**ADVANCING OUT-OF-SCHOOL LEARNING IN MATHEMATICS AND ENGINEERING (AOLME) PROJECT**

**SESSION TRANSCRIPT**

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**Video title**: G-C3L1P-Feb28-D-Ivonne\_q2\_03-05

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**Folder in which the video is included/stored:** AOLME Drive: Cohort 3, Level 1, Polk, Feb 28

**Students Involved:** Kassandra, Maya, Seraly

**Facilitator:** Ivonne

**Activity/Topic:**

**Languages used**: Spanish and English

**Author:**

Transcript:

**0:00 Video starts.**

Kassandra: so esta aca? [*so this one?*] yeah okay, so what makes this game right? okay the number guessing game, to make this game work we need to think about inverse operations, why do we need inverse operations for the number guessing game to work? so why do you guys think that?

Facilitator: operaciones inversas? *[inverse operations]*

Kassandra: yeah

Facilitator: so voy a jugar a que yo soy la computadora *[so I’m going to play that I am the computer]* shut up I’m the computer

[external man is fixing the camera]

External man: siri

Facilitator: siri, entonces quien quiere jugar contra mi? (*so then who wants to play against me?*)

Kassandra: Maya

Facilitator: okay piensa en un numero, multiplicalo por cinco… ay hubiera eligido un numero mas chico… y sumale dos, cual es la respuesta? (*okay think about a number, multiply it by five… I should’ve pick a smaller number… and then add two, what is your answer?)*

Maya: 52

Facilitator: okay I’m the computer and I only have 52, que tengo que hacer para adivinar el numero original de ella? (*what do I have to do to guess her original number?)* [starts writing on the board]

Kassandra: subtract o tu vas (*you go)*

Maya: subtract

Facilitator: y luego? (*and after*)

Maya: divide by, what was it? five?

Facilitator: yes and the answer is?

Maya: ten

Facilitator: is that your number? then I guess it… so what I did, like she, what I told her to do was multiply this instead of dividing and then I told her to add instead of subtracting so if I’m doing the opposite what am I doing then?

Kassandra: what is it call?

Facilitator: inverse operation

Kassandra: yeah inverse operation

Facilitator: so yeah that is what we were doing on our minds, but we don’t think about the name or something, but you guys knew you all knew that I have to substract and then divide, because she first multiplied and she first added so we have to do the inverse to know the answer so that is basically an inverse operation

Kassandra: so inverse just means opposite

Facilitator: yes that is what we been doing with the computer

Kassandra: 2. inverse operation, multiplication is inverse to the image, consider the following (unintelligible) giving number X, which means a number, multiply by 2 and divide by 2

Facilitator: okay so now you can play that game so who wants to guess and who wants to, and you are gonna think of a number [points student 3]

Maya: okay think of a number [to student 3]

Student 3: so ya

Kassandra multiply by 2, now divide by 2

Student 3: wait… mm yeah

Maya: what is your answer?

Kassandra: no, esperame, esperame, te dije algo mal (*no, wait, wait, I said something wrong*) is it right lo que le dije? [to Maya] *(is it right what I said?)*

Maya: okay divide by 2, was it suppose to say?

Facilitator: pues es la misma porque esta multiplicando y dividiendo, pues no importa, no importa lo que digas, nomas lo unico que importa es que la persona que vaya a adivinar haga exactamente lo opuesto, no importa el orden o si se suma o resta *(well it is the same because you are multiplying and dividing, but it doesn’t matter, it doesn’t matter what you say cause the only thing that matters is that the person that has to guess does the exact oposite, the order doesn’t matter or if you add or subtract)*

Maya: (unintelligible phrase) right?

Kassandra: yeah and then add by 2… okay so restart, entonces que ponemos?(*so then what do we put?)* multiply by 2, then add 2 and then subtract… no si esta bien, (*no it’s okay)* okay let me read this really quick

Facilitator: so yeah multiply by 2 and divide by 2 and what was the answer?

Maya: six

Facilitator: and what do you need to do to guess the number

Maya: is it multiply primero? (*first)*

Facilitator: aja

Maya: divide it by 2 cause 3 times 2

Facilitator: why is it giving you the same number? like she thought of 6 and the answer by multiplying by 2 and dividing by 2 is also 6

Kassandra: cause they are… como se dice? (*how do you say it)* opposites ones and they are like in the same, they are telling you the same

Facilitator: exactly

**5:28**

Kassandra: why do we want to get rid of the values we enter? osea como ya skip this so like que dijiste? [to student 3] (*so like we can skip this so like, what did you say?)*

Student 3: no me acuerdo *(I don’t remember)*

Maya: six

Student 3: yeah

Kassandra: pero lo primero que le dijiste (*but the first thing you tell her)*

Facilitator: divide it by 2

Kassandra: yes yes divide it by 2, why do you guys think you wanna get rid of that? so como la vez que dijiste multiplication and then addition y luego va a ser division and subtraction, it’s like getting rid of going to the number(*so like the time you said multiplication and then addition, and then it’s going to be division and subtraction, it’s like getting rid of going to the number),* what is the inverse operation of addition?

