**Cityscape Project - Lesson Outlines/Planning**

Here are some links to the project I have been using in my classes the past two years. As you can see, there are many different options for customizing the final product. One thing that I liked about this specific task is that it starts at the very beginning/basic level and can grow into advanced concepts (even classes and methods)

Oziel - <https://editor.p5js.org/oavald59/sketches/mAuR28oe_>

Josiah - <https://editor.p5js.org/jrleac03/sketches/Ls3TPzujC>

Molly - <https://editor.p5js.org/myhuan48/sketches/_cOy-N0_s>

Holly - <https://editor.p5js.org/habill40/present/UndmCeb5T>

Marlen - <https://editor.p5js.org/mxhern49/sketches/ECv0p6frB>

Bethany - <https://editor.p5js.org/blhins19/sketches/7V3PQIgeG>

Jeslyn - <https://editor.p5js.org/jyliu62/sketches/s36Z5nCPy>

Gretchen - <https://editor.p5js.org/Gretchen/sketches/2bRm_69qF>

Emily - <https://editor.p5js.org/etnguy61/sketches/Eg7dlMyed>

Sophia - <https://editor.p5js.org/smsall75/sketches/7m69nzAJU>

Reed - <https://editor.p5js.org/rmvanp88@harrisonburg.k12.va.us/sketches/6MF2QiLvl>

**What we need:**

We would like to break this lesson down into 8-10 lessons with a few extra at the end for advanced concepts. I plan on taking the lessons and creating video resources for the project as well. We need help building the lessons so that they are scaffolded for beginning learners and explain the concepts that are being programmed in Javascript. Any ideas your team might have would be greatly appreciated as we work to develop this project and its lessons.

**Lesson Schedule:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson Topic** | **Narrative** | **Lesson Link** | **Time** | **url** |
| 0: Introducing p5js | Students are familiarized with the web application of the p5js web editor and the accompanying resources for this tool. | [Lesson 0](https://docs.google.com/document/d/1z57sY1pPChqckrQxWIp6XzEuPbUXT3RSq_E3GUEXKe4/edit?usp=sharing) | 60 min |  |
| 1: The Canvas and Drawing Lines | Covers preparing canvas size and the Cartesian coordinate system for this tool. Students will use lines to connect several (x,y) points after planning on grid paper. | [Lesson 1](https://docs.google.com/document/d/1TU3kivjBkLGrHlEAblTM_qY-mwCuzIYjQBxzkl8_k0w/edit?usp=sharing) | 60 min |  |
| 2: Drawing Shapes | Covers the use of primitive shapes and beginShape(). Students will use these tools to render shapes they have planned out on grid paper. | Lesson 2 | 60 min |  |
| 3: Color & Layering | Covers the use of fill() and the concept of layered rendering. | Lesson 3 | 60 min | <https://editor.p5js.org/alu_templa/sketches/7q3o6J7Q> |
| 4: Variables | Covers the use of variables and their use in setup() as global variables. | Lesson 4 | 30 min | <https://editor.p5js.org/alu_templa/sketches/O4uGK0VU> |
| 5: Objects | Covers the concept of objects. These are unordered, unindexed, and keyed. These should be utilized for complex variables. | Lesson 5 | 30 min | <https://editor.p5js.org/alu_templa/sketches/58xs1jiy> |
| 6: Loops and Variable Updates | Introduces the concept of loops which can be used to draw static objects and updating variables (infinitely). | Lesson 6 | 60 min | <https://editor.p5js.org/alu_templa/sketches/u_X7P8uG> |
| 7: Conditionals | Introduce the concept of conditionals. Very important to stop all of those pesky infinite updates. | Lesson 7 | 60 min | <https://editor.p5js.org/alu_templa/sketches/3Rc2bXjd> |
| 8: Functions | Covers the use of functions for making generic code. | Lesson 8 | 60 min | <https://editor.p5js.org/alu_templa/sketches/a29Kks0g> |
| 9: Wrapper Functions | Introduces the concept of calling a function with a function. | Lesson 9 | 30 min | <https://editor.p5js.org/alu_templa/sketches/r6kHAQMn> |

**Final Product:** [**https://editor.p5js.org/alu\_templa/sketches/oEKRpUEpm**](https://editor.p5js.org/alu_templa/sketches/oEKRpUEpm)

I also did a tutorial for one of the projects that I thought was more visually pleasing.

Part 1: <https://editor.p5js.org/alu_templa/sketches/LGeBWoic>

Part 2: <https://editor.p5js.org/alu_templa/sketches/Gw6cRI70>

Part 3: <https://editor.p5js.org/alu_templa/sketches/XAsTM4yR>

Part 4: <https://editor.p5js.org/alu_templa/sketches/jpDj_gFV>

Part 5: <https://editor.p5js.org/alu_templa/sketches/QLxfx4Ii>