Video Supplement

Norms for Watching Video (if not using your own)

- Speak from the "I" perspective. For example: "If I could rewind the tape and ask students a question, I would ask…"
- Be inquisitive, not judgmental. For example: "I wonder what might happen if," instead of "the teachers should have…"
- Justify your ideas and conjectures based on the video clip, and not other parts of the lesson that you didn't see. For example: "I think that the student understands...because in the video she…"
- Focus on how what you learned from the video might help you implement this (or similar lessons) with your own students.

School Context

- School Type: Urban Public School
- School Demographic Information (approximate):
    - Students of color: 60%
    - Free and reduced lunch: 50%
    - English language learners: <5%
    - Students with special needs: 20%

Lesson Context

- Subject: 7th grade Mathematics
- Unit: Equations
- Number of students in class: 30
- Lesson duration: 90 minutes
- Prior preparation: Students have been introduced to variables and their use to represent equations in stories

Video Context

In the video, students from a group are working on the card sort activity that is an early part of the lesson, where they are attempting to match the six story cards to expressions. While there were originally going to be two groups at this table, a student being absent means that they formed a larger group.

Discussion Questions

Equitable Access to Mathematical Content: *Do I get to participate in meaningful mathematical learning? Can I hide or be ignored?*

1. **Who participates and how? Are any students ignored or "hidden" in the conversation?**
2. **As a teacher, what questions might we ask or moves might we make that encourage more meaningful participation towards important mathematical ideas by all students?**

Video Transcript

Legend		
T	Teacher	Per and within dialogue
S1 – S4	Students 1 - 4	Per and within dialogue
C	Class	Per and within dialogue
[ ]	Actions/Non-verbal	Dialogue
{{x}}	Sounds like	Dialogue
{{}}	Inaudible	Dialogue

1	S1:	0:02	You go now, S2.
2	S2:		Yay. Okay, so – “Strawberry chews cost 3 cents more than lollipops. Sarah pays 54 cents for two strawberry chews and four lollipops. What is the price of a strawberry chew?” So
3	S3:		That one I got 2x plus four times three minus x…
4	S1:		So x is the strawberry chew
5	S2:		Yeah
6	S1:		So x…
7	S2:	0:29	She paid 54 cents for two chews and four lollipops. And the chews cost three cents more than the lollipops. So would it be like..
8	S1:		Uh, it would be 2x, no no no no no
9	S4:		It would be this, right?
10	S1:		No, she bought two chews, look, see, she bought two chews, right?
11	S2:		Yeah
12	S1:		So that would be 2x, right?
13	S2:		Yeah
14	S4:	0:56	It has to be either one of these.
15	S1:		And then it would be…
16	S2:		Plus four

17	S1:		Yeah.
18	S2:		Equals fifty four. Wait no, that's too
19	S1:		But that's six. Oh, no no no no no no. Three cents more…. Four lollipops. So minus, right, no plus
20	S4:		With three that would be nine.
21	S3:		I think it's this one.
22	S2:		No it would be x
23	S1:		Six times three that's eighteen
24	S3:		Cause I got two x plus 4 times x minus three
25	S4:	1:31	I got two x plus four
26	S1:		Oh 54 is what you have for all of it
27	S4:		Times x plus four
28	S1:		So it has to equal 54.
29	S2		Wait wait wait. So minus six. Do minus six and then
30	S1		Wait I have a calculator. Here, I got it.
31	S2:		Do 54. Here I got it.
32	S1:		54 minus six
33	S2:	1:58	54 minus six
34	S4:		That's 48
35	S2:		48 divided by
36	S1:		2, no 4, 4

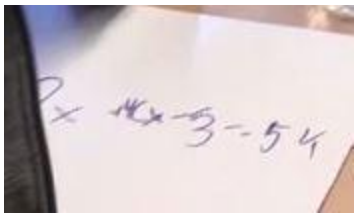

Figure 1. S3's whiteboard.

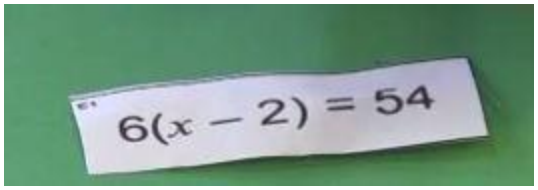

Figure 2. Paper that S3 and S4 are showing S1 and S2

37	S3:		I'm pretty sure it's this
38	S2:		12, so it would be 12
39	S1:		12 dollars each
40	S2:		12 cents
41	S1:		12 cents each
42	S4:		It'd be this one
43	S2:		No, for the lollipops
44	S3:		Guys
45	S2:		Because we just subtracted six.
46	S4:		It would be this one
47	S3:		Hello. Guys
48	S2:		It would be fifteen though.
49	S1:		No, but, the twelve would be for the two chews, no?
50	S4:	2:30	Yeah, so this.
51	S1:		But it wouldn't be for the lollipops.
52	S2:		I don't, I'm confused
53	S1:		No, look, so this is how I always do it. You put a 54
54	S4:		Cause each one is three cents
55	S1:		And x is the price of a strawberry chew, we don't know how much that is
56	S3:		Look, guys. This is the equation
57	S1:		Three cents more
58	S3:		That you could have gotten for that one. You simplify that two, two x plus four x minus 12 equals 54, and when you add those together you get 6x minus 12 equals 54, and where's that
59	S4:	3:09	This one

60 S3: Yeah, so

61 S1: Oh, it could be the distributive property, and then you simplify it

62 S4: Yeah

63 S3: If you do 6 times x minus two equals 54. You get six x minus 12 equals 54. They connect to the same thing.

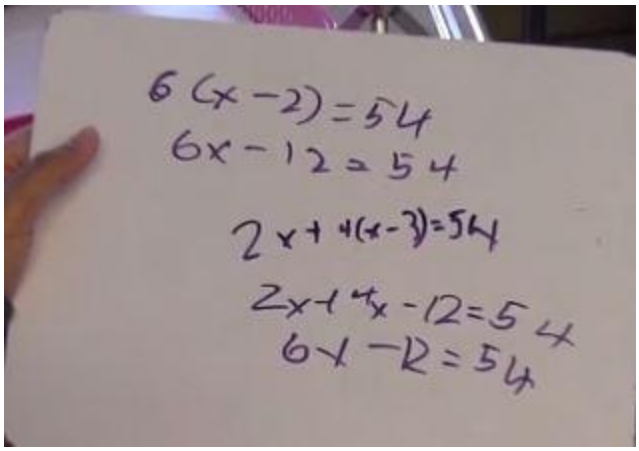

Figure 3. S3's work demonstrating equivalence

64 S2: 3:31 Whoa, okay. Alright,

65 S4: So there's that

66 S3: This one

67 S2: Yeah. Six x minus two

68 S4: I'll put this one here

69 S2: So this one would be with three

70 S1: And that one would be four. Why don't you do four now, since S3 did