Maya: subtraction

Kassandra: (unintelligible)

Maya: what?

Kassandra: (unintelligible)

Facilitator: I think it’s pretty straight forward so you can just skip that and go forward

Kassandra: it’s pretty straight forward… okay… what will this game do if any number add three and subtract it

Maya: should we do it?

Student 3: she will do it [points at Kassandra]

Kassandra: okay so Maya give a number

Maya: ten

Kassandra: okay so, ay te dije mal (*oh I told you wrong*) so think of a number, sorry I keep forgetting

Facilitator: pero no le digas (*but don’t tell her*) don’t tell her the answer

Kassandra: and then add three

Maya: wait

Kassandra: subtract three.. what is the answer?

Facilitator: eight

Maya: no, 2

Kassandra: how is that possible?

Facilitator: I got lost

Kassandra: me too [uses her fingers to count]

Facilitator: so you say think of a number and then what did you say?

Kassandra: add three

Facilitator: add three, and then?

Kassandra: and then subtract three

Facilitator: subtract three so what is the answer? of adding three and then substracting it

Kassandra: I don’t get that so

Facilitator: so 2+3?

Maya: 5

Kassadra: and then 3

Facilitator: and then you substract 3

Maya: 2

Facilitator: 3.. yeah there you go, it gives you the same number

Kassandra: oh okay… oh okay so it just switches them okay, I get it

Facilitator: so what does number, what does part 4?

Kassandra: what do you mean? oh part 4

Maya: part 4

Kassandra: designing program, in your team mate number guessing game, take turns typing in the code, save your work, use the code in cell 2.3 to start your game, then ask someone from another team to play your game… so oh like this one

Facilitator: is that 2.3?

Kassandra: yeah, so this is the game right? so we are just creating it, so what is your name? do you guys wanna change it to something else?

Maya: that is her

Kassandra: but like both of you, think of something together like what do you guys wanted to be like, what is your favorite color, your favorite animal, your favorite food?

Student 3: I dont know

Kassandra: just like type something

Maya: like potato

Student 3: potato

Kassandra: like what is your favorite food then

Maya: oh like pizza

Kassandra: so like no, I’m asking you guys to type what is your favorite food, do you guys get it?

Facilitator: another question

Kassandra: another question

Maya: oh yeah

Kassandra: so just type

Maya: wait do I erase that?

Kassadra: yeah, what is your and then favorite food, mmm take off the cap and then the question mark, so I think this took a long time on this one, I struggle on that

**10:24**

Facilitator: it’s okay, we can actually run it and see how it like ends up

Kassandra: okay

Facilitator: what is your favorite food?

Kassandra: just type

Facilitator: (unnintelligible)

Kassandra: I think we should change, I don’t want it to be that hard but yeah think about it… so now is doing the same thing as it did last time so now we could change it, we could put

Facilitator: yes, but like play it all and see if it’s exactly the same, so enter, multiply by 2, hit enter, 3, give me the result, okay

Kassandra: the number is to onion press pizza

Facilitator: so now you see what you can change, because it is like… taking the answer and thinking that is your name

Kassandra: so… how can we can change? oh something to being not weird we can put… what is your favorite animal? right? cause it’s like (unintelligible) press lion… I don’t know

Facilitator: you can actually put whatever, it’s just gonna be more funny or more senseless… I don’t know

Maya: yeah and then do I do this?

Facilitator: yeah but if you say what is your favorite animal and then what is the next line? like the one that it says high?

Kassandra: high

Facilitator: the one that says hello, so it’s gonna say hello in the name of the animal

so we can change the name

Facilitator: yeah you can say oh that is a nice animal or I like it too or something like that

Kassandra: hello and then change the name for like that is a cool animal or something… just make something up

Facilitator: and then after that it’s gonna be Seraily, is it Seraily?

Seraily: yes

Facilitator: oh I pronounced, okay it’s gonna be your turn to make something up

Maya: where?

Kassandra: so just run it or are we still making something up?

Facilitator: sure

Kassandra: just run it

Facilitator: something happen there

Kassandra: so dale (*go*)… (unintelligible)

Facilitator: so I can see what is the difference between this and this

Kassandra: oh you put animals

Facilitator: actually you have to

Maya: I have to put the two lines at the time

Facilitator: yeah, can we go up please?… up, so say hello with animal, so I think with animal should be here because this is still name, like this is the variable name so this should be here and then cool animal should be here

Kassandra: so over here put cool animal and then [points at the computer]

Facilitator: we can even erase everything and just put cool animal

Seraly: like this?

