Research-Based Practices for Teaching Students Performing below Grade Level:

A Resource for Supporting and Evaluating Teachers

The following table identifies major categories of research-based practices for teaching students performing below grade level (Column 1), including general instructional practices; reading, writing and mathematics instructional strategies; formative assessment strategies; and teacher collaboration practices.

In addition, it provides specific examples (though not exhaustive) of research-based best practices in teaching students performing below grade level (Column 2) and how teacher evaluators can identify evidence of these practices in classroom observation, teacher conferences or other sources of evidence (Column 3). The citations and references provided in Column 4 have complete bibliographic information at the end of the document.

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
	GENERAL INSTRUCTIONAL PRAC	CTICES	
Academic Engaged Time	Use of predictable routines and signals that have been taught and practiced by students so that instructional time is maximized □ Posted agenda □ White board configuration □ Hand signals or clapping patterns □ Line-up procedures □ Transition procedures □ Materials distribution and collection □ Music cues □ Code words □ Practicing routines (beginning of the school year or when introducing a new procedure)	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Echevarria & Short, 2000; Peregoy & Boyle, 2008; The Education Trust, 2005)
Curriculum, Instruction and Assessments Linked	 Teachers use standards and assessments to monitor their teaching. In courses that have no external standards and assessments, teachers may create them (e.g., SLOs) to ensure that students are 	• Classroom Observation • Lesson Plan	(Common Core State Standards Initiative, 2010, n.d.; The Education Trust, 2005)

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to Content Standards	getting the instruction they need.	Pre- conferencePost- conference	
Universal Design in Learning (UDL) Principles: 1. WHAT: Present content in multiple ways 2. HOW: Allow students to express what they know in multiple ways 3. WHY: Capture and maintain student interest and motivation	 Teacher may use visuals, short video clips, role play, discussion, debate, etc., to support a textual reading Teacher may use manipulatives, graphics, symbols, animation, modeling, etc., to present mathematics content Teacher uses multiple methods to check for understanding and allow students to demonstrate their learning, including: Thumbs Up, Thumbs Down Self-Assessment activities Think (Write) Pair Share Use of leveled sentence frames Responses to leveled questions Quick drawing or sketching Response cards Example/Non-example Posters/comic strips Reading response journals Oral presentations or demonstrations Teacher builds in opportunities for student choice, connects objectives to real-world situations, and eliminates learning distractions (e.g., noise levels when students are reading, overload of sensory stimulation) 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	http://www.udlcenter.org/aboutudl/udlguidelines/downloads
Response to Intervention (RtI) Principles: 1. Primary prevention: high	 Teacher teaches the core curriculum using research-based instructional strategies to help students access grade-level content (see the remainder of the document for examples of these strategies) Teacher uses instructional practices that are culturally and linguistically responsive 	 Classroom Observation Lesson Plan Pre- conference Post- 	(National Center on Response to Intervention, 2010) http://www.rti4success.org/

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quality core instruction that meets the needs of most (80%) students 2. Secondary prevention for the remaining 20%, including evidence-based intervention in small groups 3. Tertiary prevention and individualized intervention(s) of increased intensity for students (2-7%) who show minimal response to secondary prevention	 Teacher engages in once-a-year universal screening to determine students' current level of performance Teacher conducts Progress Monitoring at regular intervals to determine if students are responding to intervention Teachers collaboratively engage in data-based decision making to inform instruction within the classroom and allow movement within the multi-level system (e.g., use of formative and benchmark assessments focused on specific Common Core State Standards and discrete skills) Teacher provides differentiated learning activities (e.g., mixed instructional grouping, use of learning centers, peer tutoring) to address individual needs Teacher makes accommodations to ensure all students have access to the instructional program (e.g., use of Assistive Technology [see below], strategies for helping English learners and non-readers access grade-level content and text [see below and see ELL document]) Teacher identifies interventions, as needed, to address behavior problems that prevent students from demonstrating the academic skills they possess (e.g., use of Positive Behavioral Interventions and Supports [see below]) In Tier 2, evidence-based interventions are well defined in terms of duration, frequency, and length of sessions, and the interventions demonstrate fidelity to research-based models [see below] In Tier 3, teachers provide intensive and individual support to remediate existing problems and prevent more severe problems [see Students with Disabilities document] 	conference	
Use of Assistive Technology (AT) as needed	 Examples include (but are not limited to): ☐ Abbreviation expanders ☐ Alternative keyboards ☐ Audio books and publications 	Classroom ObservationLesson PlanPre-	(Great Schools Inc., 2012) http://www.greatschools.org/articles/?topics=188&language=EN

