

<b>Lesson:</b>	Division Lesson, Second Grade		
<b>Teacher:</b>	Ms. Sonia Cosio		
<b>Video URL:</b>	<a href="http://education.ucsc.edu/ellisa/case_studies/cosio-division-lesson.html">http://education.ucsc.edu/ellisa/case_studies/cosio-division-lesson.html</a>		
<b>Clip:</b>	Board math prior to the math lesson		
<b>Abbreviations:</b>	T = Teacher	S = Student	Ss = Students
			[???] Unclear

**Transcript**

1  
2 [00:00:05]  
3 T: Ready for some math?  
4 Ss: Yes!  
5 T: Show me how respectful you can—I know—show me how respectfully you can sit.  
6 Wonderful. We have my calendar helper. Okay, here we go. We’re still in the month of January  
7 and she’s putting the number thirty one and that flag belongs to the country of...?  
8 Ss: Spain!  
9 T: Spain. I like how you were looking at those letters and you saw the “a” and the “i”, making  
10 the sound...  
11 Ss: Aaaa...  
12 T: A. Yes. Spain. Okay. So how many days can a month bring?  
13 Ss: Thirty! Thirty one!  
14 T: Thirty or thirty one. But there is one month that only brings 28...  
15 Ss: February!  
16 T: February. We’ll get to see that as we start our new month tomorrow.  
17 Ss: Yay!  
18 T: Yes, now by looking at the calendar, tell me—and I need to think also—which date, *date*, and  
19 I mean a date that means a number, which date is the, one of these numbers again, which date is  
20 the third? Kind of like the number three? But it’s a third. First...second...the third...Third  
21 Wednesday of the month of January?  
22 [00:01:30]  
23 T: Don’t scream it out loud. I love to see those hands up. I have to think myself, okay? Okay.  
24 Turn to your partner. Whisper that. What number is that? What date is that?  
25 S: Sixteen. The third Wednesday... [*students talking to each other*]  
26 T: Five, four, three, two, one...zero! You know what I noticed of you? Today? That uh, you’re  
27 not only turning around talking to your talking partner, but also you were speaking in complete  
28 sentences. That was very nice! Good English! So the third Wednesday in the month of  
29 January...think it! Think it! Say it!  
30 Ss: Sixteen!  
31 [00:02:21]  
32 T: The sixteenth. Very quickly, the next one. Give me the date of the second—look at my  
33 fingers—second, not the first, but the second Saturday in the month of January. What is the date?  
34 Think it! Say it!  
35 Ss: The twelfth.  
36 T: The twelfth. Okay, and the last one, give me the...fourth...oh that’s my favorite one (???)  
37 that one...fourth Sunday. Give me the date of the fourth Sunday in the month of January. Ready?  
38 Here we go. Think it! Say it!  
39 Ss: The 27<sup>th</sup>  
40 T: The 27<sup>th</sup>. Good job! Alright. Um, calendar helper, we’re ready for another day in school.

41 S: Another day! What are we going to do?  
42 [00:03:22]  
43 T: Down. On your knees please? There. How many days have we been in school?  
44 Ss: We have been in school for one hundred days.  
45 T: For one hundred days.  
46 S: [???]—do this. If there's fifty then...[???] make a hundred.  
47 T: So that...we could! You're right. Absolutely right. Thank you, Justin. Justin brought two  
48 coins. This one is fifty and this is another fifty. They're half dollar coins. Half dollar coins. Yes.  
49 So fifty plus fifty?  
50 Ss: One hundred.  
51 [00:04:07]  
52 T: One hundred. And one hundred what?  
53 S: One hundred cents!  
54 T: One hundred cents 'cause I might...equals?  
55 Ss: A dollar!  
56 T: A dollar. What we can do is we can just put one more penny there for now...but I like your  
57 idea, Justin. And these two coins, we are going to change them...exchange them...I know this  
58 lesson will take a little bit longer before we have to—  
59 Ss: *[murmuring to one another]* ...a real one?  
60 T: It's not real. It looks real...almost real, but it's not, it's not the real thing.  
61 S: You can tell it's fake because there's an owl right there.  
62 T: Yes, yes. So we're going to exchange those two 50 dollar coins—50 cents coins! 50 cent  
63 coins. For one dollar bill. We're going to put it here. Now because...good I like these coins.  
64 Justin, can I just set them aside because tomorrow we're going to have more time to work more  
65 with the coins because we have to exchange. Now those coins are going to go away and we're  
66 going—that dollar bill is going to stay there and um...because tomorrow we start a new month.  
67 [00:05:22]  
68 T: Justin, is it okay if I can just hold onto these two coins and I leave them up here? Just here for  
69 now. For now. I would like to have a better place for them. I have an idea. How about if I  
70 put...put it here? What do you think? Makes sense?  
71 S: Here?  
72 T: But we're going to do something else over here.  
73 Ss: *[students talking]*  
74 T: One here. And this one?  
75 Ss: A hundred.  
76 T: Uh I think it is time to work. We have to remove all the—all the rest of the coins, Brenda.  
77 Let's remove all the coins. I'll help you. Remove, remove, remove, remove, remove.  
78 S: *[students talking]* I know—  
79 T: Remove all.  
80 S: So you made two dollars?  
81 T: No, we made one.  
82 S: Well it's 'cause—  
83 T: I know what you mean. Yes, yes. I'm just going to put this one here. You're going to take  
84 those two also...those three, Brenda.  
85 S: I have a number [???] with one hundred...a division.  
86 T: Already? Okay.

