Video Descriptions for an early version of Laws of Arithmetic Surfacing Student Errors

This video features an early version of the Formative Assessment Lesson, *Laws of Arithmetic.* It could be confusing to use this footage to illustrate the current version of the Lesson. Therefore the footage is used to illustrate the power of the formative assessment lessons in general.

Video 1: Teacher Surfaces Student Errors

Participants watch a video clip of the beginning of the lesson, where the teacher enacts the whole-class introduction to the lesson: *LOA*01 - Teacher surfaces student error (3 minutes).

Questions to consider after watching a video of a teacher facilitating the Whole Class Introduction for *Laws of Arithmetic*:

- What student mistakes does the video show?
- How prevalent is the error in the class—just a couple of students? Almost all students?
- If you were the teacher, how would you have responded?
- If you were the teacher's coach in the video, what would you advise him to do next?

Facilitate a whole room discussion on possible moves the teacher might make to address the students' misconceptions.

Video 2: Teacher Attempts to Move Student Learning Forward

Watch a short video clip of the teacher's first move to address the *Big Issue* that arose in the introduction: *LOA*02 - Students working on the collaborative activity (3 minutes).

While watching the video, participants record observations (teacher and student actions, questions, statements) specifically trying to capture questions and discussion and how the teacher facilitates student learning.

Questions to consider after watching video of the teacher mini-conferencing with students during the collaborative activity:

- What does the teacher do to move student learning forward?
- How effective does the teacher appear to be?
- How effective did the students' collaborative work appear to be in moving their own learning forward?

Participants discuss the teacher's first move.

Video 3: Teacher Gives Feedback to Students to Move their Learning Forward

Watch another short video clip of the teacher's second move to address the same Big Issue that arose in the introduction and record observations: *LOA03* – Teacher gives feedback to students (7 minutes).

While watching video participants record observations (teacher and student actions, questions, statements) specifically trying to capture questions and discussion and how the teacher facilitates student learning.

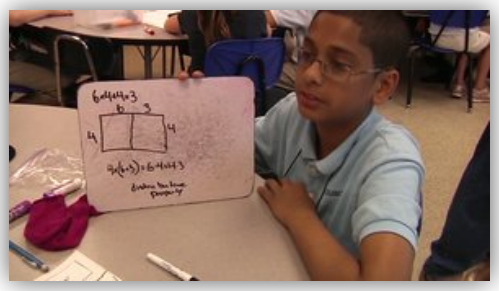
Questions to consider after watching a video of a teacher giving feedback to students:

- Which questions and discussions points did the teacher use to facilitate student learning?
- How did the teacher's prompting affect the students?
- Why did the teacher's actions have the effect they did?

Participants discuss the teacher's second move.

Video 4: Whole Class Discussion

Watch another short video clip of the teacher's third move to address the same Big Issue that arose in the Introduction to the Lesson and record observations: *LOA*04 - Whole class discussion (8 minutes).



While watching video participants record observations (teacher and student actions, questions, statements) specifically trying to capture questions and discussion and how the teacher facilitates student learning.

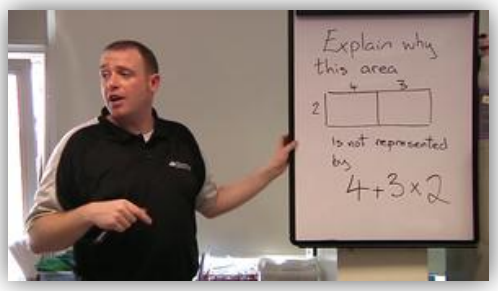
Questions to consider after watching a video of a teacher facilitating a Whole Class Discussion.

- How did the teacher facilitate student learning?
- How did the teacher's prompting affect the students?
- Why did the teacher's actions have the effect they did?

Participants discuss the teacher's third move.

Video 5: Teacher Gives More Feedback to Students to Move their Learning Forward

Watch another short video clip of the teacher's fourth move to address the same Big Issue: *LOA05* - Teacher Gives More Feedback (2 minutes).



Questions to consider after watching a video of a teacher providing feedback questions to the class.

- How did the teacher facilitate student learning?
- How did the teacher's feedback meet the criteria for feedback that you studied earlier?

Participants discuss the teacher's final move.

Video 6: A student's perspective

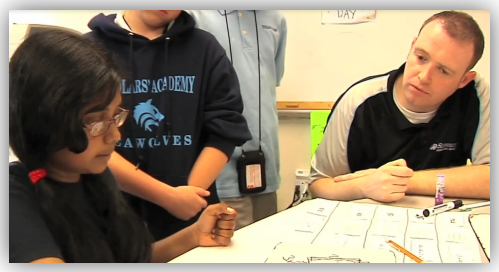
Watch a short video about a student's experiences with the *Laws of Arithmetic* lesson: *LOA06* - I Heard it From Myself - A Student Perspective (4 minutes).

Questions to consider after watching a video of a student discussing her experiences during the *Laws of Arithmetic* lesson:

- How did the student describe the teacher's strategy?
- Did the student convince you that her teacher should not have corrected her mistake?
- How will this video impact your teaching?

Video 7: Mini-conference

Watch a video about the teacher mini-conferencing with a group of students during the *Laws of Arithmetic* lesson: *LOA07-Laws of Arithmetic Mini Conference* (10 minutes).



Questions to consider:

- How did the teacher's feedback help move the students' thinking forward?
- How effective does the teacher appear to be?
- How did the students act as instructional resources for one another?

Video 8: A teacher's perspective

Watch a final short video about a teacher's experiences with the Laws of Arithmetic lesson. He discusses the challenges the students faced during the lesson and the misconceptions it revealed. He describes the "Pandora's box of misunderstandings" the collaborative activity revealed: *LOA08-* Laws of Arithmetic A Teacher Reflects on Enacting A Classroom Challenge (6 minutes).

Questions to consider:

- How did the teacher's feedback to students address their misconceptions??
- How effective does the teacher appear to be?

Video 9: Students reflect on this early version of Laws of Arithmetic

LOA-Laws of Arithmetic Students reflect on a Classroom Challenge

This short videos captures interviews with students and illustrates the importance of students acting as instructional resources for each other.