The Standards-Based Teaching/Learning Cycle
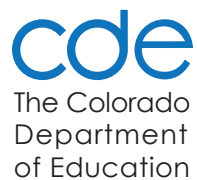
Second Edition

A guide to Standards-Based Education practices at the district, school, and classroom level

The Colorado Coalition of Standards-Based Education:

cde
The Colorado
Department
of Education

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The Standards-Based Teaching/Learning Cycle
Second Edition

May 2012

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The Standards-Based Teaching/Learning Cycle

Foreword

Transforming standards-based teaching and learning in Colorado

Colorado's 21st century

In 1993, Colorado House Bill 93-1313 mandated the creation of K–12 academic standards that, for the first time in the state's history, defined what all students should know and be able to do across grade levels and content areas. The arrival of a new century and a reassessment of the demands of 21st century society, however, necessitated a significant re-visioning and a fundamental transformation of those standards. In 2008, with the passage of Senate Bill 08-212, Colorado initiated the creation and implementation of its next generation of standards. This bill, "Colorado's Achievement Plan for Kids" (CAP4K), acknowledged the **achievements** of standards-based education in Colorado thus far, namely its ability to facilitate state and school district officials' ability to "measure what each student knows and is able to demonstrate at various levels in the student's academic career" (CRS 22-7-1002). Moreover, CAP4K also recognized that standards-based education had led to "significant increases in learning and academic achievement among some students enrolled in the public schools of the state" (Ibid). Yet, for all these successes, CAP4K also acknowledged that the **purposes** of standards-based education had not been fully realized with unacceptably high drop-out rates, achievement gaps, and remediation rates still existing in the state.

To address these persistent problems and their impact on children's lives, CAP4K then created a blueprint for the creation of the next generation of standards-based education. Accordingly, these new standards would:

- Create a seamless education system through the intentional alignment of preschool through post-secondary expectations for students;
- Consider the needs of the whole student through a rich and balanced curriculum;
- Infuse 21st century skills into rigorous content; and
- Prepare all students for meaningful postsecondary options and the workforce.

With these goals in mind, teams of teachers, school administrators, and various educational professionals, working alongside content and instruction specialists with the Colorado Department of Education, engaged in a year-long revision process in 2009 to re-create standards in all ten content areas and English language proficiency. With the vision of "all students, all standards," the new Colorado standards that emerged from this process reflect an increased attention to rigorous academic preparation and the educational foundation each student needs for success in college and career.

At each grade level, the Colorado standards:

- Are designed with the end in mind with postsecondary and workforce readiness for all students;
- Require application of knowledge, creating a new definition of mastery;
- Contain fewer expectations with greater depth to allow for richer, more meaningful learning; and
- Create a focus on "all students, all standards" through a rich and balanced curriculum.

This next generation of Colorado's Academic and English Language Standards help set the stage for the high levels of standards-based teaching and learning intended by the legislative vision of the last twenty years.

Raising student achievement through a continuous improvement cycle

The successful implementation of standards-based education practices, like Colorado's iterative legislative process, compels educators to embrace a continuous improvement cycle that focuses on effective teaching and learning practices through planning, doing, reflecting, and revising. Colorado's education transformation agenda exemplifies this continuous improvement cycle at all levels of the educational system: classroom, school, district, and state department of education. Continuous improvement for student learning, which is the central focus of this guide, revolves around four primary questions:

1. What do students need to know, understand, and be able to do? (Plan)
2. How do we teach effectively to ensure students are learning? (Do)
3. How do we know students are learning? (Reflect)
4. What do we do when students are not learning or are reaching mastery before expectation? (Revise)

An analogous cycle of improvement occurs for Colorado teachers as outlined in Senate Bill 10-191, Colorado's Educator Effectiveness Bill. This cycle considers (1) what educators must know and be able to do, (2) what supports/facilitates effective educational practices, (3) what evidence demonstrates teaching effectiveness, and (4) what steps can be taken to continuously improve and build upon effective classroom instruction. Likewise, Senate Bill 09-163, Colorado's Education Accountability Act, embodies this cycle for schools/districts, asking administrators to consider (1) what they need to know and be able to do, (2) how their work supports an effective educational system, (3) how they identify and develop effective systemic practices through their leadership, and (4) how they work to build an agile and responsive system that effectively meets the needs of all students. Thus, from micro to macro levels, Colorado's multifaceted educational agenda establishes a process for continually revisiting the learning we seek for children and improving the work of the adults who serve them.

Realizing a transformation

While it may seem that such a vision is not perhaps immediately achievable, without this vision, Colorado schools may easily center their work on our previous goal of proficient performance in essential knowledge and skills, based on lists of objectives where students are asked to list, identify, define, etc., or worse, to "cover" the content of a curriculum, a published program, or text book at the knowledge or comprehension level. It is now the work of schools to move beyond proficiency to mastery, beyond lower-level thought or performance processes to the more complex conceptual work of analyzing, synthesizing, hypothesizing, understanding, and creating connections among a number of concepts and skills, as well as applying and creating. It is this vision of teaching and learning that our leaders in the legislature and in the Colorado Department of Education believe will create the keys to the future for the youth of Colorado.

– The Colorado Department of Education

Preface

In 2006, it became clear to numerous educational leaders in Colorado that the comprehensive implementation of standards-based educational practices stood out as a significant need at both the school and district level. In a survey by the Colorado Education Association in 2006, this same issue was identified as a top concern of teachers. At that time a group of the state's educational leaders came together to address this concern (including representatives of the Colorado Department of Education [CDE], Colorado Association of School Executives [CASE], Colorado Education Association [CEA], Adams State College, Tointon Institute for Educational Change, Front Range BOCES, and members of CDE's School Support Team [SST] and Comprehensive Appraisal of District Improvement [CADI] teams). The results identified in the CDE SST and CADI reviews and the CEA survey were confirmed by this ad hoc committee. With that understanding, the group set out to create a common vision of standards-based education and to develop descriptions, tools, and materials to help districts and schools more effectively implement standards-based practices.

After collaborating for more than a year, the committee commissioned a document to clearly and simply articulate what it means to be standards based in practice. Following a review of best practices through research, literature, expertise of respected authorities, the work of other state departments of education, as well as the best thinking of this committee and numerous other educators in the state, a document was produced to address this need. *The Standards-Based Teaching/Learning Cycle (2008)* was published to identify and describe those practices that have been found to be essential in providing a comprehensive standards-based education.

This new edition of *The Standards-Based Teaching/Learning Cycle* has been updated to reflect the most recent literature and research and integrates the observations of successful practices in Colorado schools and districts. It is hoped that this document and accompanying self-assessments and planning tools will help schools throughout the state to enhance their delivery of a standards-based education for *every child, in every classroom, every day.*

As in the 2008 edition, this edition is not intended to represent the individual perspective of a particular researcher or author, but rather to synthesize and describe those practices most often cited as fundamental for standards-based districts and schools. It is not intended to be a "how-to" text on classroom planning, instruction, or assessment, but simply a synthesized description of the critical standards-based practices that have been shown to lead to higher levels of achievement. It is intended to provide the framework for educators to teach and support every student to learn and demonstrate mastery of the Colorado Academic Standards (SB 08-212).

The practices described in the following pages emphasize best-first classroom instruction and are designed to describe the tools essential to any effective, high-performing classroom. It is hoped that this publication, along with an understanding of the state of Colorado's vision, will challenge the profession to shift focus from past practices (i.e., emphasis on "covering" classroom curriculum;

dependence on texts, published programs, testing or grades; or an over reliance on interventions, special programs, or placements) to emphasizing development of students as engaged and empowered learners that are not just recipients of learning, but partners in their own education.

The Standards-Based Teaching/Learning Cycle and accompanying tools are designed to guide all educators, from superintendents, to all staff who deliver and support teaching and learning in our schools, to understand the context of standards-based education in Colorado and to see themselves as part of an effective, standards-based system, whatever their professional role be in a school or district.

While this guide is designed as a tool for educators, it is also a source of information and reference for the broader Colorado community, from school boards and families of students to business and community stakeholders. Every effort has been made to describe standards-based educational practices in a straightforward, concise, and understandable fashion for all Coloradans who support high levels of learning for *every child, in every classroom, every day.*

> *– David J. Benson, Ed.D.*
> *in collaboration with Shelly Lantz, M.A.*

The original standards-based education ad hoc committee included representatives from the following organizations:

   Adams State College

   The Center for Strategic Quality Professional Development

   Colorado Association of School Executives

   Colorado Department of Education

   Colorado Education Association

   Front Range BOCES

   Focused Leadership Solutions

   Tointon Institute for Educational Change

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What does it mean to be standards based in practice?

Standards-based education in Colorado is defined as an ongoing teaching/learning cycle that ensures all students learn and master Colorado's Academic Standards and associated concepts and skills. In this continuous process of teaching/learning, student achievement is frequently measured through a variety of formats and assessment practices, and students are provided multiple opportunities to learn until they reach mastery. *Regardless of content area, course, level, or revisions in standards, this teaching/learning cycle remains constant.*

Comprehensive standards-based practices involve more than knowing state and district standards; posting standards, learning goals, or objectives in a classroom; referencing standards in lessons or units; "covering" a curriculum; or following a textbook purported to follow state standards. Rather, it means consistently teaching with activities, lessons, and units specifically designed to ensure every child learns the grade-level expectations that lead to mastery of the standards.

Being standards based means that every teacher, in every classroom, every day, through this continuous teaching/learning cycle, ensures students learn all standards and associated concepts and skills to mastery. Throughout every district, this takes focus and fidelity to a relentless cycle of teaching and learning along with hard work, persistence, and strategic use of time and resources.

In its simplest terms, a standards-based teaching/learning cycle continually answers four critical questions, adapted from Dufour & Eaker (1998, 2002, 2006):

1. What do students need to know, understand, and be able to do?
2. How do we teach effectively to ensure all students are learning?
3. How do we know students are learning?
4. What do we do when students are not learning or are reaching mastery before expectation?

Within these four critical questions, 34 elements of standards-based practice are now consistently identified in research and literature and are evident in high-performing schools and classrooms.

The Standards-Based Teaching/Learning Cycle, Second Edition outlines the elements of practice as they relate to these four critical questions. Each of the four chapters addresses one critical question, beginning with a list of the elements of practice with descriptions along with *Guiding Questions* to help educators evaluate their current level of implementation and determine what needs to be done next. At the end of each chapter, a diagram helps clarify how the elements of practice fit within the continuous cycle of teaching and learning.

Being standards based requires supportive conditions in districts and schools

While *The Standards-Based Teaching and Learning Cycle, Second Edition* provides a description of standards-based educational practice, other fundamental systemic conditions within districts and schools must be in place for the practices described in this document to be effectively delivered in every classroom. While the conditions identified below do not attempt to describe all the organizational systems needed to support effective teaching and learning practices, several critical conditions that must be in place to reach that goal are highlighted.

Throughout every district there is a need for focused, well-informed, and visionary leadership along with creative and motivated teachers and support staff who will generate the classroom conditions to create highly motivated students, develop productive teacher/student relationships, and engage students in learning for meaningful purposes.

Leadership needs to ensure a guaranteed and viable curriculum is delivered through evidence-based instructional strategies, with tools and resources available to every teacher along with ongoing, high-quality professional development.

Organizational systems and structures to build the capacity of all staff to perform at high levels are vital. First and foremost, leaders must provide support and coaching for all instructional staff to continually improve their individual performance. Second, leaders must continually monitor the professional practices of staff as they plan, collaborate, teach, assess, and adjust their classroom instruction. Third, leaders must implement well-designed teacher and administrator evaluation systems that support best practices, including accountability of all staff, to implement those practices known to have the greatest effect on student learning.

Additionally, districts and schools need creative and strategic allocation of resources, clear improvement goals and action plans, and effective methods to meaningfully engage families and the community.

Many of these along with other systemic conditions are more thoroughly identified in a separate publication, *Conditions in the School District that Support Implementation of The Standards-Based Teaching/Learning Cycle.* This brief document provides schools, and particularly school districts, a tool to assess their efforts in creating the conditions to ensure classrooms indeed implement appropriate and effective standards-based educational practices.

While *The Standards-Based Teaching/Learning Cycle* provides a description of critical elements that are fundamental to ensuring students master standards, without ensuring a host of supportive systemic conditions are in place in every district and school, the vision of educating all students to high levels will be a continuing challenge for districts and schools.

Being standards based in practice requires commitment

Reminders to Consider:

➡ Standards-based education in Colorado is defined as an ongoing teaching/learning cycle that ensures all students learn and master Colorado's Academic Standards and associated concepts and skills.

➡ Comprehensive standards-based practices involve more than knowing state and district standards, posting standards or objectives in a classroom, referencing standards through lessons or units or "covering" a curriculum that has been aligned with standards.

➡ Regardless of content, course, level, identified outcomes, or revisions in standards, this teaching/learning cycle remains constant.

➡ Being standards based means that every teacher, in every classroom, every day, through a continuous cycle of teaching and learning, ensures students learn the district's standards, concepts, and skills to mastery. This takes, as described by Fullan (2008), "focusing on the right work and getting better and better each day with relentless consistency."

➡ Best-first classroom instruction is critical to improving student achievement. Without commitment to ensuring every student is afforded the opportunity to learn at high levels—through effective standards-based classroom instruction—supplemental interventions, programs, or placements will not be able to make up for and should not supplant less-than-effective classroom instruction.