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
Positive Behavioral Interventions and Supports (PBIS)	□ Electronic math work sheets □ Freeform database software □ Graphic organizers and outlining □ Information/data managers □ Optical character recognition □ Paper-based computer pen □ Personal FM listening systems □ Portable word processors □ Proofreading programs □ Speech-recognition programs □ Speech synthesizers/screen readers □ Talking calculators □ Talking spell checkers and electronic dictionaries □ Variable-speed digital recorders □ Word-prediction programs ● Teacher implements school-wide behavioral expectations, including the use or teaching of: □ rules □ routines □ prosocial behaviors □ environment arrangement to prevent the development and occurrence of problem behavior □ instruction to prevent initial occurrences of behavior the school would like to target for change □ data to make decisions and solve problems □ universal screening and regular monitoring of student behavior and performance ● Teacher teaches, models, provides opportunities for student practice of, observes and recognizes examples of appropriate	conference Post- conference Observation of collaboration between general education and special education teachers Classroom Observation Lesson Plan Pre- conference Post- conference School-wide behavioral plan	(OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports, 2009) www.pbis.org
	student behavior, including: ☐ Respect Yourself, Respect Others, and Respect Property		

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
	 □ Be Safe, Be Responsible, Be Respectful □ Respect Relationships and Respect Responsibilities • Tier 2: Teacher provides specialized small group interventions for students with at-risk behavior • Tier 3: Tertiary Level (Individual) – teacher provides or collaborates with specialists who provide specialized, individualized systems for students at high risk for dangerous or highly disruptive behavior or those behaviors that impede learning or result in social exclusion 		
TEACH	HING STUDENTS BELOW GRADE LEVEL IN EN	GLISH LAN	GUAGE ARTS
Addressing Gaps in the Code: • Phonemic/Phonological awareness • Alphabetic knowledge CCSS Foundational Skills 1, 2 ¹	 Systematic instruction and practice in orally identifying and producing sounds, and sorting words based on beginning, middle, and ending sounds Rhyming Onset/rime blending Onset/rime segmentation Phoneme blending Phoneme segmentation Phoneme substitution, addition, deletion Systematic instruction and practice to recognize all 52 letters of the alphabet (upper- and lower-case) 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Adams, 1990; Adams, Foorman, Lundberg, & Beeler, 1998; Ehri, et al., 2001; Juel, 1988; National Reading Panel, 2000)
Addressing Gaps in the Code: • Phonics and decoding • Multisyllabic decoding	 Focused instruction of phonics/ decoding with immediate practice in text (including consonants, short/long vowels, consonant blends and digraphs, diphthongs, silent consonants, and syllabication) Picture Sorts by sound Use of software to reinforce sound/spelling relationships 	 Classroom Observation Lesson Plan Pre- conference Post- 	(Adams, 1990, 2011; Blachman, et al., 2004; Foorman, Francis, Fletcher, Mehta, & Schatschneider, 1998; Lesaux & Siegel, 2003; National Reading Panel, 2000; O'Connor, Fulmer,

¹ CCSS – Common Core State Standards. Foundational Skills are not ends in themselves, but are necessary prerequisites to effective text comprehension.

