

Activity 1 Create a Food Chain Habitats & the Environment CS...

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SUMMARY KEYWORDS

food chain, organisms, conditional statements, ces, coding, rabbit, producer, statements, blocks, video, sprite, consumer, scratch, create, ready, project, examples, add, carnivores, truths

Hi, and welcome to activity number one habitats and the environment. With CS First with Google, I'm very excited to start activity number one where we are going to be creating a food chain. Now, for today, we are going to be doing three things, you're going to first learn about producers, primary consumers, secondary consumers, tertiary consumers. And then you're going to learn about other terms like herbivores, omnivores, and carnivores, you're going to be given some time to research each of these organisms in your food chain, and then hopefully create an interactive food chain that describes the relationship between these organisms. Now, before we start, I have a question here, What is a food chain? Give you some moment to think about it. And teachers, this is a fantastic time for you to pause and facilitated discussion. And feel free to return to this video once you're done.

Now, how was your discussion? If you mentioned something about producers are always the start of food chain, then you're on the right track. So essentially, food chains are the order of transfer of energy from one organism to another. So essentially, we're trying to arrange them in such a way where the energy is being transferred. So it always describes the relationship between organism. Now here I have an example that I designed in Scratch using character sprites. So as always, my producer is always going to be the start of my food chain. So food chains are always going to go from left to right. So grass in this case, which is some kind of vegetation is my producer. And then rabbits are taking in energy, which is why the arrows pointing towards the rabbit, and the rabbit is the primary consumer, it is the first level of organism that is taking in energy from the producer. Now the secondary consumer consumes the rabbits or Fox here consumes the rabbit, which is why it's considered the secondary consumer. And then finally, we have the bear. Sometimes bears are carnivores, and they eat foxes. So again, that energy is coming from the fox. And so bear is the tertiary consumer. So as you can see, these consumers are all taking in something, and the arrows are always pointing towards whoever's eating what so. Rabbits are eating grass, so the arrows pointing towards the rabbit. So this is only one example of the food chain. Now it's your turn to come up with other examples of food chain, and teachers, again, feel free to pause this video and facilitate the discussion and feel free to return to this video once you're done.

Now, if you have provided other examples, that is similar to the food chain example that I provided, then that's great. If your food chain is set under the water, what you started with some seaweed, and then maybe some fish and then a shark, then that's a great example. Thank you. If you have created another food chain that is set in the desert, where you started out with the cactuses and the lizard,

and maybe other foxes that live in the desert, then that's great, fantastic example. So thank you so much for sharing those examples. And we're gonna continue on to our CS First and Scratch for CS First now, we're going to be using our friends unit. So I'm gonna ask you to go to CS First friends, and lesson number two in friends where it says two truths and a lie. As I mentioned, we have learned so many different terms and we want to be able to review our understanding of those terms. So we're kind of basically going to be rehashing this project in two truths and a lie. So I want you to go on to lesson number two of the friends unit. Click on number one to truth and a lie and make sure you watch the video. Here is a huge hint, make sure you pay close attention because there's going to be a pop quiz coming up next. I'm going to give you another hint. Make sure you pay very, very close attention to the two examples. That's mentioned in the video. Teachers, this is a great time for you to pause and then we can revisit this after you're done.

All righty, I hope you are ready to go. Hopefully you have retained everything that's from that video. And let's see if you're ready. So pop quiz time. For the first question here. What are conditional statements? What are conditional statements? Now it's mentioned in the video, what are conditional statements?

Now if you have said something along the lines of if and then statements, then you're on the right track. Perfect. I want you to elaborate that a little bit more. So conditional statements are essentially where you have one situation happening in order for another situation to occur. Good. And then in the video, they talked about two different examples. So let's see, we remember the first one. In the first example, what does the program do when the student is not a good match? Okay, so if you say that the programmer doesn't do anything, because the student is not a good match, then you are correct, well done - perfect. So in this case, the condition statement is, if the student is not a good match, then the program will not notify the company. Good. Last question here in their scratch example, here, what happens when the sprite touches the wall? So when a character sprite touches the wall, what happens then? Okay, good, and we're applying this to coding. So if the sprite touches the wall, then it will say ouch. Or maybe it'll say, hey, that's the wall, despite it's not going to go beyond the wall. So you can definitely use conditional statements if then coding blocks in Scratch to help you create these conditionals situation. Perfect.

Okay, so now we're going to start creating a food chain. So we're staying on lesson number two and the friends unit. And now instead of popping on to the next video, just on the left right hand side of that page on the same page that we were just on, make sure you click on the starter project. Now, because I've mentioned that we are going to be rehashing, changing some things from the starter project, using what we're learning about to truth and a lie and conditional statements for our food chain. I want you to actually delete all the sprites from the starter project, and insert for organisms that describe producer, primary consumer, secondary consumer, as well as tertiary consumer in your food chain. So right now, it's going to, I'm going to give you some time and make sure you create a food chain with four different character sprites. And feel free to add an appropriate background that describes this food chain,. Where do these animals live in? So teachers, this is a fantastic time for you to take a pause, help your students make sure they have all their food chains set up and ready to go. And you can come back to this video.

