

## Teacher Quality Standard I

**Teachers demonstrate mastery of and pedagogical expertise in the content they teach. The elementary teacher is an expert in literacy and mathematics and is knowledgeable in all other content that he or she teaches (e.g., science, social studies, arts, physical education, or world languages). The secondary teacher has knowledge of literacy and mathematics and is an expert in his or her content endorsement area(s).**

*The key to distinguishing the knowledge base of teaching rests at the intersection of content and pedagogy.*

—L. S. Shulman

To teach all students according to today's standards, teachers need to understand subject matter deeply and flexibly so they can help students create useful cognitive maps, relate one idea to another, and address misconceptions. Teachers need to see how ideas connect across fields and to everyday life. This kind of understanding provides a foundation for pedagogical content knowledge that enables teachers to make ideas accessible to others. (Shulman, 1987)

Although Shulman's work dates back to the late 1980s, the importance of teacher content knowledge and pedagogical expertise has never been more important than it is now as teachers ensure students are college and career ready for the demands of the 21<sup>st</sup> century.

### Element D

**Teachers demonstrate knowledge of the content, central concepts, tools of inquiry, appropriate evidence-based instructional practices and specialized character of the disciplines being taught.**

*A teacher must believe in the value and interest of his subject as a doctor believes in health.*

—Gilbert Higher

Professional practices referenced under each element of the Rubric for Evaluating Colorado Teachers are cumulative. Therefore, for teachers to be proficient in demonstrating knowledge of the content they teach, they must break down concepts into manageable parts and provide explanations that are accurate, clear, concise, and comprehensible for students. This is done by using instructional materials that are accurate and appropriate for the learning objective along with a variety of strategies, explanations, and representations of the content to address student needs and to allow students to explore new ideas and theories.



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## ACCOMPLISHED AND EXEMPLARY RATING LEVELS

The impact of a proficient implementation of the professional practices referenced in Element D will be students who utilize a variety of inquiry tools and strategies that allow them to engage in more complex and challenging tasks and apply new learning to unique situations and different disciplines.

### PROFESSIONAL PRACTICES: STUDENTS:

- *Develop a variety of explanations and multiple representations of concepts.*
- *Build on the skills and knowledge learned in the classroom to engage in more complex concepts, ideas and theories.*

Use a variety of inquiry tools and strategies to:

- *Learn content.*
- *Understand central concepts.*
- *Answer complex questions.*
- *Problem solve.*

Routinely:

- *Choose challenging tasks and instructional materials.*
- *Apply newly learned content skills to unique situations and different disciplines.*
- *Discuss ideas and content that are intellectually challenging to them.*

### *Classroom Examples*

**Kindergarten science:** Students are working on Colorado Academic Standard 2: Life Science, Grade Level Expectation 1—Living things have characteristics and basic needs. *(Implements lesson plans based on: Colorado Academic Standards)*

Students are learning how scientists make observations using the five senses and scientific tools, such as a magnifying glass. In previous lessons, the teacher taught students about each of the five senses and provided activities for them to learn about various objects using their senses. They have learned about the special tools scientists use and had opportunities to observe objects using them. The teacher now connects this learning to a study of plants. Students are told they are going on a “field trip” around their school to collect leaves and look at different plants. *(Breaks down concepts into instructional parts and teaches each part using appropriate effective strategies and/or tools.)* As scientists do, they will use their senses to make observations. As the students observe various plants, the teacher asks the following questions to guide their observations and discoveries:

- In what part of the yard did we find this plant?



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- What do you notice about this plant that reminds you of another plant?
- How would you describe the plant (short/ tall, color, feel, smell)?
- What can we learn about the plants in our yard from our observations?

When students return to the classroom, the teacher provides magnifying glasses and plants like the ones from the school yard for students to continue their observations using the senses of touch, sight, and smell. *(Uses instructional materials that are accurate and appropriate for the lesson being taught.)* She continues to question students to lead them to discover that plants can have different types of leaves, sizes, colors, textures, and smells. *(Engages students in a variety of inquiry methods to explore new ideas and theories.)* Students make observations and draw a picture of the plant that includes as many details as they can. The teacher shows her drawing and explains to students how she is being careful to draw the many details she noticed.

