**Lesson 10** Final Project: Emoji Sketch Day 2

**How do we evaluate our progress?**

| **Overview** | |
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| In this lesson, students will continue coding their emoji designs. They will evaluate their progress and use pseudocode to plan and make improvements. | |
| **Lesson Objectives** | |
| Students will be able to   * Demonstrate their understanding of p5’s coordinate system * Draw ellipses, rectangles, and other 2D shapes in p5 * Change shape attributes, including fill color and stroke * Follow debugging protocols * Evaluate their progress and make improvements to their work | |
| **Suggested Duration** | |
| One or two periods (45 to 90 minutes) | |
| **Blueprint Foundations Student Outcomes (**https://blueprint.cs4all.nyc/outcomes/) | |
| Abstraction  Analyze | **Describe how** I might use patterns to express an idea |
| Abstraction  Prototype | **Describe** different things I tried in order to achieve a goal. |
| Algorithms  Analyze | **Describe how** instructions can have different outputs depending on inputs. |
| Programming  Analyze | **Describe** ways a development environment helps me create a project |
| Programming  Prototype | **Describe the changes** I made after testing parts of my program. |
| **Vocabulary** | |
| * N/A | |
| **Planning Notes** | |
| * Assess students’ progress from the previous lesson. If students are exceeding expectations, consider pulling them for small group instruction to cover more challenging material (e.g., using the alpha channel to change opacity of shapes, or using the arc function). * Students will work on pages 7 and 8 of the [final project worksheet](https://docs.google.com/document/d/1-9U2eTUzr5GXC7rDdp3gALNFa0FeTFdl7v8Z-j1oCU8/edit). * As students are coding, identify 3 to 4 to present their work in the next lesson. The work presented should show different levels of content mastery and approaches to the assignment. | |
| **Resources** | |
| * N/A | |
| **Assessments** | |
| * Circulate during the **Student Activity.** Check for students’ ability to:   + Follow debugging protocols   + Self-assess progress based on the rubric   + Make improvements to achieve specific design goals * Assess student’s progress in the **Wrap Up**. Check for the ability to:   + Draw ellipses, rectangles, and other 2D shapes   + Adjust shape attributes like fill color and stroke | |

| **Do Now:** |
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| * Students should continue working on their emoji sketches. |
| **Discussion:** |
| * No new material to introduce |
| **Teacher Demo:** |
| * No new material for demonstration |
| **Student Activity: Emoji Drawing in p5** |
| * Students should continue recording their process on page 5 of the final project worksheet and follow debugging protocols. * Enforce structured screen break time. You may lead students in a game like [Mind Meld](https://wiki.improvresourcecenter.com/index.php/Mind_Meld) or [Artist, Model, Clay](https://www.youtube.com/watch?v=CUKygxITl7k) (for CS class, Artists should give verbal instructions to the Clay without gestures or touching). * Once students have shown you a completed version of their original design, instruct them to move onto pages 7 of the worksheet. Students will use this worksheet to self-assess their progress based on the rubric and make improvements. * As students are filling out page 7, circulate the room to check that students are accurately evaluating their progress. * Before students move onto page 8, explain that the planning section can be less detailed than it was for the first design, and that they should focus on writing what will be helpful for them to implement those changes. * Once students have completed pages 7 and 8, they should return to their sketches to make updates and improvements. |
| **Wrap Up** |
| * Make sure students save their sketches before they leave (as long as they are working within the same sketch, they do not need to re-share the links to their sketches with you). |
| **Extensions** |
| N/A |