# : Teacher Quality Standard III

**Teachers plan and deliver effective instruction and create an environment that facilitates learning for their students.**

Study after study shows the single most important factor determining the quality of the education a child receives is the quality of the teacher. Quality teachers have knowledge of content, curriculum, and standards. They are able to plan and implement instructional strategies in an effective and purposeful manner that enhances student learning and independence. Research shows that when implemented effectively and purposefully, the professional practices referenced in Standard III can result in an environment in which all students can learn and succeed.

## Element E

**Teachers establish and communicate high expectations for all students and plan instruction that helps students develop critical-thinking and problem solving skills.**

- *Whether you think you can or think you can't — you are right.*
- *—Henry Ford*

Professional practices referenced under each element of the Rubric for Evaluating Colorado Teachers are cumulative. Therefore, for teachers to be proficient in application of the practices referenced under Element E, they must establish and communicate high expectations for all students that challenge students to learn to their greatest ability. Teachers must plan instruction that ensures students have opportunities to learn and apply critical-thinking and problem-solving skills which support them in meeting or exceeding performance expectations.

### Accomplished and Exemplary Rating Levels

The result of a proficient implementation of the professional practices referenced in Element E will be students who take ownership of their learning by setting learning objectives and monitoring their progress towards these objectives and the teacher's expectations. Students who take ownership of their learning are cognitively engaged in the learning process as evidenced by their application of higher-order thinking skills and desire to seek opportunities to test their problem-solving skills.

Professional Practices: Students:

- ***Help set their learning objectives.***
- ***Apply higher-order thinking and problem-solving skills to address challenging issues.***
- ***Monitor their progress toward achieving teacher's high expectations.***
- ***Seek opportunities to test their problem-solving and higher-order thinking skills.***

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## Classroom Examples

**Early childhood:** Preschool students are working on the Colorado Academic Standard 2: Geography, Grade Level Expectation 1--Develop spatial understanding, perspectives, and connections to the world. ***(Implements lesson plans based on: Colorado Academic Standards)***

At the beginning of a unit on transportation, the teacher introduces materials that students can use to build an airport, a train station, and/or highways. The teacher also introduces ways students can make a plan for what they will build. She models how she made a plan to build an airport that included pictures of different size blocks and toy airplanes. ***(Teaches higher-order thinking and problem-solving skills.)*** During center time, the teacher uses questioning to ask students about their plans:

- "Tell about your plan."
- "What are you building?"
- "Why did you use these blocks?"
- "Why are you building the airport tower so high?"

***The teacher then asks the students to compare their plans to the structure that was built to see if they are missing anything. If they added something to the structure, they can add it to their drawing. (Holds students accountable for their learning. Students apply higher-order thinking and problem-solving skills to address challenging issues.)***

*Refer to this external resource for additional information:*

http://www.highscope.org/file/EducationalPrograms/EarlyChildhood/el200802_epstein.pdf
Article: "An Early Start on Thinking," by Ann S. Epstein explains how to create an environment that encourages young children to think critically.

**Middle school mathematics:** Students are working on Colorado Academic Standard 4: Shape, Dimension, and Geometric Relationships, Grade Level Expectation 1: Modeling geometric figures and relationships leads to informal spatial reasoning and proof. ***(Implements lesson plans based on: Colorado Academic Standards)***

During a unit on geometry, the 7th-grade teacher invites architects and construction engineers to visit the classroom and explain how geometric shapes are used in the design and construction of buildings. Students will complete a project in which they apply their knowledge of shapes to various types of architecture and draw conclusions as to why the architect selected the geometric shapes utilized. They then will design a building or bridge using geometric shapes and explain their design in writing, based on their knowledge of geometry. ***(Sets student expectations at a level that challenges students. Incorporates critical thinking and problem-solving skills.)*** Prior to students beginning the project, the teacher provides an exemplar of a project she completed. She shares her thinking that led to her conclusions and building design. As she does this, she connects to what she knows about geometry and information obtained from the guest speakers. ***(Teaches higher-order thinking and problem-solving skills.)***

**Middle school science:** Students are working on Colorado Academic Standard 2: Life Science, Grade Level Expectation 3. Cells are the smallest unit of life that can function independently and perform all necessary functions of life. ***(Implements lesson plans based on: Colorado Academic Standards)***

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During a study of photosynthesis and respiration in plants, a 7th-grade science teacher asks questions that are scaffolded across various levels of Bloom's Taxonomy. The questions begin with basic recall of terms related to the parts of plants and their location and function. The questions progress to a higher level of the taxonomy where students compare and contrast the two processes and evaluate symbols that represent the processes. ***(Has high expectations for all students. Incorporates critical-thinking and problem-solving skills.)*** As questions become more challenging, the teacher requires students to write their responses prior to sharing them with a partner. As students write, wait time is provided for each student to process the question and develop a response. ***(Holds students accountable for their learning. Sets student expectations at a level that challenges students.)*** The lesson concludes with students creating their own symbols or illustrations for how photosynthesis and respiration in plants are connected. As students share their models with one another, their peers create questions to ask why they created the specific model and how it relates to the two processes. ***(Ensures that students perform at levels meeting or exceeding expectations.)***

**High school history:** Students are working on Colorado Academic Standard 1: History, Grade Level Expectation 2--Analyze key historical periods and patterns of change over time within and across nations and cultures. ***(Implements lesson plans based on: Colorado Academic Standards)***

Following a unit of study on the Civil Rights Movement, students write a biography on a significant figure of the movement. Students select the individual for their biography from a list the teacher provides. Each student must write a rationale for his or her choice before beginning their research. ***(Holds students accountable for their learning.)*** The teacher provides specific information to include in the biography but allows students to develop questions for what they would like to learn about the individual. ***(Students help set their learning objectives.)*** Both sets of questions are used to guide students' research. During class presentations, students generate questions to ask each other about the subject of their biographies. The teacher makes resources available for students to locate answers to these questions.

## *Planning/Coaching Questions*