Transcript - Music - Activity 5

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SUMMARY KEYWORDS

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Hello, and welcome to this fifth and final see CS First with Google Canada co-taught lesson with moi, Joel and I'll be here learning alongside with you for the last time today. Well, let's get to it. This is going to be a really fun one where we'll get to take everything that we've learned from music and from coding, and then we'll jam it all together into one really cool final project. So why don't we get right to it? What today is activity you ask? Well, it's a music video. What?! Also, we'll get to create procedures. So creating our own blocks that contain some more blocks underneath. What are those more we'll get to in just a minute.

So what's on today's menu? For your music video number one, you will actually learn to create your own procedure blocks and to automate and actually make your code a lot simpler. What that actually means is that once we create a block, nested or hidden you our own block will be maybe 5, 10, 20 lines of code, so that instead of having all those lines of code will have that one block with that extra special name. How cool is that? Number two, we'll actually use all of those created blocks to create our music video. So we'll be able to use all our skills that we've used and learned in the previous lessons, in music, in tempo, in everything that we've seen. And then we'll create that music video with that visual component as well. And after that, of course, by the end of this fifth and final lesson, you will learn to code like a pro, by creating your own blocks, adding all your new Ninja coding skills to your final production. Whoo, let's go. Like we always do, and I absolutely think is essential, before we jump into something new, let's just make sure we remember what we learned before. So let's take a few moments. Just to think back on all the previous lessons (there were four). Can you identify all those elements, those blocks those functions, those tricks that you've learned? And then can you list them and kind of describe what they are what they do, we can do it as a class, take a few moments, think about it first, and then discuss it as a class. I will remove myself for a few moments and I'll meet you back once you've discussed that. So see you soon happy discussion.

Okay, wonderful! So what are some of the stuff that we've learned? I've just gathered a few of the blocks over here. The first one, of course, are just loops, and how to use loops to our advantage when we want to automate processes, when there's a whole bunch of stuff that is repeating all the time. Why don't we use blocks of loops, just to make that process easier? So we've looped dancing, we've looped movement, we've looped music, that's a whole bunch of stuff that we can use today, as well. We've also used this one right below conditionals. Remember, "if this, then that." So in our project, it was a musical art. So we had a bunch of colors on the screen, and then we coded if my mouse cursor, and we had that yellow x. So if my mouse cursor hits that colour, then play that sound. If I hit that colour, then play that sound. If I play that colour, that oh, if I touch that colour, then play that sound

or that series of sounds. So we could create a different melody from that. How cool is that? The other one up there with the orange is a variable. Remember how we created a notation system where we can actually grade or give points to in a vote in our talent contest? And then the last one, the pink. We've never seen the pink one before. Maybe that's because those are the ones that we'll be creating today! Yes! So coding time! Let's watch the first two videos from the music video project. And I want you to start your own. Once again, go from that first video, create your own startup project. And then let's jump right into your own because today will be a lot of exploring, playing with add-ons and then just creating your own awesome final project. So let's jump into it. And I'll see you in a bit.

Okay, this is awesome. So we started by creating our own procedure blocks, right? Before we actually jump into those and just have you discussing it in class, how about, we just take a look at what they actually look like. So here's the first one that I created. So define "grow." So this one that's rounded at the top is the one that will actually say, okay, so when I use this new button, or this new block, this is what I want you to do. So there's only a few ones here. But I could add 20 more blocks of code here if I want to do. So by defining grow, and here's if I just want to choose that button grow, so with one button, it's executing all of these, and this is a "procedure." So that I now have in my blocks, I have my own blocks that exist right here. That is really cool. And you'll get to use them in a bit. But first, now that we've actually seen how powerful they can be, take some time to discuss with your classmates about some of the advantages that creating procedure blocks like that can actually have for your own code. How could it be useful? What are the advantages of using procedure blocks? Chat it up for a few minutes. Teachers, we can pause this video, and we'll chat in a bit.

Yes, I heard you loud and clear! If our code or code blocks are shorter, it's easy to debug. Remember that word "debugging," finding mistakes. When code is shorter, it's lesser lines for us are fewer lines for us to look through. And it makes it easier just to add in that code. And if it's something that I want to reuse, oftentimes in my code, well, it's easier to drag one block than dragging 20. Right. Yeah, those are just a few of the advantages of using procedure blocks. Absolutely. Good job.

So now that we've actually had this first starter, so we've had our character just grow and shrink and grow and shrink and grow and shrink, well, let's add some music to it. Let's add some more stuff. And I want you to make it even more awesome. And maybe at the end. Once you've added all your add-ons and maybe added some of you that previous knowledge and and skills that you've developed from the four last activities, we can actually make a really cool music video and maybe how about a work playlist for the classroom and maybe just that hit-list like we have on the radio! So have fun, watch those videos. And there are more today, because it's that final project and I want you to take the time to really choose the ones that you think will work best with your music, with your video, with your characters and just with how you're feeling. So, look at all those add -ons, have some fun creating, and I'll meet you for that final wrap up. Happy coding. I'll see you soon.

Oh my, my, my my in tenths. Yeah. Okay, well, I hope you found some cool stuff. I wanted to show you really quickly what I came up with just very simple ideas. But let's just see. So let's put this away. I want my character to grow, but then how else will I use him? I have pivot, so I want him to turn about. I want him when I click on this to change costumes and wait. But I also have magic. I added a crab and then with my music, I decided to change back to change backdrops. Let's see what it comes down to. So full screen. Let's press play. And let's see what I came up with.

Okay, simple enough. Simple enough, but oh, so awesome. I hope you had a lot of fun and why not share it with your classmates as this is the last project! Of course, I want to start by saying one sharing is that best way to end those coding lessons. So share with your classmates have that hitlist if you want to maybe vote, or create in coding a voting system for all of your music videos. So why not have a actual system to vote on the best ones and then create that hit list for the classroom. And if you have time, check out the next lesson which will actually build on your music video from here and then add some extra sounds and stuff to your video clips. So there's so much stuff that you can do. We've only had five lessons exploring a few of those essential skills that you can use as a coder, and you can create what ever your heart desires. And of course, this has been CS First - Exploring Music and Sound. And of course with music and sound, there is no limit as to what you can create. And hopefully, you'll keep on creating and of course sharing with your classmates because sharing is caring and coding is awesome! This was a whole lot of fun, everyone. I hope to see you soon. Have a great day and happy coding!