Facilitator: yeah yeah just erase it and put cool animal, erase it

Seraly: and that one?

Facilitator: yeah this one too, and this cause we already have this one at the end, yeah that is… oh no this one this one at the end

Seraly: this one?

Facilitator: yeah cause we only need a pair of these ones… Yeah that is fine and now we can save

Seraly: with name?

Facilitator: no, actually you can put cool animal

Kassandra: I laugh because of what I said

Facilitator: so we can run it, and now you can press… type your favorite animal. So it’s printing hello cool animal, so now if you want to change it, you can do it

**15:40**

Kassandra: presente (*present*)

Maya: you have a number right?

Seraly: No

Maya: give me a number and then multiply by 2

Seraly: okay

Maya: enter

Seraly: so I type the number?

Maya: no, enter and then type the number

Facilitator: you got it girls… aren’t you impress then that? okay so I think you guys think you got it, do you think you wanna go through it a little more and wanna change anything or do you just wanna skip to the next part?

Kassandra: skip to the next part

Facilitator: yeah I think so too, let’s go for session three yay

Kassandra: and we are gonna have to go to (unintelligible) that thing?

Facilitator: yeah so just read the instructions

Kassandra: okay so go to terminal, that thing

Facilitator: oh yeah, but since it asks us to go to jupiter notebook we already are in Jupiter notebook so

Kassandra: so we are just gonna go to session three

Facilitator: yes so you already gotta it, that is too woah

Kassandra: how do you go to session three? I forgot

Facilitator: So file

Kassandra: which one is file?

Facilitator: the one that says file, up

Maya: up [points to the computer]

Facilitator: mmm open, and session three should be right there

Kassandra: session three?

Facilitator: [to external man walking by] oh you know we are session three in the computer

External man: here [brings some materials], there you are

Facilitator: oh that is what session three was

Kassandra: okay so we open that right?, run it and analyze in cells A…A, B, and C there is some phytons code, pay attention to the code in the cell and run them, what happens when you run each cell? when you change some of the numbers in the code and run it what happens?… right here right?

Facilitator: mm ha [saying yes]

Kassandra: okay so, she runs it?

Facilitator: so we have to restart it, so click on cell A… yeah and then restart it cause we are just looking at the answer right there… so… okay and run it again and see what happens… Okay it’s one and two… so now we need to know what happen

Kassandra: so what you guys think happen? it just went four and then went one

Maya: I did not see

Kassandra: me neither

Facilitator: so whats… we are gonna read I think line by line, can you read like start on I, so what is I?

Kassandra: which one, these one?

Facilitator: no, like the code

**19:58**

Kassandra: oh okay, so I equals 1

Facilitator: and then what is says?

Kassandra: parentisis, right??

Facilitator: so why is it printing a word

Kassandra: like what

Facilitator: you see that… so here this is the answer, right 1 and 2? it’s printing I so what it’s printing?

Kassandra: I

Facilitator: and I is equals?

Kassandra: to 1

Facilitator: so that is why it’s printing 1 and then?

Kassandra: so that is like saying I equals 1 and 1 multiply is 2

Facilitator: exactly and here even though I is the same letter it’s change it’s value, this is like the old I and this is new I and here is printing the new I which is 2

Kassandra: okay, you understand right?

Facilitator: so let’s go, what is it cell B then? and now we run it , who wants to run it?

Kassandra: Maya

Facilitator: Maya

Kassandra: so the same thing happen right? now we have… like last time

Facilitator: yeah cause it’s not only I now, it’s starts I and then it’s I, so what is happening?

Maya: it’s printing it again?

Facilitator: I’m sorry?

Maya: it’s printing it again?

Facilitator: yes, it’s printing it again because it’s printing three things, because we see the command printing three times but it’s only printing I so what is changing?

Kassandra: so it starts at I right?

Facilitator: yes, it starts at I

Kassandra: and step is one, so now all that here says is 1+step I, so why do you think guys that is?

Maya: so 1+

Kassandra: so 1+1 cause that means 1 and the start is one, so 1+1 pretty much cause that would mean that is 2, and the 1 is up here so that would mean that is this one

Maya: and then is doing it again and is 1+1

Facilitator: but it’s not 1 anymore cause that is the old one

Kassandra: I and I, but how did it get through

Maya: maybe because there is three prints

Facilitator: exactly yes, so it’s printing old I, the other old I and the new one… Okay I think we can go to cell C, I need someone to read with the comments like when it’s starting with the comments with the (unintelligible) like scroll down a little, up

Kassandra: all these?

Facilitator: yeah so cell C, let’s count (unintelligible) so you are gonna take turns and read line by line

**End of video.**