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
CCSS Foundational Skills 3	 Regular assessment to determine which sound/spelling relationships have been mastered Multisyllabic decoding instruction: BEST—Break apart the word, Examine each part (prefix, suffix, root, syllables), Say each part, Try the whole word in context (5-10 minutes per day at most) Word Analysis Chart used in instruction 	conference	Harty, & Bell, 2005)
Addressing Gaps in the Code: Code-switching/contrastive analysis CCR Anchor Standards ² for Speaking and Listening, 6 CCR Anchor Standards for Language, 1, 3, 6 CCR Anchor Standards for Unique Marchards for Unique Marchards for Writing, 4	 Provide explicit instruction and practice in code-switching or contrastive analysis between: Casual writing and formal writing First and second languages Dialects and standard English "Accurate assessment requires that we separate dialect influence from decoding error in Standard English" (R. Wheeler, Cartwright, & Swords, 2012, p. 418) General and technical (domain-specific) language (e.g., plane, equal) 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Laufer & Girsai, 2008; Turner, 2009; R. Wheeler, et al., 2012; R. S. Wheeler, 2006, 2008)
Oral Reading Fluency (accuracy, rate, expression) and Word Recognition	 Explicit instruction in high-frequency irregular sight words Constant Time Delay (sight word practice with 3-second delay to promote word recall) Use of Word Walls 	Classroom ObservationLesson PlanPre-	(Rasinski, 2003; Wexler, Vaughn, Edmonds, & Reutebuch, 2008) (O'Connor, 2006)

² CCR Anchor Standards – College and Career Readiness Standards (K-12) from the Common Core State Standards

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(automaticity) • Link the Teaching of Oral Reading Fluency to proven Word Recognition and Comprehension Strategies CCSS Foundational Skills 3, 4	 Practice games to increase automaticity (e.g., I have; who has?) Pattern and predictable books Partner reading Unison reading Choral reading Phrased Text Lessons (for modeling and practicing reading with expression and phrasing) Limited use of repeated reading 	conference • Post-conference	
 Explicit and Systematic Vocabulary Instruction Regular opportunities to practice and apply new vocabulary Word learning strategies taught Wide reading of fiction/non-fiction Morphemic analysis CCR Anchor Standards for Language, 4, 5, 6 	 Teacher has pre-selected high-utility domain-specific and general vocabulary words for instructional focus Use of Word Knowledge Rating Chart or Anticipation Guide to pre-assess student understanding Links between new words and previously-learned words or concepts Clear, student-friendly definitions and examples Use of visuals, short video clips, or graphics Opportunities to check for understanding during vocabulary instruction Regular opportunities to practice new words in context Meanings of Latin and Greek roots, prefixes and suffixes Structural and morphemic analysis of words Use of student-friendly dictionaries Appropriate use of context clues Academic word families Multiple meaning words Use of graphic organizers Examples/non-examples (Frayer model) Word Walls Personal dictionaries 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Beck, McKeown, & Kucan, 2002; Feldman & Kinsella, 2005; Hairrell, et al., 2011; Harmon, Hedrick, & Wood, 2005; Kinsella, 2003; Marzano, 2004; Stahl & Nagy, 2006)

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
	 Vocabulary games for review I have Who has? Picture This Non-linguistic representations (sketches, motions) to represent newly acquired vocabulary 		
Reading Comprehension Support Scaffolding of complex text Leveled texts on same topic Repeated reading for different purposes Direct instruction of key words and concepts, with student practice Exploration of subtopics involving more complex texts CCSS Anchor Standards for Reading, 1-11	Scaffolding of complex text "1. Select a topic about which your students need to learn. If the students are below grade level, begin with shorter, simpler texts. 2. Teach the key words and concepts directly, engaging students in using and discussing them to be sure they are well-anchored. 3. As the students learn the core vocabulary and basic concepts of the domain, they will become ready to explore its subtopics (more complex texts!)" (Adams, 2011, p. 93) □ Use of visual displays, realia, and actions to support comprehension of complex text □ Graphic organizers □ Clustering, webbing, mapping □ Venn diagrams, compare/ contrast matrices □ Branching (e.g., family tree) □ KWL charts □ Thinking maps □ Flow charts □ Storyboards or timelines □ Cause/effect relationships (e.g., Fishbone) □ T-charts □ Somebody Wanted But So □ Semantic maps □ Sense charts or 5 W charts □ Mnemonic devices □ Computer-assisted instruction ■ Instruction and student practice in leveled texts along these	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(ACT, 2006; Adams, 2011; Bowers, Fitts, Quirk, & Jung, 2010; Gajria, Jitendra, Sood, & Sacks, 2007)