87 S: One hundred divided by two, equals fifty.  
88 [00:06:26]  
89 T: Interesting. Yes, you got it right. You keep it for later also. Okay, Brenda, let's put the coins  
90 away. And, um, tomorrow when we take care of our one hundred chart, we will do the...taking  
91 those away...so we can just keep that one dollar bill up there and we will start with more  
92 numbers because is the school year over now? Are we done with second grade?  
93 Ss: No  
94 T: We still have more days to come.  
95 S: One hundred and eighty days.  
96 T: That's right. One hundred and eighty...eighty more days. Thank you, Brenda. Okay, eighty.  
97 Yes, we will talk more about it tomorrow.  
98 Ss: A hundred eighty more days. | I thought you said eight because that would— [*students*  
99 *talking*]  
100 [00:07:14]  
101 T: In the number one hundred...I have a question for you now. In the number one hundred, how  
102 many digits do- would you see? How many digits would you see?  
103 Ss: Three!  
104 T: Three digits. We have a number one and then? Followed by two...zeros. Followed by two  
105 zeros so now we're moving into those three digit numbers. Okay...um...I think we have some  
106 time to do a little bit of board math. We may not have time to do the whole board, but I think we  
107 can do some number sense and some other [???] functions.  
108 S: [???] [*student asks a question*]  
109 T: Could you hold it please? Okay so...reposition yourselves for our board math.  
110 Reposition...what does that mean? To reposition?  
111 S: Position again!  
112 T: Position your bodies again. Like change positions. Put them in a different way.  
113 [00:08:12]  
114 T: A little bit backwards, please. Poquito pas atras. So I don't trip. Alexa find a good spot.  
115 Somebody's ready! Somebody's ready to sing. Let me get my marker. I count on you. Your  
116 voice is very important Richard, your voice is very important. Ready? Clear up your throats!  
117 Ss: [*students engage in singing a tune/jingle*] There is a time in the day when we do board math!  
118 B...o...a...r...d...b...o...a...r...d... b...o...a...r...d and board math is our name [???] lots of  
119 problems to be solved when we do board  
120 math...b...o...a...r...d...b...o...a...r...d...b...o...a...r...d...and board math was our name-oh!  
121 Number sense...[???]...one digit is in the hundred's place...  
122 [00:09:05]  
123 T: We have a bigger number there...that number is getting ready for third grade! The number is  
124 three thousand, nine hundred and forty two. Let's read that number again emphasizing the  
125 hundreds. Ready? Think it! Say it.  
126 T+Ss: Three thousand and nine hundred and forty two.  
127 T: I think we need to say it one more time because we got confused a little bit. I'll help you. One  
128 more time.  
129 T+Ss: Three thousand and nine hundred and forty two.  
130 T: So which digit is in the hundreds place? Think it. Are you ready? Say it!  
131 Ss: Nine!  
132 T: So far...

