



Student Sheet: “HOPportunities”

Name: _____ Date: _____ Session #: _____

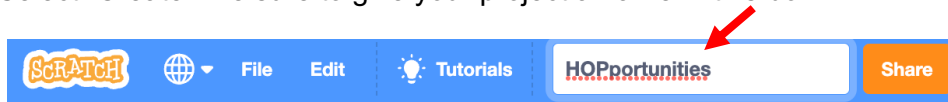
Part I: Backyard Drama

Now that you are fluent in designing new characters (called sprites) in Scratch, let’s see how you can continue to make them do different activities. Before starting this, you will now learn how to add a backdrop in your project.

Log onto your Scratch account by typing the following link into an Internet browser.

scratch.mit.edu

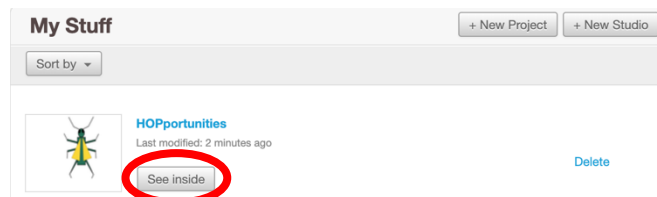
1. Select “Create”. Be sure to give your project a name in this box.



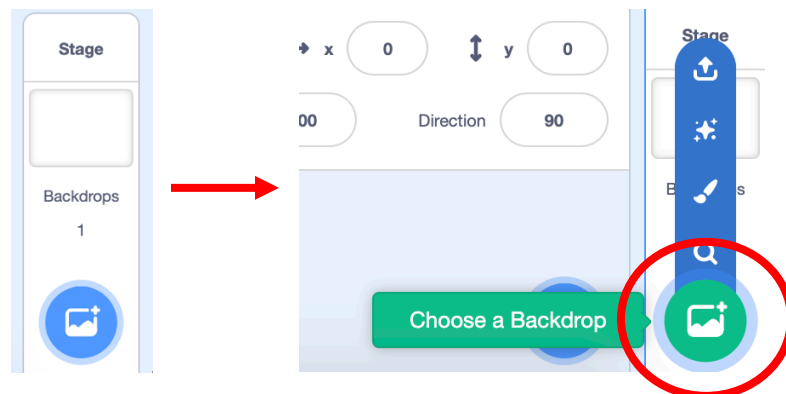
In the upper right corner, click on the “Folder” icon.



Once in the “My Stuff” box, find the project you just created and click on “See inside”.

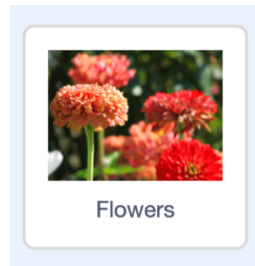


2. Now that you are back in the “Create” window, navigate to the lower right corner until you see the “Backdrops” button. Select “Choose a Backdrop”.

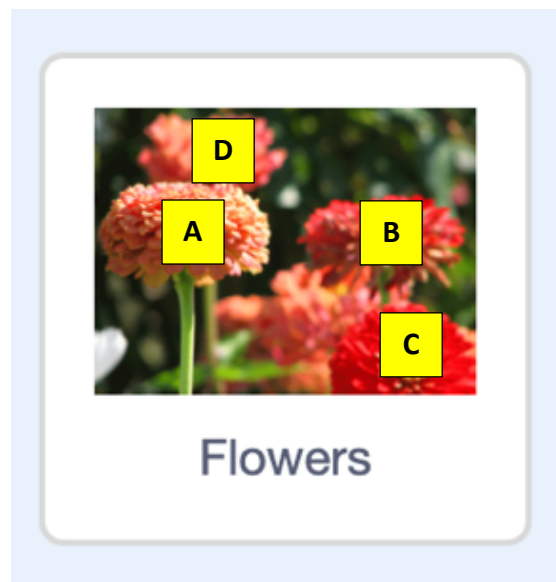




3. Scroll through and examine all of the backgrounds that are available. Then, choose the “Flowers” background.



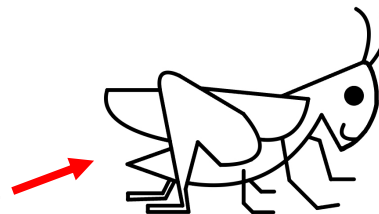
4. In the image below of the “Flowers” background, the flowers are labeled A, B, C and D to help you understand this lesson.