Reminders to Consider:

➡️ The job of every school district is to make certain that supportive conditions are in place to ensure standards-based practices are implemented in every school, in every classroom, every day.

➡️ To ensure all district and school staff understand and implement standards-based practices, district and school leaders must commit to a system-wide infrastructure of support that builds the capacity of teachers and monitors and sustain effective classroom practices.

➡️ Being truly standards based in practice takes system-wide commitment with focus, fidelity, hard work, follow-through, and continuous monitoring and reflection. Throughout the United States and in Colorado, it has been demonstrated that high student achievement does occur if every educator fully commits to engage in a continuous standards-based teaching and learning cycle.

Illustration 1.

Continuous Cycle of
Student Learning

- What do students need
  to know, understand,
  and be able to do?

- What do we do
  when students are
  not learning or
  are reaching
  mastery before
  expectation?

Student Learning

- How do
  we know
  students are
  learning?

- How do we teach effectively
  to ensure all students
  are learning?

Illustration 2.
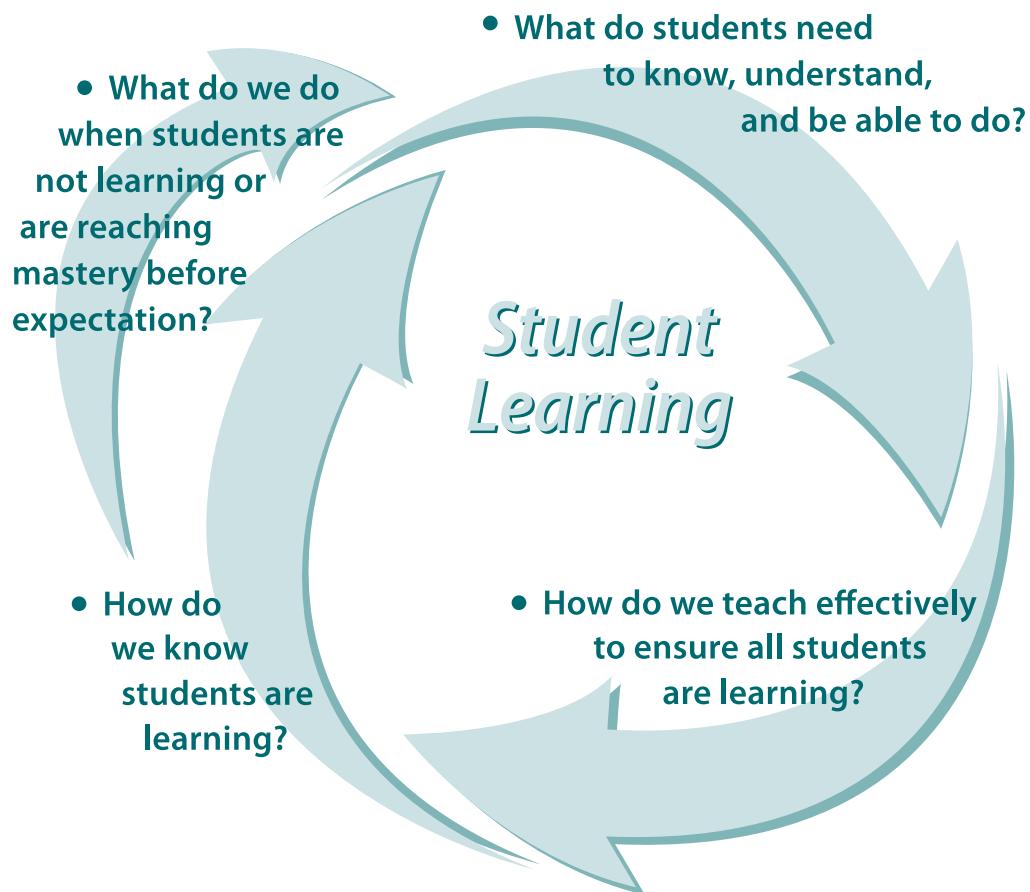
Chapter 1

> • **What do students need to know, understand, and be able to do?**

Continuous Cycle of
Student Learning

• What do students need
to know, understand,
and be able to do?

• What do we do
when students are
not learning or
are reaching
mastery before
expectation?

*Student
Learning*

• How do
we know
students are
learning?

• How do we teach effectively
to ensure all students
are learning?

Chapter 1

What do students need to know, understand and be able to do?

Essential Practices

A Standards in all academic disciplines or content areas, along with corresponding high school and grade-level expectations, are adopted at the district level.

B Learning expectations for all students are identified, organized, and described around prepared-graduate competencies and the "big ideas" that connect expectations and standards.

C High school and grade-level expectations are articulated and aligned within and among grade levels and across the district to make certain there are no gaps or unnecessary overlaps in those concepts and skills and to ensure a scaffold of increasing depth, breadth, and cognitive complexity.

D District curriculum provides a scope and a sequence of grade-level expectations organized to comprise a district's guaranteed and viable curriculum for preschool through high school.

E District-produced curriculum documents, guides, or frameworks provide tools to assist teachers in planning effective instruction that focuses on the "big ideas"along with the concepts and skills identified in the district's guaranteed and viable curriculum.

F Descriptions or indicators of mastery are identified and used to describe the types and levels of performance expected for all grade-level expectations.

G Examples and exemplars of mastery-level student work are identified or created to provide models of performance expectations for students.

H Adopted or purchased instructional programs and materials are intentionally aligned with the district's standards-based curriculum.

I Standards and grade-level expectations are communicated effectively to students and families.

Description of Essential Practices

What do students need to know, understand, and be able to do?

Until districts and schools clearly articulate what students should know, understand, and be able to do and provide students with clear learning goals and descriptions of mastery-level performance, they cannot ensure students will learn and perform at high levels. A standards-based school district is perfectly clear about the standards and expectations all students should learn. The importance of developing a comprehensive district curriculum based on adopted standards cannot be understated. Without the foundational direction provided by curriculum documents to guide what and how teachers will teach and measure student learning, students will not be assured access to or mastery of the academic standards for their grade level or be fully ready to graduate with the knowledge and skills needed for success in the 21st century.

In order to address this question, districts and schools need to ensure these practices are in place:

Ⓐ Standards in all academic disciplines or content areas, along with corresponding high school and grade-level expectations, are adopted at the district level.

The first step in being standards based is for school districts to formally adopt standards for learning in all academic disciplines or content areas. Those academic standards, along with high school and grade-level expectations and corresponding evidence outcomes, form the basis for teaching and learning for all students.

In the past, academic standards at the national, state, and even local levels have often been quite general in nature. Colorado's current standards now provide more grade-level specificity regarding what students should know and be able to do as well as vertical progressions that provide a logical sequence of knowledge, concepts, or skills expected of students over time.

Guiding Questions:

> *Has the district identified and adopted grade-level expectations and evidence outcomes in all content areas for every grade level?*

> *How has the district communicated its adopted grade-level expectations and evidence outcomes to staff? To parents and students?*

> *How does the district ensure all teachers know and understand the grade-level expectations and evidence outcomes for their grade level or content area? How does this occur at the school level?*

> *Does each teacher have and use district-developed curriculum documents to guide their planning, instruction, and assessment?*

B **Learning expectations for all students are identified, organized, and described around prepared-graduate competencies and the "big ideas" that connect expectations and standards.**

Beyond adopting standards, districts must organize concepts and skills around the big ideas that frame the standards for every student to learn and demonstrate at a mastery level. This is accomplished through a district-developed curriculum which is an organized plan of instruction for engaging students in mastering the standards.

Even with a reduction of standards, grade-level expectations, and evidence outcomes in the new Colorado Academic Standards, it is still important that districts organize learning goals around big ideas and identify which goals all students should master at designated points in time. Organizing these concepts and skills for all grade-level expectations allows educators to make certain that all students are afforded adequate and equitable opportunities to learn, i.e., what Marzano (2003) describes as *guaranteed and viable.* Without a district identifying what concepts or skills are the focus for a given unit or period of time, teachers find themselves either struggling to "cover" standards or making personal decisions about what is most important for students to learn at any point in time. Such prospects, by definition, deprive students of a guaranteed and viable curriculum and leave teachers in the untenable situation of being unable to teach the curriculum to mastery.

Guiding Questions:
> *Are grade-level expectations and evidence outcomes identified and organized for all grades and content areas?*

> *What criteria are used to organize grade-level expectations and evidence outcomes in the district's curriculum documents?*

> *How does the district ensure administrators and teachers know, understand, and teach those concepts and skills expected for their grade or content area?*

> *How do schools effectively communicate to students the outcomes they are expected to learn or the type of performance they must demonstrate?*

C **High school and grade-level expectations are articulated and aligned within and among grade levels and across the district to make certain there are no gaps or unnecessary overlaps in those concepts and skills and to ensure a scaffold of increasing depth, breadth, and cognitive complexity.**

As districts design and adopt curriculum and curricular tools, it is important that all learning expectations are clearly articulated within and among grade levels to eliminate gaps or unnecessary overlaps within content areas or grade levels, between grade levels, and when numerous courses are offered in one content area. This alignment supports designing and delivering the curriculum in a *meaningful sequence or a vertical progression* to provide a scaffold of learning opportunities for students. It also helps students to incrementally and developmentally acquire all the expected concepts and skills and build on prior learning.

Guiding Questions:
> *How has the district eliminated gaps or overlaps in the scope and sequence of expected concepts and skills in the district curriculum?*

> *Does the district curriculum build a scaffold of increasingly difficult levels and complexity of concepts and skills through learning progressions?*

D. District curriculum provides a scope and a sequence of grade-level expectations organized to comprise a district's guaranteed and viable curriculum for preschool through high school.

Beyond adopted standards and grade-level expectations, districts must have a curriculum, usually developed by grade level and/or content area, that identifies and describes both the *scope* and the *sequence* of the big ideas and the concepts and skills students should learn throughout a school year or within other designated time periods. This scope and sequence comprises the district's guaranteed and viable curriculum and should be clearly identified in curriculum guides, documents, or frameworks and be readily available to all teachers. This is critical to ensure teachers clearly understand the road map of concepts and skills they should teach and students should learn and they accept responsibility to deliver this guaranteed and viable curriculum to all students.

Guiding Questions:

> *Has the district produced a guaranteed and viable curriculum with a scope and sequence of all grade-level expectations and evidence outcomes preschool through high school?*

> *How does the district ensure curriculum documents are available and used by all teachers?*

E. District-produced curriculum documents, guides, or frameworks provide tools to assist teachers to plan effective instruction that focuses on "big ideas" along with the concepts and skills identified in the district's guaranteed and viable curriculum.

In addition to the district's scope and sequence of grade-level expectations, curriculum documents often include supplemental instructional planning tools such as curriculum maps, or pacing guides, that provide general time frames for addressing grade-level expectations allowing flexibility for teachers to adjust for student learning needs. Often these documents provide descriptions of learning by organizing the concepts and skills with descriptors including varying Depths Of Knowledge (DOKs) or through a taxonomy of thinking skills. Curriculum guides can also identify instructional strategies to support classroom delivery of the district's curriculum, as well as examples of formative assessment practices, to inform instruction (pre-post assessments, informal progress monitoring checks, etc.); interim assessments to determine progress (periodic benchmark, curriculum, common course assessments, etc.); and summative assessments to measure mastery (post-tests, chapter or unit assessments, student products, performance assessments, etc.).

Additionally, curriculum guides can provide references to supplemental instructional resources, tools, or strategies to differentiate for varying student learning levels and needs, identification of necessary vocabulary terms, as well as enrichment or extension activities and interdisciplinary connections.

Guiding Questions:

> *What are the elements of district curriculum documents that guide planning, instruction, and assessment for and of learning? How comprehensive are these documents?*

> *How does the district ensure all teachers have access to curriculum maps, pacing guides, or other tools designed to assist teachers in planning and delivering the curriculum?*

> *How are teachers utilizing curriculum documents to guide their planning and teaching? How is this monitored?*

> *How would teachers describe the usability of curriculum documents?*

> *How do curriculum guides create intentional links to 21st century skills for students with interdisciplinary connections?*

It is also important that curriculum documents help teachers understand the unifying themes and supporting concepts at each grade level in ways that support 21st century learning and connections across content areas. These are identified as Discipline Concept Maps (DCM) in the CDE Design Tools at http:www.cde.state.co.us/sitoolkit/index.htm.

Curriculum documents, guides, or frameworks comprise vital information to help teachers organize and plan standards-based units and lessons and are critical to ensure teachers deliver the curriculum consistently, equitably, and comprehensively. These documents need to be clearly organized, written descriptively, and teacher friendly.

F Descriptions or indicators of mastery are identified and used to describe the types and levels of performance expected for all grade-level expectations.

In addition to identifying and organizing grade-level expectations, Marzano and Haystead, 2007, suggest that curriculum documents should clearly describe performance expectations so that standards and grade-level expectations can be more useful in providing clear learning goals for students and measuring student performance. As the curriculum describes the scope and sequence of grade-level expectations, descriptions or indicators of mastery must also be identified by teachers and provided to students. Teachers must know what mastery looks or sounds like for the concepts and skills they are responsible to teach and students must learn to mastery. Additionally, teachers need to ensure students can articulate what they are learning and describe the performance expected of them. This can be accomplished by providing descriptions with formative assessments, scoring guides, scales, checklists, rubrics, exemplars, or other measures of mastery for grade-level expectations.

