Games: Behind the Scenes

Curriculum

- *Week 1: Introductions & Discussions*
  - *Introductions*
    - *IceBreaker Activities*
      - *WhoDunIt - you write a card about something interesting they've done. Put the cards into the hat and shake. Each person takes a card and guesses who wrote it.*
  - *Talk about Gaming*
    - *Research question Activity*
      - *They would research a game that they would like and focus on the following questions below. After that, have a discussion about those questions.*
        - *What game did they choose?*
        - *What makes their game a game?*
  - *Talk about Computer Science*
    - *What do they know about it?*
    - *Explain what it is and how does it apply to gaming*
  - *Talk about the program*
    - *Learning about the coding that goes behind a game*
    - *Learning basic coding (terms, functions, etc.)*
    - *Schedule*
- *Week 2: Basic Terms of Coding*
  - *Teach them the basic terms and structure of computer science using Processing Reference Guide since they will learn coding using Processing.*
    - *Variables and Types of Variables (float, int, etc.)*
    - *Void setup() and Void draw()*
  - *Difference between void setup() and void draw() (Activity)*
    - *Using Processing, copy and paste code given to help them see the difference by doing the scenarios below. After that, help them come to a conclusion on what is void setup() and what is void draw(). Do this either as a class or as little groups then coming back together.*
      - *Play the program with all code and discuss the results.*
      - *Play the program without void setup() and discuss the results.*
      - *Play the program without void draw() and discuss the results.*
- *Week 3: Game Background & Shapes*
  - *Show them ways to create background for themselves using Target*

        - *Color as a background*
        - *Image as a background*
    - *Show them how to create shapes and stuff using Target*
        - *Circles/Ellipses, Rectangles, lines, etc.*
    - *Let them try it for themselves!*
        - *Let each code for themselves for a bit (30 minutes). Then have a 'gallery walk' and have a shot out conversation. Encourage them to ask questions about how something was coded.*
- *Week 4: Getting Into Character*
    - *Show them ways to create their character*
        - *Make character an image*
        - *Draw characters with shapes, lines, etc.*
    - *Let them try it for themselves!*
        - *Allow them to add an image of a character into their code along with a simple character they coded using shapes, lines, etc. (1 hour) Then have a 'gallery walk' and have a shot out conversation. Encourage them to ask questions about how something was coded.*
- *Week 5: Action! Part 1*
    - *Introduce booleans, if-then-statements, for-loops, arrays, creating their own voids, etc.*
        - *Using the game Target, show how the things listed above can be used to make your character do something.*
    - *Let them try it for themselves!*
        - *Task them into making their characters move continuously, left to right, and up and down.*
- *Week 6: Action! Part 2*
    - *Continuing off of last week, they will continue to work on moving their characters.*
- *Week 8: Score & Time*
    - *Using Target, show how to use booleans and void to keep score. Also show them how to do time using millis().*
    - *Let them try it for themselves!*
        - *Task them in making time to go up and time to count down. Then have a 'gallery walk' and have a shot out conversation. Encourage them to ask questions about how something was coded.*
- *Week 9: Theme Music*
    - *Using Target, show them how to import mp3 into their codes*
    - *Let them try it for themselves!*
        - *Task them importing audio into their codes.*

- *Week 10: Conclusion*
    - *Discuss things that they learn from this program*
    - *Discuss about possible careers in computer science*
    - *Show them ways they can sharpen their skill*
        - *Code.org (Free website to understand code more easily)*
        - *Continue playing with your code.*