During the day’s writing block, the teacher reminds students that it is important for scientists to communicate their findings with others. Acting as scientists, they write words to use in a simple sentence about their drawing of the plant. As she writes her sentence, the teacher explains that it tells something she learned about the plant and that the words they choose for their sentences should tell what they know or learned about the plant when they were observing and drawing it. She also shows students that her sentence uses a capital letter, has spaces between the words, and ends with a period. *(Provides explanations of content that are Accurate. Clear. Concise. Comprehensive.)* The lesson concludes with students sharing their drawing, words, and sentence with a peer. *(Employs a variety of instructional strategies to address student needs.)*

**Elementary reading, writing, and communicating:** Students are working on Colorado Academic Standard 2: Reading for All Purposes, Grade Level Expectation 1 –Comprehension and fluency matter when reading literary texts in a fluent way. *(Implements lesson plans based on: Colorado Academic Standards)*

Fourth-grade students are comparing and contrasting the adventures and experiences of characters in stories. Prior to this lesson, the teacher and students created charts of characters’ adventures and experiences as they read different texts. The teacher begins the lesson by having students preview the definitions of adventure, compare, and contrast. She models the expectations for student work and shares her thought process for how she compared and contrasted two characters’ adventures. *(Breaks down concepts into instructional parts and teaches each part using appropriate effective strategies and/or tools.)* She also refers to the previously created charts and demonstrates how to transfer the information to a Venn diagram. She charts the questions she asked herself as a support for students. *(Uses instructional materials that are accurate and appropriate for the lesson being taught. Employs a*



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*variety of instructional strategies to address student needs. Provides explanations of content that are Accurate. Clear. Concise. Comprehensive.)* She tells students they will use their Venn diagrams in the next day's lesson to analyze how the characters' adventures had an impact on the ending of each story.

**Middle school dance:** Students are working on Colorado Academic Standards 2, 3, and 4.

*Standard 2:* Create, Compose, and Choreograph, Grade Level Expectations 1 and 2--Correlation between choreographic intent and choreographic product; Create abstract movement using imagery

*Standard 3:* Historical and Cultural Context, Grade Level Expectation 2-- Observe and participate in a variety of dance forms from around the world

*Standard 4:* Reflect, Connect, and Respond, Grade Level Expectation 1--Communicate choreography through written, oral, and practical applications (*Implements lesson plans based on: Colorado Academic Standards*)

Eighth-grade students are learning about structure and form in dance compositions, and the teacher asks them to choreograph a well-structured short dance work. He draws upon students' working knowledge of structure and form in short poems with specific structures, such as a traditional Japanese Haiku by facilitating a workshop in which students select a Haiku and deconstruct its elements (5 syllables/7 syllables/5 syllables). (*Provides explanations of content that are: Accurate. Clear. Concise. Comprehensive.*) Then, students watch dance videos and performances that emulate poetic intent. (*Employs a variety of instructional strategies to address student needs.*) Students also research and discuss the various dance forms and choreographic techniques, as the teacher guides them in making concrete connections between the forms they find within poetry and the organization of a dance work (e.g., experimenting with a 5-step sequence, 7-step sequence, 5-step sequence to mirror the Haiku syllabic form). (*Uses a variety of explanations and multiple representations of concepts and ideas.*)

He next provides students with floor diagrams to use in researching common choreographic forms, such as ABA, Narrative, or Variation on a Theme. (*Uses instructional materials that are accurate and appropriate for the lesson being taught.*) Using improvisation, discussion, and reflection, students determine the most effective dance patterns to complement their Haiku's form. (*Breaks down concepts into instructional parts and teaches each part using appropriate, effective strategies and/or tools.*) Throughout the lesson, the teacher explicitly models proper technique, vocabulary, and artistry within dance sequences for students to follow and commit to memory. Once he determines students' level of mastery of learned dance sequences, the teacher guides them in using their learning to create a final dance performance that symbolizes the meaning and intent of their selected Haiku.

### *Planning/Coaching Questions*

- How will I break down concepts into instructional parts that support student learning of the content?
- How will I select accurate and appropriate instructional strategies and materials for each lesson?
- How will I ensure the instructional strategies used address student needs?
- How will I plan explanations of content that are accurate, clear, concise, and comprehensive?
- How will I decide what is the most important information to explain so students can master the content?
- How will I engage students in a variety of explanations and representations of concepts and ideas?
- How will I engage students in inquiry methods that allow them to explore new ideas and theories?



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