To support equity for all students, descriptions of mastery should be consistent within grade levels or departments and across a district as well as calibrated with other measures of performance to ensure precision and accuracy. This supports educators in maintaining high expectations for students to reduce the potential for quality drift (Hollingsworth and Ybarra, 2009) and provides students with clarity regarding what they are expected to learn and demonstrate at a mastery level.

Guiding Questions

> *How are mastery levels for grade-level expectations and concepts and skills described for all grades and content areas?*

> *How do teachers, administrators, students, and parents know what mastery looks like in their assigned grade or content area?*

> *How do teachers use descriptions of mastery to guide planning and instruction?*

G Examples and exemplars of mastery-level student work are identified or created to provide models of performance expectations for students.

In order to ensure students are taught to mastery levels of performance, teachers and students must be able to see examples of what students are expected to learn and perform. Both examples of student mastery of concepts and skills within lessons as well as exemplars for big ideas, or broad, longer-term learning goals, are important for students to be able to understand what it looks or sounds like to perform at a mastery level.

Examples, models, or demonstrations should be provided to students in daily lessons to show students how they are expected to perform in lesson activities or assigned tasks. Additionally, students should be provided with exemplars for broad, longer-term learning goals with mastery-level models of performance tasks or interim assessments or through scoring guides, scales, checklists, and rubrics that describe at what level a student must perform, over time, to be considered at mastery level. Identifying and providing examples and exemplars should ensure both teachers and students have clearly described targets for learning and mastery-level performance. It is also important that examples and exemplars be accompanied with descriptions, such as checklists, scales, or rubrics, specifying what levels of performance constitute mastery.

As an instructional strategy, valid examples and exemplars can provide students with the opportunity to analyze their own work against those models of performance and provide teachers an opportunity to identify to what degree students have internalized mastery expectations.

Guiding Questions:
> *Do schools have assessments, performance measures, checklists, scales, or rubrics to describe, in measurable terms, what is expected for mastery? How are those measures being used in classrooms?*

> *How do schools ensure staff, students, and parents know what mastery-level student work looks like?*

> *How do teachers access and provide examples and exemplars of mastery-level student work along with scoring guides and rubrics?*

H Adopted or purchased instructional programs and materials are intentionally aligned with the district's standards-based curriculum.

Districts generally purchase or adopt published programs, textbooks, or instructional materials to support teaching the district's curriculum or to provide interventions to students. It is critical that such programs or materials are intentionally aligned and identified within the district's standards-based curriculum through a crosswalk to identify areas of alignment and/or lack or alignment. While districts endeavor to adopt materials that are most closely aligned with standards and grade-level expectations, teachers cannot solely

Guiding Questions:
> *How can the district ensure teachers understand the differences and purposes of the curriculum and adopted programs, texts, or instructional materials?*

> *How do district policies and procedures ensure alignment of textbooks, programs, and materials with standards and the curriculum?*

The Standards-Based Teaching/Learning Cycle

rely on commercial programs or texts to ensure all grade-level expectations are taught and learned to mastery. Consequently, it is important that teachers (1) understand how standards and grade-level expectations are integrated within adopted programs, texts, and materials to ensure they are taught to mastery and (2) have sufficient clarity and understanding of adopted programs, texts, and materials to purposefully teach all grade-level expectations for their content area or grade level. Accordingly, all instructional and support staff members must become critical consumers of instructional resources to ensure the best alignment to standards and 21st century skills.

❶ Standards and grade-level expectations are communicated effectively to students and families.

Students and families should understand what students are expected to learn and how mastery is demonstrated. Particularly, students need to understand and be able to describe both the concepts and skills they are expected to learn for their grade level and/or content area as well as what and how they are expected to perform. To be fully engaged in learning, students need to (1) know what they are learning, (2) be able to understand the purpose and rationale for what they are learning, (3) make connections to prior learning, daily life, higher education, the adult world, and careers, and (4) know how they are expected to demonstrate mastery. As stated previously, this means that students must have adequate descriptions and examples of mastery-level performance for the concepts and skills they are expected to learn and that parents understand the learning and performance expectations for their child.

Illustration 3.

Summary

What do students need to know, understand and be able to do?

A Standards and grade-level expectations adopted

B Grade-level expectations identified, organized, and described

C Grade-level expectations articulated and aligned

D Scope and sequence provided in curriculum

E Teachers assisted through curriculum documents

F Descriptions or indicators of mastery for students

G Examples and exemplars of mastery-level student work

H Programs and materials aligned with standards-based curriculum

I Standards and grade-level expectations communicated to students and families

Continuous Cycle of
Student Learning

• What do students need to know, understand, and be able to do?

• What do we do when students are not learning or are reaching mastery before expectation?

Student Learning

• How do we know students are learning?

• How do we teach effectively to ensure all students are learning?

Notes

Illustration 4.

Chapter 2

> • **How do we teach effectively to ensure all students are learning?**

Continuous Cycle of
Student Learning

• What do we do when students are not learning or are reaching mastery before expectation?

What do students need to know, understand, and be able to do?

Student Learning

• How do we know students are learning?

• How do we teach effectively to ensure all students are learning?

Chapter 2

How do we teach effectively to ensure all students are learning?

Essential Practices

A The district's guaranteed and viable curriculum is consistently and equitably taught to mastery.

B The district designs, communicates, and ensures implementation of an instructional framework that describes commonly expected, research-based instructional methods that actively, meaningfully, and rigorously engage students in learning.

C Teachers engage in ongoing, intense collaborative work to develop units, lessons, and instructional strategies focused on grade-level expectations.

D Pre-assessment of current performance levels informs planning and instruction.

E Lessons and units are developed using a backwards design process, i.e., beginning with the end in mind (big ideas, grade-level expectations, and indicators of student mastery) along with planned methods to assess mastery.

F Instructional strategies actively engage students *in learning* and *as a learner* in order to develop the attitudes and behaviors that lead to high levels of learning such as motivation, self-direction, and personal responsibility for their own learning.

G Instruction is continually informed by assessment of student learning through intentional and ongoing formative assessment practices *(assessments for learning),* interim assessments to determine progress toward mastery, and summative assessments to measure mastery *(assessments of learning).*

H Students receive feedback and guidance to develop understanding of their performance, improve their achievement, monitor their progress, and identify goals for learning.

I Effective best-first classroom instruction includes multiple opportunities to learn through differentiation strategies.

J Ongoing training, coaching, monitoring, and feedback regarding instructional practices are provided to teachers to ensure effectiveness of instruction in activating student learning.

Description of Essential Practices

How do we teach effectively to ensure all students are learning?

Effective best-first classroom instruction is what causes students to be engaged in the classroom and in learning. It is the responsibility of every educator to understand effective instructional methods and strategies and to ensure every student is afforded learning opportunities in classrooms which use potent, research-based practices that can promise student success and mastery. And, it is the responsibility of every educator to ensure schools do not hastily default to interventions, special programs, or placements before affording all students multiple opportunities to learn at a high level within their classroom.

In standards-based districts and schools, commonly expected, research-based instructional methods and strategies are used to deliver the standards-aligned curriculum and ensure students have adequate and equitable opportunities to learn. While the educational literature consistently suggests that teachers need information, training, descriptions, examples, and expectations regarding effective instruction to successfully teach students to mastery, district instructional frameworks that address these needs are not commonly evident (Wagner & Kegan, 2006). School Support Teams (SST) and Comprehensive Appraisal for District Improvement (CADI) reviews over the last eight years support this observation. Consequently, a strong emphasis on ensuring effective classroom instruction is delivered in every classroom, every day is critical to deliver a high-quality, engaging standards-based education to every child.

The following table contrasts traditional teacher/instruction-centered classrooms with standards-based, student/learning-centered classrooms.

Traditional Classroom vs. Standards-Based Classroom

Traditional Classroom	Standards-Based Classroom
Teachers select topics from the curriculum.	Teachers **identify and analyze concepts and skills** to be learned based on the district's curriculum framework and pre-assessments of student performance.
Teachers use textbooks or published materials as a basis for planning instruction.	Teachers first identify **what students must learn and how they will demonstrate that learning at a mastery level,** and then plan instruction based on those learning targets, i.e., **backwards design.**
Teachers create and/or administer tests at the end of lessons or units.	Teachers use a **variety of assessments** throughout a lesson or unit to ensure students are learning.
Lessons focus on teacher-directed activities.	The focus of lessons is on **what type of thinking and learning** students will engage in.
Focus is on the teacher's instruction and performance.	The focus is on instruction that leads to **student engagement in learning and mastery of grade-level expectations.**
Teachers give a grade and record that grade as part of a final grade or report card.	Teachers provide **ongoing feedback to students** regarding their learning and **additional opportunities to learn,** practice, and demonstrate their knowledge and skills.
Teachers cover the curriculum within pre-planned units and time frames.	Teachers continually **monitor and adjust their instructional practices** to ensure students have learned before moving on to new topics or units.

Adapted by D. Benson from *Aiming high: high schools for the twenty-first century.* California Department of Education (2002) and *Where great teaching begins: Planning for student thinking and learning.* Anne Reeves (2001). Alexandria, VA: Association for Supervision and Curriculum Development.

In order to address *How do we teach effectively to ensure all students are learning,* districts and schools need to ensure the following practices are in place:

Ⓐ The district's guaranteed and viable curriculum is consistently and equitably taught to mastery.

Districts and schools need clear policies and procedures as well as systems of accountability to ensure adopted standards and grade-level expectations are taught to mastery. This does not imply that teachers should not use their creativity to design engaging or innovative instruction or assessments in their classroom. It does, however, imply that through district policies, expectations, and accountability measures, every child should be assured access to the district's guaranteed and viable curriculum.

Guiding Questions:

> *What policies and accountability systems are in place to ensure all students are provided access to a guaranteed and viable curriculum?*

> *How does the district communicate and monitor the expectation that all teachers teach the grade-level expectations and evidence outcomes identified in curriculum documents?*

> *What strategies are used by district and building leaders to monitor the implementation of district curriculum?*

Ⓑ The district designs, communicates, and ensures implementation of an instructional framework that describes commonly expected, research-based instructional methods that actively, meaningfully, and rigorously engage students in learning.

Over the last 45 years, research has identified classroom instructional methods and strategies that have demonstrated a positive effect on student learning. It is critical that districts and schools identify and ensure the use of those effective and rigorous methods and strategies that provide students the best opportunity to learn and demonstrate mastery. This implies that (1) teachers are trained in those research-based instructional methods, (2) those expected methods and strategies are understood and practiced by all instructional staff, (3) all instructional staff members are accountable to visibly implement those methods and strategies, and (4) district and school leaders regularly monitor classrooms to ensure every child receives effective and engaging classroom instruction, regardless of teacher, content, or grade level. Marzano and DuFour (2011) suggest that while the literature is full of "research-based" instructional methods and strategies, the final evidence of effective instruction is whether, in fact, students in a given classroom are learning.

Guiding Questions:

> *Has the district identified and expected effective instructional strategies within a district instructional framework?*

> *How is the district communicating those instructional practices that will have the highest impact on student learning?*

> *How are teachers focusing instructional strategies specifically on the grade-level expectations and evidence outcomes identified in the curriculum?*

> *How does the district ensure classroom instructional methods are research based?*

The Standards-Based Teaching/Learning Cycle

C Teachers engage in ongoing, intense collaborative work to develop units, lessons, and instructional strategies focused on grade-level expectations.

Purposeful collaboration by grade-level or content-alike teams of teachers has been consistently shown to strengthen the quality of instructional and assessment practices and lead to higher levels of student learning (Dufour, Eaker, & Dufour, 2006). Teachers need to be provided adequate training to understand and effectively engage in collaborative practices. Additionally, teachers need structures and tools such as dedicated time, model agendas, and protocols to plan units, lessons, and teaching strategies. And, all staff should be expected to use effective collaborative practices as they work together. Such collaboration helps ensure a consistent focus on the district's grade-level expectations and provides an equal opportunity for all students to learn the same content. Opportunities for cross-disciplinary collaboration are also important to ensure relevant connections in and among disciplines are identified and understood by students to support the transfer and reinforcement of their learning. Collaboration is shown to be most effective when supported by designating time for meetings, protocols, and skilled facilitation to guide the process and monitoring by leadership with feedback and accountability.

Guiding Questions:
> *How are teachers supported in learning and utilizing effective collaborative practices?*

> *How are teachers regularly collaborating to plan instruction?*

> *How do teachers collaboratively monitor student progress and ensure students reach mastery through regular reflection regarding effectiveness of instructional strategies?*

> *How are collaborative practices monitored to ensure effectiveness?*

D Pre-assessment of current performance levels informs planning and instruction.

While instruction should clearly focus on the learning expectations for the grade level and content area, lessons must be designed based on students' readiness to engage in that level of content. This implies that an assessment and analysis of students' current level of background knowledge and competence in the expected learning is necessary to appropriately design instructional units or lessons. Learning progressions, or a task analysis of the required grade-level expectations, provide a sequence of knowledge, concepts, or skills that are pre-requisites for students to meaningfully engage in the learning and can provide a foundation for developing pre-assessments for any given grade and content area.