133 Ss: So good!  
134 T: Keep going.  
135 Ss: One hundred is shown—  
136 T+Ss: One hundred, two hundred, three hundred...three hundred and ten...three hundred and  
137 twenty...three hundred and thirty...three hundred and forty...  
138 Ss: forty...three hundred and fifty...three hundred and fifty one...three hundred and fifty  
139 two...three hundred and fifty three...  
140 T+Ss: Three hundred and fifty four...three hundred and fifty five!  
141 T: And the number is...  
142 Ss: Three hundred and fifty five!  
143 T: Are you sure?  
144 [00:10:34]  
145 Ss: Yes ma'am.  
146 T: Really?  
147 Ss: Absolutely.  
148 T: Now you convince me. So far...?  
149 Ss: So good!  
150 T: One point right there. Keep going!  
151 Ss: Operations! Solve...  
152 T+Ss: Three hundred and ninety four plus fifty seven.  
153 T: What do we do?  
154 Ss: *[humming a tune]* Look at the symbol. We're going to add. Open the curtains. What do you  
155 see? Four plus seven equals...  
156 T: Hm...let's see. Save it in our heads. Seven...show me four. Ready? Go!  
157 T+Ss: Seven,  
158 Ss: eight, nine, ten, eleven.  
159 T: Hold it, hold it, hold it!  
160 [00:11:16]  
161 Ss: One on the bottom and one on the top.  
162 T: What do we have now?  
163 Ss: One plus nine plus five.  
164 T: Hm...hold on. Do you see two numbers that when you put them together, that when you put  
165 them together, they add up to ten?  
166 S: Yeah  
167 T: Yes? Do you see that? What do we have?  
168 Ss: Nine.  
169 T: Uh ah ah uh.  
170 T+Ss: One plus nine equals ten. Ten plus five equals fifteen.  
171 Ss: Five on the bottom and one on the top.  
172 T: Are we done?  
173 Ss: Not yet! One plus three equals four. And the answer is four hundred and fifty one.  
174 T: Beautifully done! Beautifully done! Wait a second. Beautifully...what did I just say? What  
175 does that mean?  
176 Ss: [???)  
177 T: That means in a...  
178 T+Ss: beautiful way!

179 [00:12:18]  
180 T: Okay. We're not finished! Let's keep going.  
181 Ss: *[students talking]*  
182 T: Again. Erase, erase, erase. Again.  
183 Ss: Six hundred and ninety three minus four hundred and sixteen...  
184 T: Sixteen. Again. Take a look at this.  
185 Ss: Look at the symbol. We're going to subtract. Open the curtains, what do you see? Three  
186 minus six...  
187 T: Show me three. Show me the three, the three. Take away the six. Can't do it. So? The three's  
188 going to ask for help.  
189 Ss: Help! Can you help me?  
190 T: And then the nine is going to say?  
191 T+Ss: Sure!  
192 T: So the three becomes a...?  
193 Ss: A thirteen.  
194 T: And the nine becomes...?  
195 Ss: An eight!  
196 T: Becomes an eight. Now we're ready.  
197 [00:13:17]  
198 T+Ss: Thirteen minus six.  
199 Ss: Six in your head and  
200 T: count all the way up until  
201 T+Ss: thirteen.  
202 T: No more...  
203 Ss: No less!  
204 T: Okay. Let's do it!  
205 Ss: Six...seven...eight...nine...ten...eleven...twelve...thirteen. The answer is seven.  
206 T: No, not answer. The number is...seven.Number is seven.Yes. Are we done?  
207 T+Ss: Not yet!  
208 Ss: Eight minus one equals seven.  
209 T: Pretty soon you don't need your fingers, but I need to help you just in case...some of you still  
210 need help with fingers. Eight. Can you take away one?  
211 Ss: Yes!  
212 T: Oh yes. Abso...?  
213 Ss: lutely!  
214 T: Here we go. And the number is...?  
215 Ss: Seven!  
216 S: Because one plus seven equals eight!  
217 T: Oh Janelle, there you go! Because seven plus one equals eight! You're doing just the opposite.  
218 Because the opposite of subtraction is...?  
219 T+Ss: Addition!  
220 [00:14:19]  
221 T: Yes?  
222 S: That was in our homework last time.  
223 T: That was...you remembered! You're making those connections. I love it! Good job!  
224 S: Absolutely. And then there's a kind of...*[stops speaking]*

