

Looking For Standards In The Mathematics Classroom

The Common Core State Standards (CCSS) define eight standards for Students' Mathematical Practice. Not all standards will be evident every time, in every activity. You will find evidence of the standards that students are applying in the work and the talk of students.

see reverse

CCSS Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that students should develop. There are eight Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Principle	Evidence	
Logic connects sentences <i>Practices 1, 2, 3, 6</i>	Students say a second sentence (spontaneously or prompted by the teacher or another student) to explain their thinking and connect it to their first sentence.	Written explanations, Spoken explanations, Video
Reasoning develops when students develop viable arguments <i>Practices 1, 2, 3, 6, 7, 8</i>	Students talk about each other's thinking (not just their own).	Video, Written explanations, Spoken explanations
Students write explanations <i>Practices 1, 2, 3, 4</i>	Student work includes revisions, especially <i>revised</i> explanations and justifications.	Written explanations, Spoken explanations, Video
Academic success depends on academic language <i>Practices 3, 6</i>	Students use academic language in their explanations and discussions. Teachers prompt use by revoicing using academic language, acknowledging good student language and asking for more precision in language.	Written explanations, Spoken explanations, Video, Pictures, Performance task responses
ELLs produce language <i>Practices 1, 2, 3, 6</i>	English learners get time, encouragement, and support – from other students/teacher – in using academic language. Support includes scaffolds such as sentence frames, multiple choice oral responses, and reference to diagrams and other representations.	Written explanations, Spoken explanations, Video, Pictures
Equity	Which students are getting the teacher's attention? Is it to engage students' thinking? To give directions? Or, to correct behavior? (e.g., boys more than girls, the same student who always has the answer, the ELL students)	Video, Student interviews
Believing (that you can get better at math by learning) motivates	Interview students – Do you believe you can learn to be good at math by learning more math, by working hard to make sense of problems or do you think you cannot change how good at math you are?	Student interviews