Guiding Questions:
> *How are teachers pre-assessing students' level of mastery in learning goals?*

> *How are teachers using pre-assessment information to plan instruction?*

> *How are pre-assessments used to inform students of their current level of knowledge or skill?*

> *How might teachers connect pre-assessment with classroom formative or interim assessments of learning?*

E **Lessons and units are developed using a backwards design process, i.e., beginning with the end in mind (big ideas, grade-level expectations, and indicators of student mastery) along with planned methods to assess mastery.**

Instruction needs to be intentionally designed for students to learn and perform at a mastery level. Consequently, before planning lessons, teachers must be clear on (1) the concept or skill they expect students to master, (2) what mastery looks or sounds like through an assessment, rubric, exemplar, assignment, scoring guide, etc., and (3) the intentional steps that build a student's understanding from his/her current level of knowledge or understanding to mastery. To support students reaching mastery, teachers design learning activities and assignments with outcome descriptions, rubrics, checklists, scoring guides, assessments, etc., so teachers and students alike know the performance expectation. With outcomes and performance expectations clarified by teachers and with students, instruction can then be purposefully planned and delivered (Wiggins & McTighe, 2005, 2011; Jackson, 2011).

Guiding Questions:
> *When planning, are teachers identifying the concepts or skills students are expected to learn before they plan a unit or lesson?*

> *How are teachers planning lessons which include a method for students to perform or demonstrate mastery?*

> *How do students know, at the beginning of a lesson or unit, how they are expected to perform to reach a mastery level at the end of the lesson or unit?*

> *How are teachers planning the smaller conceptual steps that build a student's understanding from their current level to the desired level of mastery?*

F **Instructional strategies actively engage students *in learning* and *as a learner* in order to develop the attitudes and behaviors that lead to high levels of learning such as motivation, self-direction, and personal responsibility for their own learning.**

Active engagement of students in various ways is critical for students to learn at high levels. It is incumbent on teachers to design lessons that create engaging classroom instructional activities including student-centered activities, cooperative group learning, discovery or inquiry, problem solving, project-based learning, etc. Engagement of students might be described on four levels with the ultimate intention for all students to be engaged *as learners* (Sadler, 1989):

- Engagement with appropriate *learning behaviors* (compliance)
- Engagement in the *classroom activities* (on or off task)
  > Attention focused on the teacher and/or activity;
  > Individual or whole-group, overt and/or covert participation in classroom learning activities; and
  > Participation in and completion of the classroom activity or assignment.

Guiding Questions:
> *How is instruction designed to engage students in learning, provide them with feedback on their learning, and help them learn strategies to demonstrate their learning at a mastery level?*

> *How are teachers actively engaging students in their own learning?*

> *What strategies that engage students in their own learning are consistently evident in classrooms?*

> *How would students describe their responsibility for actively engaging in their own learning?*

> *How are teachers and students collaborating to support learning?*

- Engagement *in learning*

  > Students know, understand, and can articulate their learning goal/objective;

  > Students describe what mastery looks/sounds like for the learning goal/objective; and

  > Students receive and act on descriptive feedback about their learning.

- Engagement *as a learner*

  > Students evaluate their own or peer work against established performance criteria;

  > Students set personal goals for learning;

  > Students make use of their formative, interim, and summative test results and monitor their own progress and performance data;

  > Students understand and can describe their learning processes with reactions, reflections, self-appraisal, etc.; and

  > Students and teachers collaborate to create and use strategies that support learning.

Ⓖ Instruction is continually informed by assessment of student learning through intentional and ongoing formative assessment practices *(assessments for learning),* interim assessments to determine progress toward mastery, and summative assessments to measure mastery *(assessments of learning).*

Teaching to standards means that learning is continually monitored and instruction adjusted through a range of measurements and assessments. Instructional strategies should be designed or modified according to the information (data) provided by a variety of assessments, particularly forms of checks for understanding and formative assessment. And, performance expectations on assessments should be understood by both teachers and students as part of instruction. By continually evaluating information about what or how students are learning, the focus, intensity, efficiency, and effectiveness of instruction is enhanced. Additionally, objective evidence from interim and summative assessments regarding student progress and learning helps teachers and students know instruction is effective, i.e., yielding the intended learning results.

Formative assessment practices, including checks for understanding, have been shown to have a significant effect on student learning (Black, Harrison, Lee, Marshal, & Wiliam, 2003; Hattie, 2009; Wiliam, 2011). These researchers point out that when teachers

Guiding Questions:

> *How are teachers using formative assessments to inform their planning, teaching, or re-teaching?*

> *How can the analysis of student work inform instruction?*

> *How are teachers supported in effectively assessing learning and using that data to guide their teaching?*

> *How do teachers know when and how to re-teach a lesson for students to reach mastery?*

> *How are formative assessments helping students regularly understand their learning?*

regularly use formative assessment practices in their classroom, students make almost twice as much progress over a year as students whose teachers do not use formative assessments (Ibid). Ainsworth and Viegut state that "an assessment activity can help learning if it *provides information to be used as feedback* by teachers, and *by their students* in assessing themselves and each other, to *modify teaching and learning activities.*"

As an effective instructional practice, formative assessments should be low stakes and used for information only (not for grading purposes) to inform teachers about their instructional decisions and students about their learning progress. They can reveal points of confusion, misunderstanding, or progress toward mastery of an idea. This may also be referred to *assessment as learning.*

Interim assessments can be informative to teachers as a progress-monitoring tool to gauge student progress over time and to identify students who may need differentiated instruction or additional intervention beyond the classroom.

Summative assessments can be useful to teachers as they design or adjust unit plans, pacing guides, or other curricular tools.

With information from all types of assessments, teachers continually plan or modify curriculum and adjust, clarify, or re-frame instruction to ensure students are effectively and accurately learning.

More in-depth descriptions regarding assessment strategies can be found in Chapter 3.

ⓗ Students receive feedback and guidance to develop understanding of their performance, improve their achievement, monitor their progress, and identify goals for learning *(assessment as learning).*

Teacher feedback to students plays an important role in student engagement, motivation, and persistence. To maximize student growth, students must receive timely, ongoing, actionable feedback regarding their performance and learning in class and on assessments *(assessments as learning).* John Hattie (2009) analyzed 1,287 studies on feedback and found that effective feedback has one of the greatest effects on student learning of any instructional strategy. He suggests that effective feedback provides cues and reinforcement regarding a student's current performance and the progress of his/her

Guiding Questions:
> *How and when are students being provided information about their learning?*

> *How are students being provided with effective feedback, and what is the effect of feedback on their learning?*

> *How are schools teaching students to set their own learning goals?*

> *How do students determine what they must do to achieve their own learning goals?*

The Standards-Based Teaching/Learning Cycle

learning when a student acts on that feedback. Feedback allows students to understand their own levels of performance, identify what they need to learn or do, set clear targets for what they should learn next, and identify strategies to effectively learn. His and other studies have shown that when students have knowledge of their learning results and feedback about their learning processes, engagement in learning and motivation to improve are enhanced (Davies, 2000, 2007; Dwech, 2000; Hattie, 2009, 2010, 2012; Hunter, 2004).

Feedback might be described in three different ways:

- Descriptive feedback (as discussed above) that provides students with guidance in how to improve (e.g., "here's a strategy you can use to solve this problem," "this section needs more development with descriptive details," etc.);

- Motivational feedback that recognizes growth and accurate performance but doesn't provide other guidance ("good job," "great effort in solving that complex problem," "your writing is showing improvement," etc.); and

- Evaluative feedback intended to summarize student achievement with no guidance regarding how to improve (e.g., "you got a "B" on this assignment," "you didn't meet the standard for mastery," "2 out of 4", etc.).

Research has revealed that 73% of feedback given to students is evaluative (Davies, 2007), and when only evaluative feedback such as letter grades or summary ratings are used, there is likely to be a negative effect on learning for all students, particularly low-achieving students (Black & Wiliam, 1998; Dweck, 2000; Hattie, 1992, 2005).

Consequently, feedback needs to be descriptive and explained in ways that students are able to understand; is in comparison to models, exemplars, or descriptions; is specific to the performance; comes during, as well as after the learning; is always designed with the intention to reinforce or improve students' learning processes and outcomes; and is about the performance, not the person (Davies, 2000).

Hattie (2009) suggests that feedback should always ask:

- What should the student be learning (goals, success criteria, and student focus/intentions)?

- How are students currently performing (teacher and student self-assessment and evaluation)?

- What do students need to learn and do next (actions, next steps, growth goals)?

Hattie also suggests that feedback from students to teachers can provide valuable information to teachers about their instructional practices and the effect of their instruction on students' learning. He suggests that when teachers are open to understanding what and how their students are learning and where they make errors or have misconceptions, teachers can more effectively adjust their instruction to meet the identified needs of the students.

I Effective best-first classroom instruction includes multiple opportunities to learn through differentiation strategies.

In order for students to have access to all the curriculum with meaningful opportunities to learn, classroom instruction must be designed to provide multiple and varied opportunities *within the classroom* for students to reach mastery. Recognizing that not all students come to school with the same experiences, language, vocabulary, cultural expectations, or academic background, nor do they learn in the same fashion, at the same pace or are equally motivated; teachers must be able to adapt their instruction to individual needs of students with accommodations, scaffolding strategies, and modifications to meet the needs of individual or groups of students. Once the classroom capacity for differentiation with individuals or groups of students has been maximized, only then should school-level or district-level interventions, delivered by qualified specialists, be provided to students to maximize the opportunity to learn at a mastery level.

Guiding Questions:

> *How do instructional strategies accommodate diverse learners and their needs within their classroom?*

> *What is the evidence that teachers are providing students with multiple opportunities to learn and perform within their classroom, their grade level, or department?*

J Ongoing training, coaching, monitoring, and feedback regarding instructional practices are provided to teachers to ensure effectiveness of instruction in activating student learning.

In order for teachers and other instructional staff to provide the most effective best-first classroom instruction, they must be afforded, through their district or school, multiple opportunities to increase their repertoire of skills in designing and delivering research-based instruction to their students. Just as students may have varying needs and styles, teachers and other instructional staff also need a variety of opportunities to enhance their skills as well

Guiding Questions:

> *What types of ongoing professional growth opportunities are provided to teachers to ensure they have the knowledge and skills to effectively teach their students? Are these opportunities required or voluntary?*

as acquire new skills. Such opportunities should include ongoing training, modeling, and coaching from school-level or content-area experts as well as district- and school-level administrators. Hattie (2009) suggests that teacher training and feedback has a higher-than-average effect on student learning. Monitoring, feedback, and accountability for all instructional staff are critical to ensure effectively delivered, research-based classroom instruction occurs in every classroom, every day.

> *How are teachers receiving timely feedback and coaching regarding instruction?*

> *What is the evidence that feedback and coaching for teachers is improving instructional effectiveness and student achievement?*

Illustration 5.

Summary

How do we teach effectively to ensure all students are learning?

A Curriculum taught to mastery

B Instructional framework with research-based instructional methods

C Planning through teacher collaboration

D Pre-assessment informs instruction

E Planning with a backwards design process

F Students engaged in learning

G Instruction informed by a variety of assessments

H Feedback and guidance regularly provided to students

I Multiple opportunities to learn through differentiation within the classroom

J Ongoing training, coaching, monitoring, and feedback for instructional staff

Continuous Cycle of Student Learning

- What do students need to know, understand, and be able to do?

- What do we do when students are not learning or are reaching mastery before expectation?

Student Learning

- How do we know students are learning?

- How do we teach effectively to ensure all students are learning?

Notes

Illustration 6.

Chapter 3

• **How do we know students are learning?**

Continuous Cycle of
Student Learning

• What do we do when students are not learning or are reaching mastery before expectation?

• What do students need to know, understand, and be able to do?

Student Learning

• How do we know students are learning?

• How do we teach effectively to ensure all students are learning?

Chapter 3

How do we know students are learning?

Essential Practices

A All assessments to measure student mastery are tightly aligned with standards and grade-level expectations in the district curriculum.

B All educators understand the multiple purposes of assessment, particularly the different purposes, construction, and application among formative assessments *(assessment for learning* to inform instruction), interim assessments (to determine progress), and summative assessments *(assessment of learning* to measure mastery).

C A variety of assessment methods and strategies are available and used to continuously measure student learning and inform instruction.

D Common assessments are developed and administered for similar courses and/or grade levels.

E Common scoring guides, scales, checklists, rubrics, or other measurement criteria are used by teachers to consistently and reliably measure student performance and by students to evaluate and improve their work.

F Students integrate and demonstrate their learning through authentic performance tasks or assessments.

G Students receive timely feedback and guidance regarding their performance on assessments *(assessment as learning)* in order to monitor their own progress and set future learning goals.

H School leaders, staffs, and individual teachers disaggregate and analyze multiple sources of data at the *individual student level* to identify specific student needs, skill levels, etc., in order to inform instruction or to design differentiation or intervention strategies.

I Districts and schools use reporting systems that identify student mastery levels on grade-level expectations and the growth students are making toward mastery over time.

J To guide decision making, districts and schools continually collect and analyze an array of data including student growth and learning results (e.g., skill or content "snapshots," individual and group growth patterns, student sub groups, longitudinally, among schools, against comparable districts and state-level performance, etc.).

Description of Essential Practices

How do we know students are learning?

