**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

**Name Sample Rubric**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Do you have?** | Points  Possible | Yes | No | Points  Earned |
| Have a separate sprite for each letter of your name. | 5 |  |  |  |
| Have at least 3 different interesting behaviors for the letters in your name. | 5 |  |  |  |
| All the letters have a behavior | 4 |  |  |  |
| Use the “when green flag clicked” block | 3 |  |  |  |
| Use the “forever” block | 3 |  |  |  |
|  |  |  |  |  |
| **Extra Credit** |  |  |  |  |
| 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. | 2 |  |  |  |
|  |  |  |  |  |
| **TOTAL:** | 20 |  |  |  |