Imagine teaching someone younger than you how to do something. In the last lesson, “iGRASSHOPPER”, you learned how to make your own sprite and control it using short segments of blocks (called programs).

Now you will create two new grasshopper characters—one that is older, and one that is younger. Assign both grasshoppers a name. You will animate the older grasshopper teaching a younger grasshopper how to hop from one flower top to another.

Since you already know how to create new sprites, you will create a sprite of an older grasshopper and a sprite of a younger grasshopper. For this lesson, both grasshoppers should be shown from the side. You are welcome to make your two grasshoppers any color you'd like!





Follow the instructions below to create your program. Create the code for both the older and the younger grasshopper's actions described in the left side of the table below. Don't forget to show them talking to each other! Place a screenshot of your block segments (your program) in the box to the right.

Movements/Actions	Screenshot of Program Code (Your Assembled Blocks)
<p>To begin, position both grasshoppers standing on top of flower A.</p> <p>To show the younger grasshopper how it's done, the older grasshopper hops to flower B and says "Ta da!".</p> <p>The older grasshopper now says "It's your turn; now you try it."</p> <p>The younger grasshopper then successfully hops to flower B. As it lands on flower B, the older grasshopper yells "Hooray! You did it!"</p> <p>The younger grasshopper responds "This is fun!", and hops back to flower A with the older grasshopper.</p> <p>Design the code to make all of this happen.</p> <p>Don't forget to make the grasshoppers speak!</p>	

Were there any parts of the code that you could just copy? Explain. _____

Part II: Grasshoppers in Petal Pursuit

Now that the young grasshopper has learned how to hop from one flower to another, it says "Let's play 'follow the leader', and I'm the leader!"

Modify your previous code so that the two grasshoppers hop from one flower top to other flower tops, with the younger one leading the way. As they hop, the young grasshopper sings:

"Hippity, hop, hippity, hop... I can hop on flower tops".

Be sure to make both grasshoppers hop on all four flowers (A-D) at some point.

Feel free to add hoping sounds in your program!



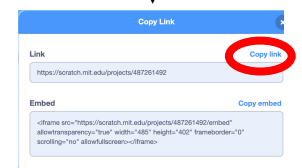
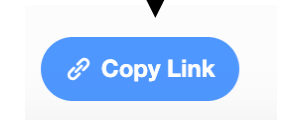
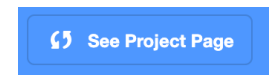


When you have finished your program, and the grasshoppers do all of the required tasks on the previous page. When you are finished, follow the instructions to the right to share the link.

	Screenshot(s) of Project Blocks/Code
NOTE: You will have two codes, one for the older grasshopper, and one for the younger grasshopper.	
Shared Project Link	

Sharing Project Link

Click on the following in order.



Paste the link in the "Shared Project Link" in the table and wherever else you'd like to share it.

Once you have shared your link, make sure your instructor can open it. Once you have confirmed this, ask your instructor to write their initials in the box below.

Instructor's Initials:



EXTEND YOUR THINKING: Innovations' Computing Roots

Go to an Internet browser, and type in the following link.

<https://www.computerhistory.org/timeline/>

You will be taken to the online "Computer History Museum", and you will be able to view a "Timeline of Computer History".

The table below contains important dates/events for the development of computers that are used today.

In the timeline online, click on the years listed in the left-hand column of the table below. Add that event to the middle column in the table below. Read the paragraph describing the event in the online timeline. In the right-hand column of the table, summarize why that technology was an important invention in one sentence.

Year	Computer History Event	Why This Technology Was An Important Invention
1933		
1934		
1937		
1939		



1940		
1941		