In order to ensure students learn the information, concepts, and skills identified in the district curriculum, districts and schools must regularly monitor student learning through a variety of quality assessments, performances, or other measurements of learning. Stiggins (2005) identifies a number of "keys to quality assessment" including: assessments that serves the specific information needs of the user; assessments aligned with particular achievement targets; assessments that accurately reflect student achievement; results that are effectively communicated to their intended users; and the involvement of students in classroom assessments by engaging in self- or peer assessment, monitoring their own progress, and setting goals for learning.

In order to address this question, districts and schools need to ensure these practices are in place:

Ⓐ All assessments to measure student mastery are tightly aligned with standards and grade-level expectations in the district curriculum.

In a standards-based framework, all assessments at the district, school, and classroom level should be tightly aligned with the grade-level expectations identified in the district's curriculum to ensure they validly and reliably measure those learning expectations. This implies that assessments are designed based on the unique elements of the concept or skill students are being asked to demonstrate. Additionally, as noted in Chapter 2, assessments should also support classroom instruction by providing a meaningful and authentic understanding of mastery-level performance for both teachers and students.

Guiding Questions:

> How does the district ensure summative, interim, and formative assessments are tightly aligned to grade-level expectations and evidence outcomes identified in the district's curriculum?

> How do schools ensure performance expectations on assessments are clearly explained to students as part of instruction?

Ⓑ All educators understand the multiple purposes of assessment, particularly the different purposes, construction, and application among formative assessments *(assessment for learning* to inform instruction), interim assessments (to determine progress), and summative assessments *(assessment of learning* to measure mastery).

As stated above, assessments in a standards-based framework can be classified in at least three ways—formative, interim, and summative. This might be best explained by Ainsworth and Viegut (2006) when they make this distinction: "If the results from an assessment can be used to monitor and adjust instruction in order to improve learning for current students, an assessment is formative, i.e., it is used to help students learn. If not, the assessment is summative, i.e., it provides summary information about what students have learned."

Guiding Questions:

> How does the district ensure all educators understand the different purposes of student assessments?

Interim and summative assessments can be used for both formative and summative purposes. All three types of assessments are important and provide different opportunities to measure and understand student learning. Appropriate use of *assessments for learning* should lead to positive results in a school or district's *assessments of learning.* Again, it is important to understand that the purpose of any assessment (formative, interim, summative) *lies primarily in its use not its format.*

See Appendix for CDE's graphic representation of the three formats and purposes of assessments used in standards-based systems.

C A variety of assessment methods and strategies are available and used to continuously measure student learning and inform instruction.

If teachers are fully engaged in a continuous teaching and learning cycle, a range of methods will be used to measure and assess student learning. With an understanding of the similarities and differences among formative, interim, and summative assessment practices, teachers need to employ multiple strategies to regularly assess student learning. Similar to differentiated instruction, differentiated assessments provide more opportunities for students to demonstrate their learning. This also gives teachers a more complete picture of the effectiveness of instruction.

As previously noted in Chapter 2, *formative assessment practices, including checks for understanding,* have been shown to have a significant positive effect on student learning. The definition of formative assessment used by the Colorado Department of Education is "a process used by both the teachers and students during instruction that provides feedback to adjust teaching and learning." These can be pre-assessments to determine current level of knowledge or skill used to gauge progress during instruction or used at the conclusion of a lesson or unit to determine the effectiveness of instruction (Ainsworth & Viegut, 2006). These low-stake assessments can be created by teachers, grade levels, departments, or other teams of teachers or specialists.

Examples of tasks and activities suitable for formative assessments might include:

- Classroom monitoring of student work
- Short performances to check for understanding
- Observations of student performance
- Oral questioning
- Small true/false, fill-in-the-blank, or multiple-choice, non-graded quizzes
- Short written responses
- Classroom lesson or unit assignments
- End-of-class "quizzes" (not for a grade)
- White board responses
- Exit slips

As part of the formative assessment process, during lessons teachers continually *check for understanding* "in the moment" using a variety of strategies to ensure students are learning and performing accurately and consistently. This may be whole group, small group, or with individual students. Checking for understanding during instruction may occur in the following ways:

- Checking for *learning behaviors* (compliance)
- Checking for understanding of *the concept or skill* to be learned
- Checking for understanding *the task* (clarity of directions)
- Checking for understanding of *the processes* needed to perform at a mastery level (clarity of the performance)
- Checking whether the students are *learning* the lesson objective (students are accurate and precise in their learning)
- Checking to understand *the students' learning processes,* i.e., problem-solving strategies, rationales, explanations, thinking skills, etc.

Data from a variety of both checks for understanding and other formative assessment practices help teachers determine what learning is taking place and to inform next steps in instruction.

Just as teachers use a variety of formative assessment practices to inform classroom instruction, interim and summative assessments provide opportunities to more broadly measure student progress, assess systemic practices, and adjust plans and actions at the classroom, grade level, department, school, or district level.

Interim assessments are periodic, moderate-stakes assessments administered to determine progress over longer periods of time and can be effective tools to monitor progress at certain benchmark times such as at the end of a unit, quarter, or at other designated times. These assessments can also help guide decisions regarding when or how to provide students more intensive interventions beyond best-first classroom instruction.

Summative assessments determine if students have learned. These assessments are designed to measure student mastery at the end of instruction such as the end of a semester or end of a school year.

Examples of interim or summative assessments are:

- School- or district-developed interim, benchmark, or progress-monitoring assessments
- End-of-unit assessments
- Student products or projects
- End-of-course common assessments
- School- or district-wide commercial, content-area assessments such as IA MAP, DIBELS, Acuity, or Galileo
- High-stakes assessments such as the Colorado Summative Assessment, ACT, or SAT

Ⓓ Common assessments are developed and administered for similar courses and/or grade levels.

Common assessments are typically created by a team of teachers responsible for the same grade level or course. Common assessments allow teachers to collaborate regarding content to be learned from grade-level expectations, thus creating a clear focus for teachers to ensure all students, regardless of their teacher, receive instruction and are assessed within a common academic curriculum. This consistency helps a school or district ensure there is fidelity to curriculum delivery and equity in student learning opportunities across the school or district.

Data from common formative, interim, or even summative assessments, can help guide collaborative planning of instruction, identify students who may need additional time or support to learn, provide

Guiding Questions:

> *How are teachers collaborating to create common formative, interim, or summative assessments to measure course or grade-level concepts and skills?*

> *How is data from common assessments used to inform curricular or instructional decisions?*

information to make adjustments to the curriculum and identify improvement goals. Additionally, these types of assessments can inform the school, district, parents, and the public about student achievement and growth with multiple sources of data in various content areas and for a variety of purposes.

E Common scoring guides, scales, checklists, rubrics, or other measurement criteria are used by teachers to consistently and reliably measure student performance and by students to evaluate and improve their work.

Scoring guides, scales, checklists, rubrics, or other measurement criteria describe student performance on standards-based learning tasks by providing various types of descriptions or rating systems to illustrate or differentiate levels of performance. These descriptions allow teachers to validly and reliably measure student performance. These tools also help students understand what mastery looks and sounds like before instruction and receive feedback about their performance based on that same description. Different types of scoring guides can be used to assess a variety of concepts and skills. They can be designed and used at the classroom, grade, department, school, and even district level.

A variety of guides, scales, checklists, or rubrics can also be useful to create more highly engaged and motivated students when they evaluate and measure their own work or that of peers against those measurement criteria. As noted by Royce Sadler (1989), student learning is enhanced when he/she (1) holds a concept of quality roughly similar to that of the teacher, (2) is able to compare his/her current level of performance with the standard or a description of mastery, and (3) is able to take action to close the gap between his/her current performance and a mastery-level performance.

Guiding Questions:
> *How are scoring guides or rubrics used to assess student performance on grade-level expectations and evidence outcomes?*
> *How are results of rubric-rated student performance used to guide instruction?*
> *How are scoring guides or rubrics used to inform students about their performance?*
> *How do schools ensure scoring guides are developmentally appropriate, valid and reliable, and can be easily understood by students so they know what they must do to demonstrate mastery?*

F Students integrate and demonstrate their learning through authentic performance tasks or assessments.

Performance assessment, also known as alternative or authentic assessment, is a form of assessment that requires students to perform one or more tasks rather than taking traditional paper-and-pencil tests. For example, a student may be asked to explain historical events, generate scientific hypotheses, solve or explain complex math problems, converse in a foreign language, conduct research,

Guiding Questions:
> *How are performance assessments used to measure and understand student learning?*
> *How do teachers access resources to design performance assessments?*
> *How are teachers integrating grade-level concepts or skills into performance assessments?*

or create a project on an assigned topic. Experienced raters—either teachers or other trained staff—then judge the quality of the student's work based on an agreed-upon set of criteria. Performance assessments can reinforce learning for students when they are able to apply their learning in authentic ways, and they allow educators, as suggested by Larry Ainsworth (2010), a "window into student understanding and application of their concepts and skills."

Highly effective performance assessments are inquiry based, often involve problem solving, require higher-order cognitive processes, integrate big ideas, and create connections among curriculum areas and/or learning progressions. They require that students actively develop their approaches to the task under defined conditions knowing that their work will be evaluated according to agreed-upon evaluation criteria. This requirement distinguishes performance assessment from other forms of testing. Some examples include:

- Open-ended or extended written responses, research papers, etc.
- Extended tasks or assignments
- Portfolios as collections of a variety of performance-based work
- Scientific or research projects
- Designing and building models
- Debates supporting or contradicting a theory
- Problem-based or project-based learning

G Students receive timely feedback and guidance regarding their performance on assessments *(assessment as learning)* in order to monitor their own progress and set future learning goals.

While feedback is a powerful instructional strategy that supports learning, students are also engaged as learners when they know, understand, and act on their assessment results. Consequently, it is critical that students receive regular descriptive, non-evaluative feedback regarding their performance on assessments to support their ownership of those results, enhance their motivation, and allow them the opportunity to revise their work or performance to improve. Again, this is described by Larry Ainsworth, (2010) as *"assessment as learning."*

Feedback from assessments, particularly when specifically related to scales, rubrics, checklists, models, or exemplars, helps students to understand their own levels of performance and progress towards

mastery, set targets for what they should learn next, and identify strategies to effectively learn. Empirical studies supporting this powerful strategy began in the 1960s with the work of Madeline Hunter. According to Marzano (2001), feedback used in tandem with goal setting is probably more powerful than either one in isolation, and, as noted in Chapter 2, feedback to students is a strategy that has one of the highest effects on student learning (Black, et. al., 2003, Hattie, 2009, William, 2011).

(H) School leaders, staffs, and individual teachers disaggregate and analyze multiple sources of data at the *individual student level* to identify specific student needs, skill levels, etc., in order to inform instruction or to design differentiation or intervention strategies.

In a standards-based framework, the analysis of individual student performance is a key to informing teachers and administrators about those students who may not be learning at mastery levels or are learning above expectations. In order to meet the needs of all students, individual student data from multiple sources provides the basis for teachers to ensure every child learns. This trait is consistently evident in effective schools when teachers work individually and collaboratively to ensure each student is afforded every opportunity possible to learn and perform at mastery levels. Administrators also regularly monitor individual student progress and data to ensure every student is afforded the best instruction to meet his/her individual needs. This implies that schools need functional, accessible data systems that allow data to be entered, organized, displayed, retrieved, and analyzed in a timely and user-friendly manner.

Guiding Questions:
> *How is individual student progress monitored after instruction?*
> *How is individual student data being analyzed to inform teachers about individual student needs?*
> *How is individual student performance data used to guide instructional or intervention decisions including grouping, re-teaching, differentiating, etc.?*

(I) Districts and schools use reporting systems that identify student mastery levels on grade-level expectations and the growth students are making toward mastery over time.

If student learning is regularly assessed through a variety of methods using consistent and reliable scoring or ratings of performance, it is only logical that the same information derived from those assessments should be used to report levels of performance to those students, their parents, and to various stakeholders. In standards-based schools, grades are replaced with, or augmented by, achievement reports that indicate levels of mastery and growth on grade-level expectations. These reporting systems differentiate compliance and learning behaviors (i.e., classroom participation, homework

Guiding Questions:
> *How is student achievement currently being reported?*
> *How can student achievement reports provide valid and reliable information on student learning?*
> *How might current reporting systems be augmented or modified to indicate student achievement growth and performance levels?*
> *How can various stakeholders access student achievement data?*

The Standards-Based Teaching/Learning Cycle

completion, attendance, etc.) from learning. Such reporting systems can provide more validity and reliability in communicating student growth and attainment of mastery of grade-level expectations than traditional grading systems as well as support students in monitoring their own learning.

J To guide decision making, districts and schools continually collect and analyze an array of data including student growth and learning results (e.g., skill or content "snapshots," individual and group growth patterns, student sub groups, longitudinally, among schools, against comparable districts and state-level performance, etc.).

Just as student growth and mastery of grade-level expectations is the core focus of standards-based schools, other measurements at both the school and district level are important to evaluate effectiveness of educational practices. This means that district-wide data from a variety of assessment sources is collected and analyzed for grade levels, content areas, student sub-groups, individual schools, and at the district level. Assessment data should provide information about current achievement, past achievement trends, and the growth students are making over time. This information is needed for accountability purposes, but more importantly, to guide district and school curricular and instructional decisions, improve practices throughout the system, deploy human and material resources, and design policies and processes that support effective educational practices. Additionally, other data such as attendance, discipline, or even perception data, can be valuable to inform district decision making.