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	dimensions of complexity: □ "Relationships (interactions among ideas or characters) □ Richness (amount and sophistication of information conveyed through data or literary devices) □ Structure (how the text is organized and how it progresses) □ Style (author's tone and use of language) □ Vocabulary (author's word choice) □ Purpose (author's intent in writing the text)" (ACT, 2006, p. 14) • Leveled texts, leveled questions, leveled response frames • Teacher read-aloud before independent reading • Partner reading • Teacher-guided discussion of text		
Reading Comprehension Support through Syntactical and Semantic Analysis The teaching of language structures to develop comprehension of complex text CCR Anchor Standards for Language, Standards 1-6	 Comparative analysis of oral and written language □ Analysis of sentences to determine propositions □ Teaching of relevant parts of speech and their function in context □ Opportunities to play linguistic and conceptual categorization games 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(ACT, 2006; Adams, 2011)
Teaching of Reading/ Listening Comprehension and	Explicit instruction in, and opportunities to practice, comprehension and self-regulation strategies while reading complex text, including:	Classroom ObservationLesson Plan	(Block & Duffy, 2008; Block, Parris, Reed, Whiteley, & Cleveland, 2009; Block, Parris,

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
Metacognitive Strategies The teaching and practice of comprehension and metacognitive strategies (including cognitive strategy instruction) CCR Anchor Standards for Reading, 1-11 CCR Anchor Standards for Speaking and Listening, 1-3	 ☐ Metacognition ☐ Monitoring ☐ Questioning ☐ Predicting / verifying predictions ☐ Inferring ☐ Summarizing ☐ Synthesizing ☐ Using text cues ☐ Visualizing/imaging ☐ Clarifying (fix-it strategies) ☐ Evaluating 	• Pre- conference • Post- conference	& Whiteley, 2008; Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007; Cubukcu, 2008; Duffy & et al., 1988; Edmonds, et al., 2009; Eilers & Pinkley, 2006; Greenleaf, Schoenbach, Cziko, & Mueller, 2001; Gunning, 2010; Hare & et al., 1989; Jitendra, Hoppes, & Xin, 2000; Johnson & von Hoff Johnson, 1986; Klingner, Vaughn, & Boardman, 2007; Kratzer & Teplin, 2005; Mills, 2009; Moats, 2001; National Reading Panel, 2000; Paris, Lipson, & Wixson, 1983; Pressley, 2006; Swanson, Edmonds, Hairrell, Vaughn, & Simmons, 2011; Teplin, 2008; Wexler, et al., 2008)
Opportunities for peer interaction around academic tasks and texts	 Cooperative group activities using purposeful grouping arrangements and structured tasks around comprehending text Development of instructional arrangements where students work together to plan, draft, revise, and edit their compositions. 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Frey, Fisher, & Everlove, 2009; Klingner & Vaughn, 1999; Perin, 2007)
Writing Processes CCR Anchor Standards for	 Opportunities for students to discuss and verbalize their ideas before writing Brainstorming, pre-writing and planning opportunities Extended and frequent opportunities to produce writing drafts 	Classroom ObservationLesson PlanPre-	(Davidson & Koppenhaver, 1993; Fisher & Frey, 2008; Gunning, 2010; Ivey & Fisher, 2006; Kinsella, 2005; Perin,

