning progressions to break down the subskills that are crucial to developing the overall learning goal and then through non-graded formative assessment exercises determining what needs to be done to ensure that students are mastering those crucial subskills before moving on. According to Popham, the teacher will have done at least some preliminary thinking about what sorts of instructional actions might be taken if the data suggest the need for further instructional alterations. Using this evidence, the teacher can think through potential instructional options in light of the data's particulars, and can fine tune adjustment plans accordingly. Application 3 is "For Last Chance Instructional Adjustments." If, near the end of an instructional sequence, a teacher wants to discover whether students have mastered the target curricular aim, that teacher may apply formative assessment for the purpose of last chance instructional adjustments. Instructional time still remains so that if assessment evidence suggests that students are not at mastery or close to it, the teacher can provide additional or different instruction designed to get students back on track before the unit's scheduled conclusion and before the unit's summative assessment. 58. Application 3 This application of the formative assessment process is associated not just with the ends of units but also with the approach of accountability tests, particularly when the teacher has an understanding of what the accountability test will cover. This application is appropriate for any important curricular outcome. But it is critical that the formative assessment used contain a sufficient number of items assessing the essential subskills and bodies of knowledge so a teacher can get a fairly accurate fix on where instructional support is required. And it is also critical that teachers plan what they will do instructionally to address the student mastery deficits uncovered by the formative assessment for the subsequent summative assessment. Application 4 is "For Learning Tactic Adjustments." The fourth application is used for the purpose of enabling students to use assessments evidence to monitor their own progress and decide whether they need to change the manner in which they're attempting to learn. Although this fourth application of formative assessment revolves around what students 59. Application 4 do, the teacher's role is significant because it is the teacher who establishes the expectation and the conditions so that each student can monitor his or her own learning progress and decide whether or not to make a learning tactic adjustment. Students actively review their own classroom assessment data, connecting these outcomes to their own inputs, and make changes so that their efforts will yield more

satisfactory results.

	Application 5 is "For Promoting a Classroom Climate Change."
	The fifth and final application of the formative assessment process works to shift the atmosphere of a classroom through theses three significant changes:
60. Application 5	 A change in learning expectations so that teachers and students see that substantial learning is likely for all students; regardless of how "smart" any student is perceived to be. A change in the locus of responsibility for learning from the teacher to the students. Students bear significant responsibility for their own learning and for the learning of their classmates. A change in the role of classroom assessment. Classroom assessments are seen by teachers as the means to gather evidence necessary to inform instructional adjustments and by students as the means to gather evidence to make learning tactic adjustments. The vast majority of classroom assessments are not graded at all.
	This fifth application of formative assessment is a consummate implementation of the process that will secure maximum instructional mileage.
61. Maximum Instructional Mileage	There are applications of formative assessment focused on teachers' assessment –based decisions about whether or not instructional adjustments are appropriate. There's also an application of formative assessment focused on students' assessment-based decisions about whether to adjust their learning tactics.
	Because this fifth application of formative assessment promotes a complete shift in classroom climate, it is necessary to employ at least one or more teacher-focused and one or more student-focused applications of formative assessment. According to Popham, "Promoting the three significant changes in classroom climate identified requires a total, no-holds-barred effort."
	All five applications we've discussed are dependent upon the same fundamental process.
62. Applications of Formative	Much of the teacher's thinking about formative assessment occurs before an instruction actually takes place. Two factors typically turn out to be most instrumental in a teacher's planning. The first of these factors is linked to when an adjustment decision must be made and implemented: immediately or later? The second factor involves the kind of assessment evidence that will be used, which requires the teacher to decide what kinds of assessments to employ.
Assessment	Formative assessment is a fundamentally simple process. At its base formative assessment involves the periodic collection of assessment evidence from students so teachers and sometimes students can decide whether or not to adjust what they're doing.
	Current research evidence indicates that the formative assessment process can tolerate teachers' employing it in many different variations and still work well. But the quality of the assessments is crucial. As Popham states in Chapter One of <u>Transformative Assessment in Action</u> , "Formative assessment based on shabby assessment instruments and

	procedures is destined to become shabby formative assessment."
63. Activity Four	Let's conclude by participating in Activity Four.