Standards-based districts and schools have policies, structures, and processes in place to ensure they are *data and information rich* and continually use the knowledge yielded from multiple sources of data to guide planning and decisions.

Guiding Questions:

> *What types of data systems are in place to efficiently manage, disaggregate, and report data from interim and summative assessments?*

> *How can analysis of student performance data be used to understand the current reality of a district or school?*

> *How are multiple sources of achievement data used to guide system-wide decisions such as curriculum revisions, deployment of staff and resources, designing professional development, etc.?*

Illustration 7.

Summary

How do we know students are learning?

A Assessments aligned to standards

B Summative, interim, and formative assessments understood and used

C Continuous measurement of learning

D Common assessments utilized

E Learning measured by common scoring guides

F Learning demonstrated through performance assessments

G Regular feedback and guidance to students

H Instruction and differentiation guided by individual student data

I Standards-based reporting systems

J Decisions guided by continuous analysis of multiple sources of data
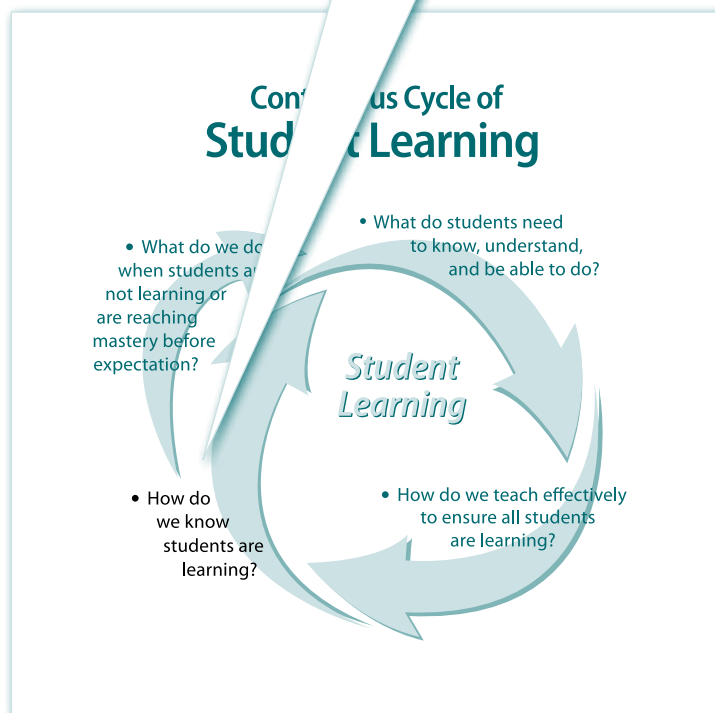
Continuous Cycle of
Student Learning

• What do we do when students are not learning or are reaching mastery before expectation?

• What do students need to know, understand, and be able to do?

Student Learning

• How do we know students are learning?

• How do we teach effectively to ensure all students are learning?

Notes

Illustration 8.

Chapter 4

• **What do we do when students are not learning or are reaching mastery before expectation?**

Continuous Cycle of
Student Learning

• What do students need to know, understand, and be able to do?

• What do we do when students are not learning or are reaching mastery before expectation?

Student Learning

• How do we teach effectively to ensure all students are learning?

• How do we know students are learning?

Chapter 4

What do we do when students are not learning or are reaching mastery before expectation?

Essential Practices

A Districts and schools ensure students who do not effectively learn through best-first instruction in their classrooms are afforded multiple opportunities to learn, first within their classroom, grade-level team, and/or department, and then beyond the classroom.

B School-level teams, including classroom teachers, specialists, and administrators, collaborate to design individual instructional or intervention strategies for students.

C Tier II grade-level or content-area instructional interventions, available beyond the classroom, are provided for students performing below mastery while extended enrichment opportunities are available for students performing above mastery. This level of intervention might include 15–20% of a school's student population.

D To ensure that any student whose needs are not met through best-first classroom instruction or Tier II interventions, Tier III interventions are provided to specifically meet individual student needs with sufficient time, intensity, and frequency needed to address those remedial or advanced needs. This level of intervention might include 5–10% of a school's population.

E All intervention models, programs, or strategies, from classroom differentiation to Tier III interventions, are research based and delivered to meet the individual learning needs of students.

Description of Essential Practices

What do we do when students are not learning or are reaching mastery before expectation?

In standards-based districts and schools, students are provided multiple opportunities to learn, both in the classroom and beyond the classroom, through interventions, supplemental programs, or other support systems. Such supplemental learning opportunities are provided both to students who are not reaching mastery and/or who are performing above expected mastery. Multiple opportunities and interventions for any student in need are generally based on a Response to Intervention model (RtI, also described as a Multi-Tiered System of Supports [MTSS] in Colorado) with three general tiers of instruction/intervention: best-first classroom instruction (universal/classroom/team level), Tier II (targeted/supplemental), and Tier III (intensive).

As articulated by the Colorado Department of Education, RtI has often been perceived and implemented as a deficit-driven model with a focus on "interventions" for those who are struggling learners. Consequently, the term "interventions" has been perceived as a description for remediation. Because of the recent trend of using interventions as a tool to ensure students learn, educators may not have consistently emphasized the critical importance of best-first instruction for all, and then provided advanced learning opportunities for those students who need additional support. Thus, the term Multi-Tiered System of Supports allows for a broader construct of a tiered model of support that encompasses a variety of academic and behavioral needs of all students. As such, it can provide a support system for all students from best-first classroom instruction through Tier III intensive interventions for students at the highest risk of failure or dropping out of school.

In order to address this question, districts and schools need to ensure these practices are in place:

(A) Districts and schools ensure that students who do not effectively learn through best-first instruction in their classrooms are afforded multiple opportunities to learn, first within their classroom, grade-level team and/or department, and then beyond the classroom.

In standards-based districts and schools, students are provided more than one opportunity to learn and perform at mastery levels within their classroom through best-first instruction. This means that teachers continually provide learning scaffolds for students to build on previous learning or through learning progressions to reach mastery. This also means that differentiation strategies are used with students within their classrooms based on their learning characteristics, needs, and current levels of performance. Strategies might include changes in the learning setting, amount of time provided to

Guiding Questions:
> *How are teachers ensuring they provide adequate opportunities for students to learn all grade-level expectations and evidence outcomes for their course or grade level?*

> *How are teachers designing instruction to build a progression of learning for students to reach mastery?*

The Standards-Based Teaching/Learning Cycle

learn or complete tasks, changes in instructional strategies, or adaptations in the ways students can respond.

Sometimes students are provided with other instructional opportunities through one or more classroom teachers within the student's grade level or content area department by re-grouping or working with a different teacher in another classroom. Such opportunities often focus on individual or small chunks of learning targets or a unit of instruction.

It is important that schools are *not supplanting* with out-of-classroom interventions at the expense of classroom access to the guaranteed and viable curriculum through multiple opportunities to learn within the classroom.

Ⓑ School-level teams, including classroom teachers, specialists, and administrators, collaborate to design individual instructional or intervention strategies for students.

In standards-based schools, interventions are always part of a larger school plan and are implemented as part of a rigorous, continuous teaching/learning cycle. This means that interventions are strategically designed to meet and support various levels or intensity of student needs, whether students are below or above expectation, both within and beyond the classroom. In order to provide systematic interventions in a timely manner, schools must carefully allocate time, materials, and personnel in order to respond to student learning concerns on a regular, "as-needed" basis. This is critical to ensure all students progress toward mastery and achievement gaps do not develop.

Highly effective schools have teams of teachers, specialists, and administrators available to routinely collaborate and problem solve with classroom teachers, help design differentiation strategies or classroom-level interventions, or match student needs with appropriate school-wide interventions.

C **Tier II grade-level or content-area instructional interventions, available beyond the classroom, are provided for students performing below mastery while extended enrichment opportunities are available for students performing above mastery. This level of intervention might include 15–20% of a school's student population.**

In standards-based schools, when the capacity of the classroom, grade-level, or department team to provide differentiated or individualized instruction is maximized, students are provided with Tier II interventions to *supplement* their classroom instruction, not replace it. Such interventions are also provided to students who may be performing above mastery. Intervention systems should significantly reduce the need for remedial instruction, classes, or referral to special education. DuFour (2004) suggests that interventions must be systematic (correctly designed), timely (to provide quick responses), and directive (rather than optional).

Guiding Questions:

> *Are interventions available to all students as needed?*

> *How do we know students are receiving the most effective and appropriate intervention at the earliest possible time once they are identified?*

> *Are interventions optional or required for students?*

> *Are interventions accelerating student learning? What evidence demonstrates this?*

D **To ensure any student whose needs are not met through best-first classroom instruction or Tier II interventions, Tier III interventions are provided to specifically meet individual student needs with sufficient time, intensity, and frequency needed to address those remedial or advanced needs. This level of intervention might include 5 –10% of a school's population.**

Tier III interventions are designed to meet the needs of those students who are at the highest risk for failure and who have not found success through best-first classroom instruction, differentiation within the classroom, or have not learned to mastery through Tier II interventions. These students are provided with an intensive, individualized learning plan appropriate to meet their unique needs through the regular education program, other school support programs, or through legislated programs required by state or federal-law. Tier III interventions are also for advanced learners who need radical adaptation of either content or environment to meet their significantly advanced needs (Brown, 2012). Options at this level of service for advanced learners might include "across-grade," "in-school," and "between-school" alternatives. Tier III interventions are the only place where "core replacement" instruction should occur.

Guiding Questions:

> *What criteria are used when designing or implementing interventions for students?*

> *How is fidelity to research-based programming monitored and ensured?*

> *How are students afforded opportunities to learn through multiple pathways including Tier III interventions?*

E **All intervention models, programs, or strategies, from classroom differentiation to Tier III interventions, are research based and delivered to meet the individual learning needs of students.**

All interventions provided to students must be research based and provide intensive, targeted opportunities based on the individual needs of each student either for acceleration or remediation. In this case, one size does not fit all.

Interventions should be designed and delivered only when they are based on proven instructional pedagogy and found, through research, to be effective with identified student needs. All interventions need to be delivered based on evidence of student needs, informed by multiple sources of data, and delivered with fidelity to the model, framework, or program design identified in the research.

Additionally, while students receive interventions at any level, ongoing formative assessment practices and interim measures should continually be used to monitor learning progress to ensure learning is being accelerated or enriched as intended.

Guiding Questions:

> *How are districts and schools ensuring all interventions are research based?*

> *How is the effectiveness of intervention strategies or programs assessed or monitored?*

> *How do schools respond when interventions are not effective in accelerating learning?*

Illustration 9.

Summary

What do we do when students are not learning or are reaching mastery before expectation?

A Multiple opportunities to learn through best-first classroom instruction

B Appropriate interventions designed by school-level teams

C Tier II instructional interventions beyond the classroom

D Tier III interventions for individual student needs

E All interventions research based

Continuous Cycle of
Student Learning

• What do we do when students are not learning or are reaching mastery before expectation?

• What do students need to know, understand, and be able to do?

Student Learning

• How do we know students are learning?

• How do we teach effectively to ensure all students are learning?

The Standards-Based Teaching/Learning Cycle

Notes

The Standards-Based Teaching/Learning Cycle

Appendix
Continuum of Assessments
– Colorado Department of Education

	Formative Assessment and Instruction	**Interim Assessment**	**Summative Assessment**
Purpose	To inform instruction	To determine progress	To measure mastery
Focus	Student now and tomorrow	Classroom curriculum/program next "quarter"	School/District curriculum/program next year
Frequency	**Daily**	**Periodic**	**End of Instruction**
Formality	**Informal** Teacher created, administered, scored	**Moderately Formal** Teacher and/or external publisher created, administered and scored	**Formal** Teacher and/or external publisher created, administered and scored
Content	**Focused**	**Slightly Broader** Use the focused content to demonstrate understanding of broader concepts	**Broader** Culmination of learning by applying concepts and content to demonstrate mastery
Technical Rigor	**Less Rigorous**		**Most Rigorous**
Types of Scores	**Informal** Perhaps none, rubric, number correct, check for understanding	**Moderately Formal** Percent correct, scale scores, subscores, norm-referenced scores	**Formal** Scale scores, subscores, norm-referenced scores
Level of Scores	Individual	School Classroom Individual	State District School Individual
User of Scores	Teacher and Student	Teacher, student, parent, and school administrator	Teacher, student, parent, school and district administrators, public
Stakes	**Low Stakes** Informational only	**Moderate Stakes** Grades	**High Stakes** Grades and accountability

cde Improving Academic Achievement

Glossary of Terms
Associated with Standards-Based Education in Colorado

21st Century Skills: Within the CDE standards document, 21st century skills and readiness competencies include the following: collaboration, critical thinking, invention, information literacy, and self-direction.

Academic Language: The language (i.e., vocabulary, phrase, sentence structure, text genre, discourse features, and language functions) that all students need to access to engage with and perform at mastery in all Colorado Academic Standards.

Advanced Level of Performance: A description of performance that exceeds expected performance indicators of the standards. An advanced level of performance is usually demonstrated by evidence of learning beyond or in addition to what is normally required for mastery-level performance in any standard, concept, or skill and demonstrated at a higher or more complex cognitive level.