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Writing, 5, 6	 Instruction and practice in revising to improve specific parts of the writing craft (e.g., organizational structure, word choice, sentence variety, integration of evidence) Instruction and practice in peer editing and self-assessment Opportunities to publish and present writing to authentic audiences Targeted instruction to individuals or small groups based on analysis of student writing/data Teacher modeling of all steps in the writing process Backwards graphic organizers Balance between writing short, bounded texts and longer process pieces Targeted questions to help students edit and revise their work Use of editing checklists for student self-assessment	conference • Post-conference	2007; Spandel & Stiggins, 1990; Vaughn & Bos, 2011)
Teaching of Analytic Writing and Presentation Skills Writing for different purposes: to inform, explain, or persuade Writing for different audiences	 Explicit cognitive strategy instruction in writing Instruction and opportunities to practice incorporating the 6 Traits of Writing (ideas, organization, voice, word choice, sentence fluency, conventions) within a writing process model Use of mentor texts, real-world models, anchor papers and rubrics to provide clear and high expectations for student writing STOP: Suspend judgment, Take a side, Organize ideas, Plan as you write DARE: Develop a topic sentence, Add supporting details, Reject an argument for the other side, End with a conclusion Instruction in summarizing a text: Delete unnecessary material (practice with existing paragraphs) 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Coe, Hanita, Nishioka, & Smiley, 2011; Culham, 2003; Davidson & Koppenhaver, 1993; Dixon, Carnine, & Kame'enui, 1993; Fisher & Frey, 2008; Graham, MacArthur, & Fitzgerald, 2007; Harris & Graham, 1992; Ivey & Fisher, 2006; Langer, 2001; Perin, 2007; Raphael & Englert, 1990; Spandel & Stiggins, 1990; Stein, 1994)

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CCR Anchor Standards for Writing, 1-3, 11 CCR Anchor Standards for Speaking and Listening, 4-6	 2. Delete redundant material (practice with existing paragraphs) 3. Compose a word to replace a list of items 4. Compose a word to replace the individual parts of an action 5. Select a topic sentence 6. Invent a topic sentence if one is not available Teachers set clear and specific goals for what students are to accomplish with their writing product. 1. What is the purpose of the assignment? 2. What are the characteristics of the final product? 3. Define each part of the product, give an example, and ask students to give examples. 4. Provide prewriting opportunities Teach text structure (e.g., compare/contrast, problem/solution) 		
Development of Writing Fluency and Stamina CCR Anchor Standards for Writing, 10	 Daily opportunities for students to write for different purposes Journals Reading response logs Quick Writes Exit slips Process pieces Writing explanations in math and science Writing for web publication Responding to writing prompts Integration of longer writing tasks (process writing) over extended periods and short writing tasks (completed in one sitting) Integration of student-selected writing tasks and topics with teacher-provided prompts and genres Emphasis on fluency rather than correctness in the early phases of working with struggling writers Individual oral and written feedback to students that encourages effort and growth 	 Classroom	(Johannessen & McCann, 2009; Kinsella, 2005)

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Research/Synthesis in Writing CCR Anchor Standards in Writing, 7-9	 Teacher modeling and guided practice in gathering and synthesizing information from multiple sources to inform or persuade an audience Teacher modeling and guided practice in using textual evidence to support a written argument 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Graham & Harris, 2005; Perin, 2007)	
TEACHING STUDENTS BELOW GRADE LEVEL IN MATHEMATICS				
1. Visual and Graphic Depictions of Problems CCSS Standards for Mathematical Practice, 4 (Model) and 5 (Use appropriate tools)	 Teacher presentation of graphic depictions of problem-solving sets with multiple examples Student practice using their own graphic organizers with guidance from teacher on which visuals to select and why Initial use of manipulatives with a transfer from concrete to abstract 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Butler, Miller, Crehan, Babbitt, & Pierce, 2003; Gersten, et al., 2009; Witzel, Mercer, & Miller, 2003)	
2. Systematic and Explicit Instruction	 Highly explicit models of steps, procedures, and/or questions to ask when solving problems Vocabulary and strategy instruction in mathematics, with teacher modeling, student practice (with teacher guidance) followed by student restating of their learning for the day 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Baker, Gersten, & Lee, 2002; Gersten, et al., 2009; Kroesbergen & van Luit, 2003)	
3. Student Think Alouds and Metacognition in Math CCSS Standards for	Teachers teach students to ask themselves the following questions: □ "1. Do I understand the meaning of the words in this problem? What is the question? (problem translation, linguistic knowledge)	 Classroom Observation Lesson Plan Pre- conference 	(Cardelle-Elawar, 1992, 1995; Carpenter, Fennema, Franke, Levi, & Empson, 1999; Gersten, et al., 2009)	

