Daily Lesson Plans

Instructional Day: 1

Topic Description: This lesson introduces the Scratch programming language, including the basic terms utilized in the language.

Objectives:

The students will be able to:

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

Outline of the Lesson:

- Journal Entry (5 minutes)
- KWL chart about programming/Scratch (15 minutes)
- Scratch introductory video (10 minutes)
- Model of how to start name assignment (25 minutes)

Student Activities:

- Complete journal entry.
- Complete KWL chart about programming/Scratch.
- Groups take turns sharing out their K’s and W’s orally.
- Watch Scratch introductory video.
- Follow along with Scratch open as teacher models how to start name assignment.

Teaching/Learning Strategies

- Journal Entry: How do you think programs like Microsoft Word, Internet Explorer and Windows are made?
  - Discuss what it means to program a computer. Remind students that in the previous unit they used a markup language to provide instructions to the computer on the layout and content of web pages. Programming languages are used to translate algorithms into a language that a computer can execute.
- KWL chart
  - Students meet with groups and each group completes a KWL chart. (Know, Want to Learn, Learned)
  - Groups take turns sharing out their K’s and W’s orally. Encourage them not to repeat anything that has already been said.
  - Put KWL charts up in the classroom; tell students that they will finish the L towards the end of the unit.
- Scratch introductory video
  - Played with sound. Can be played over a projector.
- Model of how to start name assignment
  - Address how sound will be handled in the classroom.
- Scratch lends itself to playing sounds so it can get noisy. The teacher needs to decide how to address this. Headsets with microphones are one solution.
  - Build a name project similar to name.sb.
  - Emphasize
    - Every character in Scratch is called a Sprite.
    - Although Scratch is programming, it is not used in industry. Point out a few languages that are used in industry—Java, C, C++. Throughout the unit, you will want to reinforce that the basic constructs used in Scratch are also used in “industrial strength” languages.
    - 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 (C:\Program Files\Scratch\Projects))
    - The following blocks should be modeled:
      - Move _ steps
      - If on edge, bounce
      - Turn _ degrees
      - Forever
      - Change color effect by _
        - When the green flag is clicked
    - Encourage students to experiment. They can’t break the computer by dragging the wrong block.
    - Show students where they can access ScratchGettingStarted.pdf. (It would probably be useful to have printed copies for each student.)
    - Show students Name Sample Rubric.

Resources:
- KWL Graphic Organizer Chart.pdf (UCLA SMP)
- ScratchIntro.wmv (scratch.mit.edu)
- ScratchGettingStarted.pdf (scratch.mit.edu)
- name.sb
- Name Sample Rubric
- [http://scratch.mit.edu](http://scratch.mit.edu)
Name Sample Rubric

Name: ______________________

<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>
<td></td>
<td></td>
</tr>
<tr>
<td>All the letters have a behavior</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</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>
<td></td>
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</tr>
</tbody>
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**Extra Credit**

| Have your name reininitialize itself when the green flag is clicked. In other words, all the letters will start off in the right location facing the correct way. | 2               |     |    |               |

**TOTAL:** 20