Alignment: Refers to consistency, organization, or linkage of information, plans, actions, and decisions. This often refers to the linkage between standards, of standards and curriculum, instructional materials, instructional methods, skill expectations, assessments, or data.

Alternative Assessment: "Alternative" to traditional, standardized, norm or criterion-referenced, paper-and-pencil testing. An alternative assessment might require students to answer an open-ended question, work out a solution to a problem, perform a demonstration of a skill, or produce a project. *(See Performance Assessment)*

Articulation/Articulated: The way things are joined or linked, similar to alignment. This most often refers to the identification of what students should know and be able to do within grade levels or content areas, i.e., horizontal articulation, and across grade levels or content areas, i.e., vertical articulation. In a well-articulated curriculum, there are no gaps or unnecessary overlaps in the learning targets within or among grade levels or content areas.

Assessment: An appraisal or evaluation. The process of quantifying, describing, gathering data, or giving feedback about performance (Carr and Harris, 2001). In education, assessment is a process of measuring, evaluating, or testing student competency in concepts or skills, and determining the progress of a student toward meeting academic standards.

Assessment *as* Learning: Described by Ainsworth (2010) as any kind of assessment that provides students with the opportunity to revise their work or performance after receiving teacher feedback. This helps students by clarifying or deepening their understanding of a problem or questions they initially misunderstood and/or answered incorrectly.

Assessment Framework: Description of the standards and evidence outcomes that are assessed by content area and grade level on the Colorado Summative Assessment.

Authentic Assessment: Broad evaluation procedure that includes a student's demonstration of learned content with the integration of several concepts or skills into one assessment. The products and performances are designed to resemble those which occur in the "real world." *(See Performance Assessment)*

Backwards Design: Big ideas, grade-level expectations, and indicators of student mastery along with planned methods to assess mastery.

Best-First Instruction (also referred to as first, classroom, Tier I, core, or universal instruction, or in Colorado, universal tier instruction): High-quality, effective, and engaging instruction provided in the general education classroom as outlined in a class or course curriculum, designed to meet the needs of all students. It provides students with their first opportunity to learn standards and grade-level expectations. All first instruction should be grounded in research-based methodology. *(See Research-Based Instruction)*

Best Practices: *(See Research Based and Research-Based Instruction)*

Big Ideas: The three or four foundational understandings—main ideas, conclusions, or generalizations relative to the concepts and skills within a unit of study—that educators want their students to discover and state in their own words by the end of the unit. Big ideas convey to students the benefit or value of focusing on the standards that they are to remember long after instruction ends (Wiggins and McTighe, 2005, 2007).

Checks for Understanding: An "in-the-moment" approach to formative assessment. It is a powerful method to check for student misconceptions during instruction and is a tool teachers can use to improve instruction and/or provide students immediate feedback regarding their learning (Fisher and Frey, 2007).

Classroom Summative Assessment: Evaluation administered at the conclusion of a unit of instruction to comprehensively assess student learning.

Coaching: Training and guidance provided to enhance an individual's or team's knowledge, skill, and performance. Coaching is provided to individuals or teams of educators to provide feedback and facilitate their continued development and effectiveness as professionals.

Collaboration: Systematic process in which people work together, interdependently, to analyze and impact professional practice in order to improve individual and collective results (DuFour, Dufour, Eaker & Many, 2006).

Colorado Academic Standards: The revised standards for learning in ten academic content areas for preschool through grade 12 were adopted by the Colorado State Board of Education in December 2009 with revisions to the reading, writing, communicating, and mathematics standards adopted in December 2010. These standards include personal financial literacy, 21st century skills, and the Common Core State Standards for Mathematics and English/Language Arts.

Colorado Achievement Plan for Kids (CAP4K): Signed into law in May 2008, Senate Bill 08-212, is an education reform initiative that creates, for the first time in Colorado, an aligned preschool to postsecondary educational system. With the purpose to improve Colorado's public education through alignment of preschool through postsecondary expectations, this law established new standards and new assessments intended to enable all students to graduate high school with the skills and the knowledge to succeed in today's 21st century global economy.

Colorado's Summative Assessment: End-of-year comprehensive measurement of student mastery to inform taxpayers and state policy makers, support identification of successful programs, and serve a variety of state and federal accountability needs.

Common Assessment: Assessment typically created collaboratively by a team of teachers responsible for the same grade level or course (DuFour, Dufour, Eaker & Many, 2006). The typical purposes of developing and administering common assessments are (1) to collaboratively identify and plan instruction for those concepts or skills that are essential to a course or content area and (2) to compare and analyze results, reflect on effectiveness of instructional strategies, and determine next steps for instruction.

Common Core State Standards: The Common Core State Standards are national common standards in mathematics and English/language arts which grew out of an initiative by the National Governor's Association and the Association of Chief School Officers. The Common Core State Standards are part of a state-led effort to afford all students the skills and knowledge they need to succeed. Colorado adopted the Common Core State Standards in August 2010, and incorporated these standards into the Colorado Academic Standards in mathematics, reading, writing, and communicating.

Concept Connections Tool: As defined in the CDE Standards Toolkit, this is designed to provide a cross-content (multi-disciplinary) tool that identifies possible unifying concepts with the Colorado Academic Standards from kindergarten to grade 5. The intent of this tool is to facilitate integrated instruction when possible at the elementary level and to make interdisciplinary connections explicit through intentional instruction.

Core Replacement Instruction: Individualized instruction provided to students through Tier III interventions. This instruction is designed to replace best-first classroom instruction or supplemental interventions to meet unique student needs and is only provided to those students who have not been successful in other instructional or intervention situations. *(See Tier III Intervention)*

Criteria: Standard on which a judgment or decision may be based.

Criterion-referenced Assessment: Assessment used to determine if a student or a group of students have met a specific standard, benchmark, or intended learning outcome (Ainsworth & Viegut, 2006). CDE defines this as an assessment that allows its users to make score interpretations in relation to a functional performance level, rather than in relation to the performance of others (i.e., determines whether individual students have learned specific skills or concepts).

Curriculum: As defined by the Colorado Department of Education, an organized plan or program of instruction or learning that engages students in learning. A curriculum designs and communicates a *scope and sequence* of concepts and skills students should learn within a course or grade level.

Curriculum Document, Framework, or Guide: Organizational structure that assists in the development of a curriculum or the document itself that guides the delivery of a curriculum. Curriculum documents, guides, or frameworks are often used synonymously. Curriculum guides may provide resources for teachers to deliver the curriculum such as supportive materials, books, and/or core programs, or other instructional and assessment tools.

Curriculum Map: Course of study usually linking learning objectives and targets with a designated time period through unit and/or lesson plans. A curriculum map has also been defined as a real-time collection of information about what is actually taught in classes at specific points during the school year (Jacobs, 2004).

Curriculum Objective: The term commonly used to identify a very specific grade-level or course-learning outcome aligned to standards and grade-level expectations. Objectives are often *identified at the district level* and usually communicated through district curriculum documents. They describe what students should know, understand, or be able to do at the end of a course, unit, or even a lesson. Curriculum objectives usually are described with some type of expected performance or method to assess mastery. Curriculum objectives or targets may sometimes be called *learning targets, learning outcomes, learning objectives, or learning expectations. (See Grade-Level Expectation)*

Data: Most commonly defined as "factual information," often in the form of facts and figures obtained through some type of observation, performance, or survey. The most common types of data used in education are (a) student learning, e.g., results of assessments, teacher observations, student work; (b) demographics, e.g., enrollment, attendance, drop-out rate, ethnicity, race, gender, grade level, and the behavioral characteristics of the student population (attendance, discipline, graduation rates, etc.); (c) school processes, e.g., descriptions of school programs and processes; and (d) perceptions, e.g., information collected about perceptions of learning environment, values and beliefs, attitudes or observations (Bernhardt, 1998).

Depth of Knowledge: A model organized around the assumption that curriculum elements may be categorized based upon the cognitive demands required to produce an acceptable response. The four levels of complexity include recall and reproduction (level 1); skills and concepts (level 2); strategies and thinking (level 3); and extended thinking (level 4) (Norman L. Webb, 1997).

Differentiation: The modification of programming and instruction based on a student's academic needs and intellectual ability. Such modifications provide opportunities for students to learn based on their performance level, learning style, or other individual characteristics or needs.

Disciplinary Concept Maps (DCMs): These provide visual representations of unifying themes along with organizing and supporting concepts for each discipline and grade level within the Colorado Academic Standards. The DCMs also provide a central purpose for each discipline at each grade level and depict how concepts relate to one another to inform intentional curricular and instructional planning. They provide a framework for working with the standards in a way that emphasizes 21st century learning and interdisciplinary connections. Within Discipline Concept Maps are:

- *Unifying themes* that provide an overview of content at each grade level,

- *Organizing concepts* that connect multiple grade-level expectations (GLEs) and evidence outcomes (EOs), and

- *Supporting concepts* that elaborate on and show the depth of on organizing concept.

Disciplinary Literacy: Meaningful integration of content knowledge, concepts, and skills with abilities to read, write, and communicate using styles, conventions, and levels of formality particular to various content areas.

Equity: Equity refers to a commitment to a diverse population of students, demonstrated by the creation of an inclusive and positive school and/or classroom culture and strategies that meet the needs of diverse student talents, experiences, and challenges. Equity pedagogy values students' individual backgrounds as a resource and utilizes approaches to instruction and behavioral support that build on students' strengths.

Evaluation: The process of making judgments about levels of students' understanding or skill based on an assessment.

Evidence-based Educational or Instructional Practices: Those educational or instructional practices that have been shown to have a positive effect on student learning. Evidence is established through scientific research or evidence. *(See Research-Based)*

Evidence Outcomes: Evidence outcomes define mastery expected at a specific grade level. These are the indicators of whether a student is meeting an expectation at the mastery level. Within each standard area, the concepts and skills students are expected to master are listed with evidence outcomes identified for each area. *(See Primary and Secondary Progress Indicators)*

Exemplar: Example that illustrates the knowledge or performance characteristics of a standard, grade-level expectation, big idea, or unit of study. Exemplars provide students with a model of an expected level of learning or a performance. The most common exemplars include samples of student work, assessments, projects, solutions to problems, etc., provided to students as an example of what they are expected to know or perform in a unit of study or during a grading period. Exemplars are most effective when accompanied by a description of mastery such as a rubric, checklist, or scoring guide which can then help teachers (and students themselves) to evaluate student work against a standard of performance.

Formative Assessment–*assessment for learning:* Defined by the Colorado Department of Education as "a process used by both teachers and students during instruction that provides 'in the moment' feedback for adjusting teaching and learning. It reveals points of confusion, misunderstanding, or progress toward mastery of an idea." The literature adds that formative assessments are used to monitor or adjust instruction in order to improve learning for current students, i.e., to inform instructional decision making. Formative assessments can be pre-tests to determine current level of knowledge or skill before instruction, used to gauge progress during instruction, or used at the conclusion of a lesson or unit to determine the effectiveness of instruction (Ainsworth & Viegut, 2006). These can be created by teachers, grade levels, departments, or other teams of teachers or specialists. These are low-stakes assessments used for information only. Scores from these assessments are for student and teacher use to continually ensure learning is taking place.

Goal: Generally defined as a measurable milestone that can be used to assess progress in advancing toward a vision or desired state. Goals establish targets and timelines to answer the question, "What results do we seek and how will we know we are making progress?" (DuFour, DuFour, Eaker & Many, 2006)

Grade-Level Expectations (GLEs): The articulation (at each grade level) of the concepts and skills that indicate a student is making progress toward being ready for high school, i.e., what students need to know from preschool through grade 8. In the Colorado Academic Standards, evidence outcomes define mastery of grade-level expectations.

Guaranteed and Viable Curriculum: A curriculum is guaranteed if it gives clear guidance to teachers regarding the content (knowledge, concepts, and skills) to be learned in specific courses or at specific grade levels. It assumes that processes and personnel are in place to ensure there is monitoring of the curriculum and delivery, and individual teachers do not have the option to disregard or replace assigned content. Marzano (2003) states that, "a guaranteed curriculum ensures all students receive an effective education based on adopted curriculum standards and benchmarks regardless of who is teaching the class. A curriculum is viable when there are sufficient time, materials, and instructional tools for teachers to teach the curriculum so students learn that content and perform at a mastery level."

High School Expectations: The articulation of the concepts and skills of a standard that indicates a student is making progress toward being a prepared graduate, i.e., what students need to know and be able to do in high school.

Inquiry Questions: Sample questions, intended to promote deeper thinking and reflection, that create refined understandings of the grade-level expectation.

Instruction or Instructional Practices: Methodology or strategies used by teachers to engage students in the learning process.

Instructional Materials: Any print or electronic media designed to provide resources or tools to support instructional delivery and assist students in learning. This includes textbooks and

their ancillary materials, literature, models, "manipulatives," and other tangible resources or learning tools.

Interim Assessment: Assessments typically administered every few months to fulfill one or more of the following functions:

- Instructional, e.g., to supply teachers with student diagnostic data,
- Evaluative, e.g., to appraise ongoing education programs, and
- Predictive, e.g., to identify student performance on a later high-stakes test.

These assessments are typically less rigorous than summative assessments and have moderate stakes resulting in individual, classroom, and school scores. They are sometimes referred to as "benchmark assessments."

