

Ruby Perry: RAMPED - Summer 2016: Scratch

P = Pretest (think essential questions)

O = Objectives (measurable - see Bloom's taxonomy)

C = Catch (hook, anticipatory set, etc... use different senses, not a question)

A = Activity (procedure of what the students should do)

R = Review (how will students go over what they've learned?)

A = Assessment (formative and/or summative)

P = Posttest (same as pretest for comparison purposes)

S = Standards (Wyoming, NGSS, etc...) showcasing crosscutting concepts<sup>1</sup>

Pretest Questions	<ol style="list-style-type: none"> <li>1. How do you create characters that dance, sing, and interact with one another?</li> <li>2. How do you create images that whirl, spin, and animate in response to movements of a mouse?</li> <li>3. How do you integrate images with sound effects and music clips to create an interactive birthday card for a friend, or an interactive report for school?</li> </ol>
Objectives	<ol style="list-style-type: none"> <li>1. To introduce students to programming.</li> <li>2. Become familiar with a wider range of Scratch blocks.</li> <li>3. Be able to create an open-ended Scratch Project that is an interactive representation of a mentor UNIT ACTIVITY text that they have read in class.</li> <li>4. Students can share &amp; learn from people from around the world.</li> </ol>
Catch	Play <i>How to use Scratch Intro Video</i> from the video pages on the Scratch website.
Activity	<ol style="list-style-type: none"> <li>1. Introduce students to the concept of the interactive collage, a Scratch project that represents aspects of a narrative through clickable sprites.</li> <li>2. Have the <i>Clickable Collage handout</i> available to provide guidance. Give students time to create an interactive collage Scratch project, encouraging them to build up their programs by experimenting and iterating.</li> <li>3. Allow students to share their works-in-progress with others. We suggest pair-share: have students share and discuss their projects in pairs. Optionally, invite students to add their projects to their class studio.</li> </ol>
Review	<p>Ask students to think back on the design process by responding to the reflection prompts in their design journals or in a group discussion.</p> <ol style="list-style-type: none"> <li>1. What did you get stuck on? How did you get unstuck?</li> <li>2. What might you do next?</li> <li>3. What did you discover from looking at others' Clickable Collage projects?</li> </ol>

<p>Assessments</p>	<p>Can students explain what events and parallelism are and how they work in Scratch?</p>
<p>Posttest Questions (same as pretest questions)</p>	<ol style="list-style-type: none"> <li>1. How do you create characters that dance, sing, and interact with one another?</li> <li>2. How do you create images that whirl, spin, and animate in response to movements of a mouse?</li> <li>3. How do you integrate images with sound effects and music clips to create an interactive birthday card for a friend, or an interactive report for school?</li> </ol>
<p>Standards</p>	<p><i>Math</i></p> <p><b>MP.1: *K-8</b></p> <ul style="list-style-type: none"> <li>● In programming activities, students must persevere in problem solving.</li> </ul> <p><b>NBT.1: *2-5</b></p> <ul style="list-style-type: none"> <li>● Use wait blocks and movement blocks in programs like Scratch and Tynker to differentiate between .01, .1, 1, and 10 seconds.</li> </ul> <p><b>4.OA.5</b></p> <ul style="list-style-type: none"> <li>● Have students create drawings in programs that repeat a pattern. This can be done with the "repeat" (a.k.a. "loop") block. Students can demonstrate their understanding of multiplicative procedures and patterns that follow a specific rule.</li> </ul> <p><b>4.MD.5 and 4.MD.6</b></p> <ul style="list-style-type: none"> <li>● Use <a href="http://studio.code.org">studio.code.org</a> or their <i>Frozen</i>-themed puzzles to teach students about angle measurements.</li> </ul> <p><i>English Language Arts</i></p> <p><b>RI.3: *K-5</b></p> <ul style="list-style-type: none"> <li>● Have students describe what would happen if the blocks in a program went in a specific order.</li> <li>● Identify cause-and-effect relationships by using "if this, then. . ." blocks.</li> </ul> <p><b>RI.5: *2-4</b></p>

