UNIT 4

Lesson #: Title of the Lesson

Overview

To help with the Rock-Paper-Scissors game, a short lesson on using the Boolean connectives provided in Scratch will help students find ways to reduce the lines of code needed to complete the game.

Lesson Summary

- *Students start with a moment to review their notes on logic gates from first semester. Then they create a movie price list which we will then code together so they have an example for their notes.*

I. Warm Up. (5 min)
- *A. Students review how Boolean connectives work . which was studied in unit two when we were working with binary numbers and logic gates. Scratch only uses AND, OR & NOT, so the focus will be on these.*
- *B. Wrap up with short, full class discussion*

II. Pair Activity (10 minutes)
- *A. Quick discussion about how movie tickets are sold*
  1. *used to be listed on a board at the theater*
  2. *Now online*
  3. *We will create a pricing program*
- *B. Students will create a price menu for tickets at a theater with their partner on paper*

III. Create a class list
- *A. Ask different teams to share ideas*
- *B. Create one list for class*
- *C. Make sure to include areas where you can demonstrate AND, OR & NOT*

IV. Create and Demonstrate Program
- *A. Have the student open up Scratch or whatever language you are using*
- *B. Have a class discussion that leads through creating the program*
- *C. Students should following along and give suggestions*
- *D. After a start, have students finish the program themselves adding whatever they think is appropriate*

A start of the program that was created in one of my classes is included as a sample.

CS Content

The important concepts here were
- *Boolean Operators*
- *Sequence*
- *Selection*
- *Concise code*

Objectives

Students will be able to:
- Pick the appropriate Boolean Connective
- Use connectives appropriately
- Reduce lines of code by using connectives for selection

Materials and Prep

- Computers
- Programing Software
- No prep needed

Resources

Student Documents
- *No needed documents*

Code Studio
-

Video
-

Assessments
- Program students write

Notes

In Unit 2 when looking at binary numbers we took a side trip to look at logic gates in circuits. This helped students to understand the connectives we were using here. I can share what we did if you are interested. Contact information is below.

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