Introduction to Scratch Programming

Unit 4 Days 1-3
DESK Standard: Introduction to Programming

- Students are introduced to some basic programming and issues associated with code design and development.
  - Design algorithms and create programming solutions for a variety of computational problems using an iterative development process in Scratch.

Today’s Objectives:

Students will be able to:

- Name the basic terms used in Scratch.
- Create the beginning of a simple program in Scratch.
Journal Entry

How do you think programs like Microsoft Word, Internet Explorer and Windows are made?
### KWL Chart – Group Activity

- Today we are going to address the K and W letter of the Know-Want to Learn-Learned Chart. We will fill in the Learned section later in the Unit.

- Each group – get a chart paper and make a KWL chart to display

<table>
<thead>
<tr>
<th>What we Know</th>
<th>What we Want to Learn</th>
<th>What we Learned</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
Introduction to Scratch-
https://www.youtube.com/watch?v=4y6J2jXjU34
Getting Started with Scratch - https://www.youtube.com/watch?v=uq8jYUmUCr4
Scratch Terms – Write in Journal

- Sprite
- The Backdrop
- 3 Areas of the Scratch Screen
  - The Stage
  - The Development Window
  - The Code Bank
Scratch Demo – Show how to

- How to choose a Sprite from a file
- How to paint your own sprite
- Each sprite has its own scripts.
- You can right click any block and select help to get more information on how to use it.
- How to change the language in Scratch (for your English Learners)
- How to go to full screen mode and back
- How to switch back and forth between sprites by clicking on them
- X and Y coordinates on the screen are shown on the bottom right below the stage
- How to save in the proper location (the default is to save in the Scratch Projects folder
Click on “Scratch”

Change the language at the bottom of the page
Scratch Demo – Show how to

- Move _ steps
- If on edge, bounce
- Turn _ degrees
- Forever
- Change color effect by _
- When the green flag is clicked
Getting Started with Scratch

- Open the pdf file from the S-Drive – Getting Started with Scratch
- Follow the instructions on each card to create your first project.
- Use the hints on the next slides to Save and Share your program
Working in Scratch

- Log into Scratch
- Click on CREATE
- Click on “New sprite” to create a Sprite
- Click on the MOTION Script Block to add actions to your sprite.
Working in Scratch

- **When finished:**
  - **Save**
    - Click on the arrow next to File, then on Save Now
  - **Share**
    - Click on the Share Button
Working in Scratch

- Once the project is shared, you need to write down the URL. To do this:
  - Click on “See project page”
  - You will copy or write down the URL that appears AFTER you click on “See project page”
Getting Started with Scratch

- See this example:

- Complete your own Name Program
  - Make a separate Sprite for each letter in your name
  - Have at least 3 different, interesting behaviors for the letters in your name
  - Use the “when green flag clicked” block
  - Use the “forever” block
  - Save as “Name Program” and send Mrs. Young the link to your activity
  - Print off the Rubric and submit it
<table>
<thead>
<tr>
<th>Do you have?</th>
<th>Points Possible</th>
<th>Yes</th>
<th>No</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have a separate sprite for each letter of your name.</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have at least 3 different interesting behaviors for the letters in your name.</td>
<td>5</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>All the letters have a behavior</td>
<td>4</td>
<td></td>
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</tr>
<tr>
<td>Use the “when green flag clicked” block</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use the “forever” block</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>Extra Credit</strong></td>
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<tr>
<td>Have your name reinitialize itself when the green flag is clicked. In other words, all the letters will start off in the right location facing the correct way.</td>
<td>2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td>20</td>
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</tbody>
</table>
Your Name Project

- Check the rubric to see if you have every element you need. Feel free to add MORE if you have time.
- Write the URL on your worksheet, and turn it in.

A SUCCESSFUL PROGRAM FINISHED!!
Credits

- MIT-Scratch
- PPT created by Dawnene Young, 2015