225 T: A kind of...?  
226 S: Absolutely...and it's an...  
227 T: It's an absolute way. Yeah, it's very positive in a good way. And we're not done!  
228 Ss: Six minus four equals two.  
229 T: Because?  
230 Ss: Because four plus two equals six.  
231 T: Okay, so far...  
232 Ss: So good!  
233 T: Okay, one more section! One more section. Here we go.  
234 [00:15:02]  
235 T+Ss: Fractions and decimals! Sarah has three nickels and five dimes. How much change does  
236 she have?  
237 T: Hm...okay. We have a problem there. We read it. What would be the second step?  
238 S: Reread it!  
239 T: What would the second step?  
240 Ss: Reread it!  
241 T: Reread it. Reread it. Does that mean in a read way?  
242 Ss: No.  
243 T: No! Makes no sense. Does it mean over read it?  
244 Ss: Yes  
245 T: Over read it?  
246 Ss: No!  
247 T: No!  
248 T+Ss: Reread it to read it again.  
249 T: This time, let's read it calmly and paying attention to what the problem is, okay? Okay, here  
250 we go.  
251 T+Ss: Sarah has three nickels.  
252 T: Three nickels. I'm going to start drawing my pictures here. Three nickels. There we go. Three  
253 nickels.  
254 T+Ss: And five dimes.  
255 T: One...help me count.  
256 Ss: One...two...three...four...five!  
257 T: Five. That's it. Now, um, before I move any further, I need to start giving them some value  
258 because normally I see here, one, two, three, four, five, six, seven, eight...five plus three equals  
259 eight. And...but there's...we're talking about money.  
260 Ss: Money!  
261 T: And those coins have a...?  
262 T+Ss: Value!  
263 [00:16:35]  
264 T: So Sarah has three nickels. Here are the three nickels. What's the value for each nickel? Turn  
265 to a partner. Turn to a partner. What's the value for one nickel? Turn around. Turn! Look at  
266 somebody! Look for somebodyWhat's the value? One nickel. What is one nickel?  
267 S: One nickel? One nickel is five cents.  
268 T: That's it. You got it.  
269 Ss: *[students talking amongst themselves]*  
270 T: One nickel; what is what nickel?

271 Ss: Five cents.  
272 T: Yes! Five, four, three, two, one! Somehow...I said the answer right? So one nickel means...?  
273 Ss: Five cents!  
274 [00:17:06]  
275 T: Oh, I need to make my numbers clearly. I need to write them clearly. Otherwise we don't  
276 understand. And here we have here, yes, five dimes. So what's the value for a dime?  
277 Ss: Ten!  
278 T: Ten...?  
279 Ss: Cents!  
280 T: Oh, Ms. Cosio, I need to write clearly...there we go. Ten, ten, ten, ten, ten. Here we go. Now  
281 we have to underline the...  
282 T+Ss: the question! How much change does she have?  
283 T: Oh! Look at the world I find here. Look at this word.  
284 Ss: Change...  
285 T: Change. Does it mean...change like to change clothes? Or to change something?  
286 Ss: No!  
287 T: What are they talking about? Change?  
288 Ss: Change as in money!  
289 S: The money of change!  
290 T: Change...do they mean this kind of change?  
291 S: No...it means...yeah like that change!  
292 S: But with circles.  
293 Ss: Dimes  
294 T: This kind of change. So...what is a change? One word, different meanings.  
295 Ss: Multiple meanings!  
296 T: Multiple meaning word! You guys are so good at this! Okay. Now it's time to work now with  
297 numbers. So I start with the ones that have the biggest value. In this case, the tens. Do we know  
298 how to count by tens?  
299 Ss: Yes!  
300 [00:18:32]  
301 T: Do we know how to count by fives?  
302 Ss: Yes!  
303 T: Oh yes! Absolutely. Here we go!  
304 Ss: Ten, twenty, thirty, forty, fifty.  
305 T: Hold it. Fifty. Plus five. Fifty five.  
306 T+Ss: Plus five, sixty. Plus five, sixty five.  
307 T: So how much change does Sarah have?  
308 Ss: Sixty five cents!  
309 T: Sixty five cents. Oh, can I write it in a different way?  
310 Ss: Yeah  
311 T: Yes. I don't like it when...when I make, when I write...kind of dirty. Let's see. 65. And okay.  
312 I'm done. Really? I'm done. What's missing Richard?  
313 S: The symbol!  
314 T: The symbol! For what?  
315 [00:19:21]  
316 Ss: The dollar sign.

317 T: The dollar sign?  
318 Ss: The dollar sign. | The cents!  
319 T: Oh no...no, no, no, no, no... zero here for dollars. Yes, that's it. Does this look right?  
320 T+Ss: Yes!  
321 S: Why did you put a little dot?  
322 T: Because this means...this means the dollars.  
323 S: What about the little dot next to the dollar...  
324 T: Oh it's not that necessary. I can erase it. It's not that necessary. Okay, I think it is time to  
325 move on with our lesson.  
326 [00:20:10]