All righty, so if you have your food chain ready to go set up, this is mine right here. As you can see, I

have my tiny bush here, I have an arrow pointing towards my primary consumer, the rabbit and arrow pointing towards my fox here, and then an arrow pointing towards my bear here. And I've also changed up the background. So then it really shows that they're all organisms that you would be able to find in a forest. I can't wait to see what other examples you have created. So if you have set yours in the forest, that's great! If you've set yours under the water in the ocean, that's fantastic. If you set yours in the Arctic, that's again, great. So thank you so much for doing that. Now, we had just learned from the first video on what we can do with two truths and a lie. So we are going to be applying some facts about our organisms. And I've given you some key terms there producers, primary consumers, secondary consumers. And now you can feel free to take the time and research about two facts about your organism we want to really just apply it back to the food chain. Are they omnivores? Are they carnivores? So find out more about your organisms that is in your food chain teachers again, this is a good time for you to pause and revisit this video.

Now if you have already done your research and you've written down some key points and facts about your organism, then we are ready to start creating our conditional statements. So I want you to stay on the same page in CS First, make sure you hop on over to activity number two in lesson two. activity number two says ask a question and make sure you watch that video. So right now you're going to watch video number two and lesson two of Friends and add a question box to your sprite. I only want you to do that for one of the sprites for now. And teachers this is a great time for you to take a pause and revisit the video.

Okay, so if you have added those question blocks in your sprite, then it should look something like this. Now I added my question blocks to my sprite, which is the rabbit here. And I added three different statements. And I'm going to zoom in a little bit more applying what I already know about the rabbit after I've done a little bit of research. So statement a I'm a primary consumer and statement B, I am a producer and statement c I am an herbivore. And one thing you need to note is that I want to make sure that you have a trigger that is attached to these coding blocks. So make sure you have when the green flag is clicked, then the rabbit talks or whatever your sprite is talking. So always double check your code whenever you've placed them in your Scratch project. And we're ready to go. So if you have done that for one of the organisms, that's great, if you've done that for more than one of the organisms, you're moving at a fantastic speed. So thank you so much for doing that. And we're going to keep going. So once we have our question blocks, we want to be able to check our answers. So you're asking what the questions are, and we want to make sure that the answer is correct. So let's hop on over to the third video here, check the answer. Make sure you click on that and watch that video. Once you're done watching that video, add the if then blocks to see if the answer is correct to provide that statement. And teachers this is a great time, feel free to take a pause, take your time, complete all the tasks that we've done so far, and then click on play for this video.

Okay, so we are adding on to our coding blocks there. And if you have added the correct coding block, and I'm going to zoom in that a little bit, it should look something like this. In my case, statements A and C are the correct ones. So I have two if then statements. So if my answer is A, then it's correct. And then if my answer is C, then it's also correct, again, that you should always test out your code. So click on that triggered that little green flag there to see if it is correct or not. And I'm gonna just test it out. And that's correct. And if your code is all ready and it's perfect, your organisms are speaking about the same things. It's checking the answer, then you are on the right track. So well done. Thank

you so much for following so close attention to this video. We're going to continue on now we have checked our answers and showed the audience that if it is correct, it will say yeah, it's correct. Now we want to also make sure that if it's wrong, it's going to give you a prompt. So go to CS First again and I'm going to ask you to watch the fourth video alternate answers. And once you're done, I want you to now add the if else blocks so not if then the now you're going to add another block to your CS First project to create a losing condition. So when something is incorrect, then what will happen so teachers feel free to pause this video. Have your students watch that video first, before continuing on to adding new block coding blocks to their Scratch project. And you can feel free to come back to this video once they're done.

Okay, so we are basically almost at the end of our final food chain. So if you have added your if then block, then you can have this final block here. So I'm just adding on so I have my if and else block. If the answer is B which is the incorrect statement in my case, then it says try again or else it's gonna think. So as always you want make sure that your code is running properly. By double checking everything, make sure it's smooth, make sure there's no mistakes there. And once you're ready to go, then you can continue on to the next task. So on your own, we have done one example for one of the organisms in the food chain. apply what you've just learned whether they are omnivores, carnivores, or herbivores, or even tertiary consumer primary consumer, add those statements in for the rest of the organisms in your food chain. Teachers feel free to pause this video if you have enough time to continue on. And otherwise, we can come back. And you can continue on with this video.

If you're all done for all the organisms, and you've created two truths and a lie statement, and added those conditional statements using if then if else blocks then well done, I want you to give yourself a pat on the back students. So thank you so much for joining us on this amazing experience. I'm so excited to be joining you in your classroom. Before we break off, I wanted to know what animals are in your food chain? And where's your food chain set in? Is it the same as my forest? Or have you chosen a different forest like the rain forest, or like I've mentioned before the Arctic. So teachers feel free to facilitate this discussion. And we can revisit this video later.

If you have more than three animals perfect that means your food chain has tertiary consumers if your food chain only has two and that means it only has the primary consumer as well as the producer. So it's okay because food chains don't have to all include tertiary consumers all four different organisms, it can be as short as just one producer, one primary consumer, or as long as one producer all the way up to tertiary consumer. So feel free to add even more food chains to your scratch for CS First project. And thank you so much for joining us on activity number one. I can't wait to see you again in activity number two, where we're going to start diving deep into our habitat and the environment. See you soon!