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Mathematical Practice, 1 (Solve problems) and 2 (Reason)	 □ 2. Do I have all the information needed to solve the problem? What type of information do I need? (problem integration, schematic knowledge) □ 3. Do I know how to organize the information to solve the problem? Which steps should I take? What do I do first? (planning, strategic knowledge) □ 4. How should I calculate the solution? With which operations do I have difficulty? (problem execution, arithmetic knowledge)" (Cardelle-Elawar, 1995, p. 85) • Students explain their thinking and strategy for how they solved a problem 	Post-conference	
4. Peer-Assisted Learning Activities CCSS Standards for Mathematical Practice, 3 (Critique)	Instruction and practice in using peer-assisted learning interventions, particularly for computation work	 Classroom	(Baker, et al., 2002; Gersten, et al., 2009; Kroesbergen & van Luit, 2003)
5. Use of Formative Assessment Data CCSS Standards for Mathematical Practice, 4 (Model) and 6 (Use precision)	 Teachers receive computer information on student performance and recommended next steps Teachers not only use formative assessment data but share the information with students regarding the number of types of problems students should complete in a given amount of time or focus on next Formative assessment occurs every 1-4 weeks within and between instructional units and affects student engagement and achievement 	 Classroom Observation Lesson Plan Pre- conference Post- conference School-wide data analysis Observation of collabor- ative teams 	(Baker, et al., 2002; William, 2007)

Research-Based Practices for Teaching Students Performing Below Grade Level	Specific Examples	Data Sources: e.g, Classroom Observation	Citations/ References
6. Automaticity / Skill Efficiency CCSS Standards for Mathematical Practice, 6 (Use precision)	 "Teaching is rapidly paced Modeling by the teacher with many teacher-directed, product type of questions Smooth transitions from demonstration to substantial amounts of error-free practice. The teacher plays a central role in organizing, pacing, and presenting information to meet well-defined learning goals" (Hiebert & Grouws, 2007, p. 1) 	 Classroom Observation Lesson Plan Pre- conference Post- conference 	(Brophy & Good, 1986; Hiebert & Grouws, 2007)
	TEACHER PROFESSIONAL AND COLLABORA	TIVE PRAC	ΓICES
Teacher Collaboration in Lesson Planning and Lesson Analysis	Teachers collaborate to ensure that course content is consistent no matter who is teaching □ Lesson Study □ Consultancy □ Micro-lab □ Video analysis □ Peer observation of classroom instruction	 School-wide data analysis Observation of collaborative teams 	(Chokshi, Ertle, Fernandez, & Yoshida, 2001; Lewis, 2003; The Education Trust, 2005) http://www.nsrfharmony.org/
Use of Common Assessments linked to CCSS and/or SLOs	 Teachers create and/or analyze assessments used across a grade level or course to determine student mastery of CCSS, achievement of SLOs, or to identify students in need of intervention, remediation, acceleration or enrichment Teachers collaboratively engage in data-based decision making to inform instruction within the classroom and allow movement within the multi-level system (e.g., use of formative and benchmark assessments focused on specific Common Core State Standards and discrete skills) □ Collaborative analysis of student work □ Academic conference □ Data-driven dialogue 	 School-wide data analysis Observation of collaborative teams 	(Bailey & Heritage, 2008; Love, 2002; Popham, 2008) http://www.nsrfharmony.org/

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