	<ul style="list-style-type: none"> <li>● Locate answers to a question using keywords, sidebars, and glossaries. (Programming tools use menus and categories to organize blocks.)</li> </ul> <p><b>SL.5: *2-5</b></p> <ul style="list-style-type: none"> <li>● Create digital stories in programming platforms such as Scratch and <a href="#">Tynker</a>, changing the scene (background) between events.</li> <li>● Create tutorials on how to advance through a programming level.</li> </ul> <p><b>W.2 and WHST.2: *K-8</b></p> <ul style="list-style-type: none"> <li>● Compose a tutorial on how to advance through a level/stage, or how to animate a character.</li> <li>● Write a comparative analysis, analyzing two different coding platforms or languages.</li> </ul>
<p>Crosscutting Concepts from NGSS</p>	<ol style="list-style-type: none"> <li>1. Patterns</li> <li>2. Cause and Effect</li> <li>3. Scale, Proportion, and Quantity</li> <li>4. Systems and System Models</li> <li>5. Structure and Function</li> <li>6. Stability and Change</li> </ol>

# CLICKABLE COLLAGE

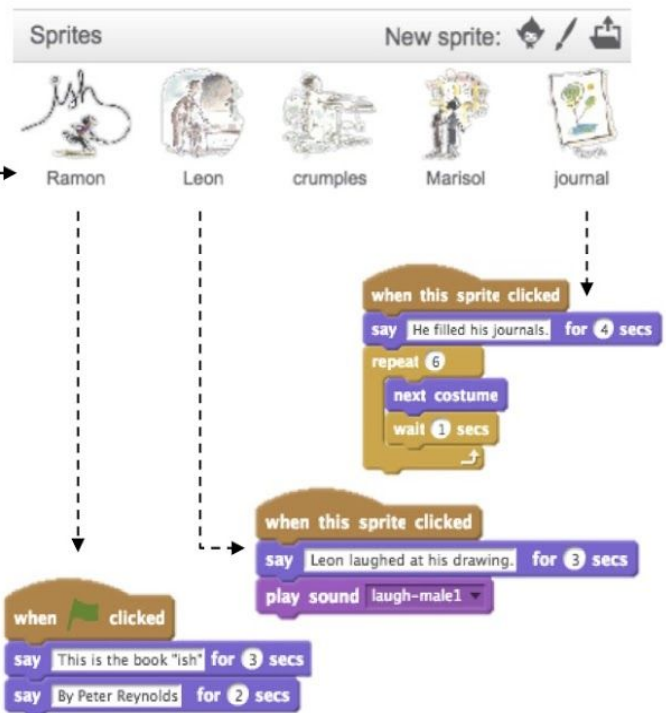
HOW CAN YOU COMBINE INTERESTING IMAGES AND SOUNDS TO MAKE AN INTERACTIVE COLLAGE?

Experiment with sprites, costumes, looks, and sounds to create an interactive Scratch project – a project that helps other people learn more about our mentor text, “Ish”.



## START HERE

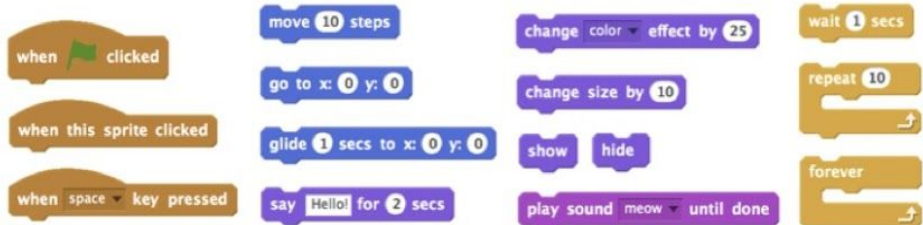
- Open the *About Ish* starter project: <http://scratch.mit.edu/projects/48176258/>
- Add code blocks to make the sprites interactive.
- Add your own text, sounds and motion to the sprites.
- Repeat!



## THINGS TO TRY

- Use costumes to change how your sprite looks.
- Try adding sound to your project.
- Try adding movement to your collage.
- Ask a neighbor about their project!

## BLOCKS TO PLAY WITH



## FINISHED?

- + Add your project to your class Studio.
- + Share your project with a neighbor and give each other feedback on your code.

Reference:

<http://scratched.gse.harvard.edu/resources/clickable-collage-literacy-computational-thinking-activity>