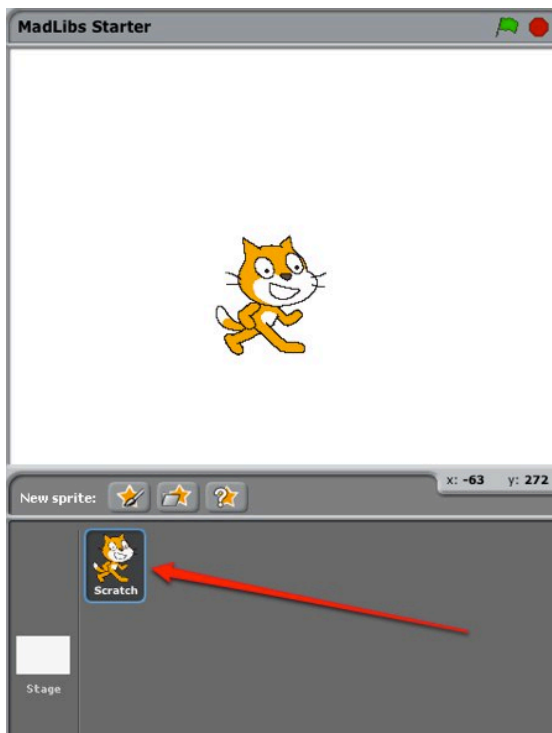


Scratch Project: Mad Libs

Middle-High School Language Arts

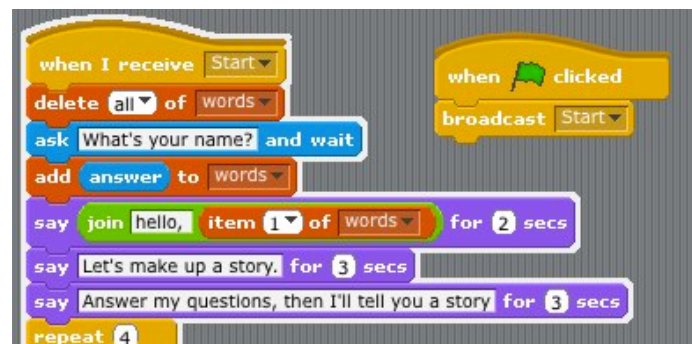
This project is designed to encourage storytelling and reinforce the identification of parts of speech, and also to develop logical, sequential thinking. The project begins with Scratch the Cat on a blank stage. Scratch is our only sprite in this project.



Click on the cat to view the scripts.

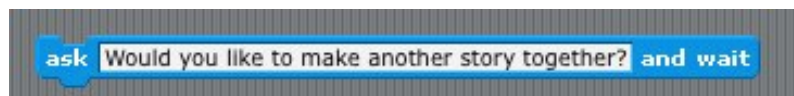
To start most Scratch projects, you click the green flag in the top left-hand corner of the screen.

Play the game by clicking the green flag. Notice when the green flag is clicked, the block with the green flag lights up briefly, then the blocks where Scratch is asking you questions light up. When Scratch is telling you the story, the blocks with the story lights up. We call these groups of blocks that work together "stacks." They light up when they are active.



Let's add to this game by giving the player a chance to start over when Scratch is done telling the story. This will create a **loop** in the program.

In the sensing blocks, find the "ask...and wait" block and drag it to the editing area. Change the question to "Would you like to make another story together?" Attach it to the story stack under "The end!"



The next step is to determine whether the player answered yes or no and make sure different events happen depending on that answer. For this we will use five different blocks.



We will start with the “if...else” block. Look for it in the Control blocks and drag it to the editing area. Notice the hexagonal opening at the top of that block. This is where we will set the condition for the events.

Find the “equal” operator in the Operators blocks, drag it to the editing area, and insert it into the hexagonal opening of the “if...else” block.



Next, from the Sensing blocks, drag the “answer” block and add it to the first opening in the operator. Now type the word “yes” in the second opening in the operator.



The next step is to determine what happens when the answer does equal yes.

Look for the yellow control blocks that broadcast and receive messages already used in the program to see how they work. Clicking the green flag causes the message “Start” to be broadcast. When it is received by the block with the questions, Scratch starts asking. If we broadcast “Start” again at the end of the story, then Scratch will start over.

Let’s do that. Find the “broadcast” block in the Control blocks and add it to the “if...else” statement.



What happens if the player says no? Let’s make Scratch give a final message in that case.

Find the “say” block in Looks and add it to the bottom opening of the “if...else” block. Change the message to read “Meow! See ya!”

Attach this stack to the bottom of the story telling stack. Test your code by running through the program. If you answer yes, the story will start over. You can answer anything not equal to “yes” to end the program, or just click the stop sign.

Next we can add a bit of movement to Scratch. Let’s have him do a little dance before he asks us the first question.



Find the “repeat” block in Control and drag it to the editing area. Add it to the asking stack immediately above the block that asks for a noun. Set the repeat number to four.

To make Scratch dance, we will change his x and y positions.

Find the “change x by” and “change y by” blocks in Motion and add them to the “repeat” block.



To make the dance fun, we can make the cat’s movements random. In Operators, find the “pick random” block and add it to the change x and y blocks. Set the range of the random number between -15 and 15.



Test your code by clicking the green flag. Did you see the dance?

I’m guessing you didn’t see much of a dance. Scratch executed the repeat block so fast you barely saw it. We need to slow down the events to make them visible.

Find the “wait” block in Control and add it in between the changes in x and y. Set the wait time to 0.2 seconds.

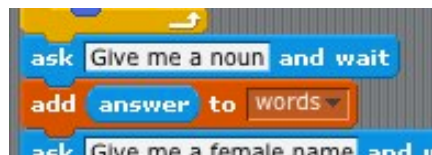


This time, when you test your code, the dance will be visible. You can re-use this bit of code to make Scratch dance at different times during the program.

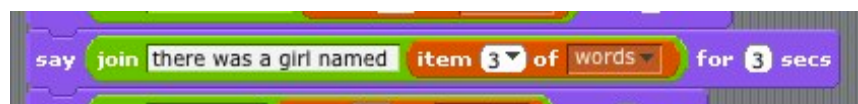
For the final part of this project, let’s look at how Scratch gathers and stores the words it uses in the story. Go to Variables and let’s take a look.



You can see there is an list called “words” in this section. We created that list to use in the program. A list will take user input and store it in order for later use. In our program, we add user answers to the list by using the “add...to...” block after each question.



When telling the story, we call up those answers by using the “item...of...” nested in the “say” block.



We could look at this process filling out a table. If we wanted to change the story, we would have to make sure the asking and the telling work well together.

Item	Question	answer
1	What is your name?	name
2	Give me a noun.	noun
3	Give me a female name.	female name
4	Give the name of an occupation.	occupation
5	Give me a verb	verb
6	Give me a method of transportation.	method of transportation
7	Give me a number.	number
8	Give me a city.	city
9	Give me a plural noun.	plural noun

Here is how the items show up in the story.

Once upon a [2], there was a girl named [3]. She was a [4]. Every day she would [5]. One day she took the [6]. [3] rode the [6] for [7] days. When she arrived at [8], she was greeted by [1] who was holding a big bunch of [9].

As you can see, once you collect the answers, you can use them multiple times throughout the story.

Try your hand at MadLib storytelling by changing the questions and the story.

Created by Bea Cantor
<http://blogs.glnv.k12.va.us/teachers/bcantor/>

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