Intervention: The systematic and explicit instruction provided to accelerate growth in an area of identified advanced or remedial need. Interventions are provided by educators based on their training, not title. Interventions are designed to improve performance relative to a specific, measurable goal. Interventions are based on valid information about current performance, realistic implementation, and include ongoing student progress monitoring.

Learning Goal: *(See curriculum objective)*

Learning Objective: *(See curriculum objective)*

Learning Progression: A sequenced set of subskills and bodies of enabling knowledge that students must master en route to mastering a more remote curricular aim.

Mastery: The application and transfer of skills so that a student has complete expertise of a skill or concept in multiple contexts.

Measure/Measurement: Assigning scores to an assessment based on an explicit set of rules. Sometimes used synonymously with assess/assessment.

Multi-Tiered System of Support (MTSS): As defined by the Colorado Department of Education, "MTSS leverages the principles of Response to Intervention (RtI) and Positive Behavioral Interventions and Supports (PBIS) to integrate a system-wide continuum of evidence-based resources, strategies, structures, and practices to support an agile response to academic and social-emotional needs." It provides "a system…or high-quality universal educational experiences in a safe and supporting learning environment for all students" along with "intensive academic and/or behavioral supports for students who have demonstrated mastery of concepts and skills or who experience academic and/or social-emotional difficulties."

Pacing Guide: Guide that identifies periods of time or timelines that grade-level concepts and skills that should be taught and learned. Often pacing guides are included in curriculum guides or documents. In a standards-based system, pacing guides are continuously adjusted based on the pace and level of student learning.

Performance Assessment: Assessment that requires students to construct a response, create a product, or demonstrate their learning through various performance tasks generally evaluated using a scoring guide or rubric. Students may be asked to complete an exercise, activity, or assignment that requires solving a problem, performing a task or experiment, participating in a performance or debate, or applying their knowledge to real-world or other new situations. As defined by the Colorado Department of Education, "a task or series of tasks requiring a student to provide a response or create a product to show mastery of a specific skill or content standard."

Performance Description/Descriptor: Level or description of performance expected of a student within a given period of time such as at the end of a course, unit of study, or lesson. A performance description usually describes how well students need to perform in various skills and knowledge to be considered at mastery level for their grade level. Performance descriptors in the previous Colorado Student Assessment Program (CSAP) were within the following four performance categories: *Unsatisfactory, Partially Proficient, Proficient* or *Advanced.*

Prepared-graduate Competencies: The concepts and skills that all students who complete the Colorado education system must master to ensure their success in a postsecondary and workforce setting.

Primary Progress Indicator (Evidence Outcomes): Concepts, content, skills, or ideas that students need to understand and/or demonstrate in order to provide the foundation leading to mastery of a grade-level expectation. *(See Secondary Progress Indicators)*

Professional Development (syn. Staff Development): As defined by Learning Forward (formerly the National Staff Development Council), "the processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students. Well-designed professional development should be an intentional, meaningful, ongoing, and systematic process for educators to enhance their practice."

Progress Monitoring: Progress monitoring is the ongoing process of collecting and analyzing data to determine student progress toward specific skills or general outcomes. Progress-monitoring data is used to adjust instruction for individual and groups of students.

Reflection: The active thought process in which educators review past practices to better understand results and to improve future practice. Reflection implies that when current practices are observed and evaluated, effective practices are sustained and less-effective practices are improved or modified. Reflection becomes a part of a continuous improvement cycle in education.

Relevance and Application: Examples of how the grade-level expectation is applied at home, on the job, or in a real-world, relevant context.

Reliability: "Reproduce-ability" of a set of scores under different circumstances, i.e., consistency or stability of a measuring instrument, necessary but not sufficient for validity.

Research Based: Educational practices, methodology, strategies, programs, or materials that have been systematically and scientifically studied and shown to have a correlation with, or positive effect, on learning and achievement. While educational practices are often identified and promoted in educational literature, such practices are not defined as research based unless they have been shown, through scientific study, to have a positive correlation with, or effect on, student learning and achievement.

Research-based Instruction (sometimes referred to as evidence-based, best-first instruction or effective instructional practices): As defined by the Colorado Department of Education, a research-based instructional practice or intervention is one found to be reliable, trustworthy, and valid based on evidence to suggest that when the strategy or program is used with a particular group of children, the children can be expected to make adequate gains in achievement. Ongoing documentation and analysis of student outcomes helps to define effective practice. In the absence of scientific evidence, the instruction/intervention is considered "best practice" based on available research and professional literature.

Response to Intervention (RtI): The state of Colorado has defined Response to Intervention as "a framework that promotes a well-integrated system connecting general, compensatory, gifted, and special education in providing high-quality, standards-based instruction and intervention that is matched to students' academic, social-emotional, and behavioral needs. A continuum of evidence-based, tiered instruction and interventions with increasing levels of intensity and duration is central to RtI. Collaborative educational decisions for students are based on data derived from frequent monitoring of student performance and rate of learning" (CDE, 2008). *(See Multi-Tiered System of Supports)*

Rubric: A rubric may have multiple dimensions of a concept, knowledge, or skill, each scored individually and sometimes together with a holistic score.

Scale: A system of grouping or classifying in a series of steps or degrees according to a standard of relative size, amount, importance, perfection, etc. The value or rating is determined by its place in the order according to a constant fixed as the basis of the system. A scale such as 1–4 is often applied to define levels of performance on a concept or skill. Marzano & Haystead (2008) suggest the use of uni-dimensional scales (a single rating) to measure or score a student performance on a single concept or skill.

Scope and Sequence: Range or extent and the order or progression of concepts and skills included in a curriculum, i.e., a year-long scope of what to teach and in what order (Ainsworth, 2011).

Score: The number or letter assigned to an assessment via the process of measurement; may be synonymous with the term "mark."

Scoring Guide: A scale that describes levels of knowledge or skill that can be demonstrated in some type of assessment or performance task. Scoring guides or rubrics utilize a clear set of criteria that describe the expected learning and quality needed to achieve a specific level of

performance or grade. They describe levels of performance and usually assign some type of descriptor (e.g., no progress—fully accomplished) and/or a numerical rating (e.g., 1–5) to that performance.

Secondary Progress Indicator (evidence outcomes, inquiry questions, relevant and application, and nature of statements): Concepts, content, skills, or ideas that support and/or deepen a student's learning leading to mastery of a grade-level expectation.

Standard: The topical organization of an academic content area.

Summative Assessment *(assessment of learning):* Assessment that provides summary information about what students have mastered in terms of content and skills. Summative assessments are formal, more rigorous and are usually given at the end of a grading period, course, or year to evaluate what students have learned at the conclusion of that time period or course. Typically, individual, school, district, and state scores are analyzed using the data from the assessment and therefore can result in being viewed as high stakes. Formative, interim, and summative assessments are all important and provide different opportunities to measure and understand student learning.

Systematic: Specific efforts to organize related parts into a coherent whole in a methodical, deliberate, and orderly way toward a particular aim.

Tier II Intervention: Targeted, instructional interventions provided to students when assessment indicates that a student is not making adequate gains from best-first classroom instruction alone. These are generally smaller group interventions and designed to provide targeted instruction for students with similar needs.

Tier III Intervention: Intensive interventions that offer students highly individualized, systematic instruction in one or more areas of assessed needs. These interventions may be similar to Tier II interventions but are provided with a longer duration and/or increased intensity in order to accelerate student learning and meet the unique needs of students at the highest risk for failure.

Unit (or instructional unit or unit of study): Usually a collection of lessons that focus on one or a related group of concepts or skills and provide a variety of instructional formats and learning opportunities for students. Units represent a coherent chunk of work in courses or strands across days or weeks…that focus on a major topic or process that lasts between a few days and a few weeks (Wiggins & McTighe, 2005).

Universal Tier Instruction: *(See Best-First Instruction and Research-Based Instruction)*

Validity: The extent to which an assessment or test does the desired job; the evidence may be either empirical or logical. Criterion-related validity is the standard, i.e., based on the content or processes (construction) of other valid measurements or criterion that ensure the assessment measures what it is purported to measure.

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In addition to the numerous publications listed above, the web sites for all 50 states were accessed and reviewed regarding their policies and practices related to standards-based education. This review was conducted to assess the contents of this document for alignment with the practices of other states, to review their expectations and policies, and to identify and review the standards-based vocabulary used in various states.

The Standards-Based Teaching/Learning Cycle
LANDSCAPE

What do students need to know, understand and be able to do?
Essential Practices

A Standards in all academic disciplines or content areas, along with corresponding high school and grade-level expectations, are adopted at the district level.

B Learning expectations for all students are identified, organized, and described around prepared-graduate competencies and the "big ideas" that connect expectations and standards.

C High school and grade-level expectations are articulated and aligned within and among grade levels and across the district to make certain there are no gaps or unnecessary overlaps in those concepts and skills and to ensure a scaffold of increasing depth, breadth, and cognitive complexity.

D District curriculum provides a scope and a sequence of grade-level expectations organized to comprise a district's guaranteed and viable curriculum for preschool through high school.

E District-produced curriculum documents, guides, or frameworks provide tools to assist teachers in planning effective instruction that focuses on the "big ideas" along with the concepts and skills identified in the district's guaranteed and viable curriculum.

F Descriptions or indicators of mastery are identified and used to describe the types and levels of performance expected for all grade-level expectations.

G Examples and exemplars of mastery-level student work are identified or created to provide models of performance expectations for students.

H Adopted or purchased instructional programs and materials are intentionally aligned with the district's standards-based curriculum.

I Standards and grade-level expectations are communicated effectively to students and families.

How do we teach effectively to ensure students are learning?
Essential Practices

A The district's guaranteed and viable curriculum is consistently and equitably taught to mastery.

B The district designs, communicates, and ensures implementation of an instructional framework that describes commonly expected, research-based instructional methods that actively, meaningfully, and rigorously engage students in learning.

C Teachers engage in ongoing, intense collaborative work to develop units, lessons, and instructional strategies focused on grade-level expectations.

D Pre-assessment of current performance levels informs planning and instruction.

E Lessons and units are developed using a backwards design process, i.e., beginning with the end in mind (big ideas, grade-level expectations, and indicators of student mastery) along with planned methods to assess mastery.

F Instructional strategies actively engage students *in learning* and *as a learner* in order to develop the attitudes and behaviors that lead to high levels of learning such as motivation, self-direction, and personal responsibility for their own learning.

G Instruction is continually informed by assessment of student learning through intentional and ongoing formative assessment practices *(assessments for learning),* interim assessments to determine progress toward mastery, and summative assessments to measure mastery *(assessments of learning).*

H Students receive feedback and guidance to develop understanding of their performance, improve their achievement, monitor their progress, and identify goals for learning.

I Effective best-first classroom instruction includes multiple opportunities to learn through differentiation strategies.

J Ongoing training, coaching, monitoring, and feedback regarding instructional practices are provided to teachers to ensure effectiveness of instruction in activating student learning.

The Standards-Based Teaching/Learning Cycle

How do we know students are learning?

Essential Practices

(A) All assessments to measure student mastery are tightly aligned with standards and grade-level expectations in the district curriculum.

(B) All educators understand the multiple purposes of assessment, particularly the different purposes, construction, and application among formative assessments *(assessment for learning* to inform instruction), interim assessments (to determine progress), and summative assessments *(assessment of learning* to measure mastery).

(C) A variety of assessment methods and strategies are available and used to continuously measure student learning and inform instruction.

(D) Common assessments are developed and administered for similar courses and/or grade levels.

(E) Common scoring guides, scales, checklists, rubrics, or other measurement criteria are used by teachers to consistently and reliably measure student performance and by students to evaluate and improve their work.

(F) Students integrate and demonstrate their learning through authentic performance tasks or assessments.

(G) Students receive timely feedback and guidance regarding their performance on assessments *(assessment as learning)* in order to monitor their own progress and set future learning goals.

(H) School leaders, staffs, and individual teachers disaggregate and analyze multiple sources of data at the *individual student level* to identify specific student needs, skill levels, etc., in order to inform instruction or to design differentiation or intervention strategies.

(I) Districts and schools use reporting systems that identify student mastery levels on grade-level expectations and the growth students are making toward mastery over time.

(J) To guide decision making, districts and schools continually collect and analyze an array of data including student growth and learning results (e.g., skill or content "snapshots," individual and group growth patterns, student sub groups, longitudinally, among schools, against comparable districts and state-level performance, etc.).

What do we do when students are not learning or are reaching mastery before expectation?

Essential Practices

(A) Districts and schools ensure students who do not effectively learn through best-first instruction in their classrooms are afforded multiple opportunities to learn, first within their classroom, grade-level team, and/or department, and then beyond the classroom.

(B) School-level teams, including classroom teachers, specialists, and administrators, collaborate to design individual instructional or intervention strategies for students.

(C) Tier II grade-level or content-area instructional interventions, available beyond the classroom, are provided for students performing below mastery while extended enrichment opportunities are available for students performing above mastery. This level of intervention might include 15–20% of a school's student population.

(D) To ensure any student whose needs are not met through best-first classroom instruction or Tier II interventions, Tier III interventions are provided to specifically meet individual student needs with sufficient time, intensity, and frequency needed to address those remedial or advanced needs. This level of intervention might include 5–10% of a school's population.

(E) All intervention models, programs, or strategies, from classroom differentiation to Tier III interventions, are research based and delivered to meet the individual learning needs of students.