

“Extending the CTE-STEM Pipeline into Middle Schools”

Design for Change with P5.js

Solutionary Phase	Problem Cycle #1
Lesson # and title	Lesson 6: Final Project Planning
Duration	45 minutes
Purpose	Students learn how images and graphics are used in social justice and environmental justice campaigns.
Outcome	Students begin planning a message for the final design project.

Lesson Overview

Students will build on previous lessons, where they learned about design templates, and begin focusing on their final design project using a planning document. Students are introduced to the Final Project Assessment Rubric. Students will define the issue, audience, message and campaign for their project. The issue should have an environmental focus. The message and campaign will be created in P5.js with the goal of distributing through a social media platform or website. The lesson uses an I Do, You Do, We Do format, where the teacher introduces a social justice campaign and shows how to complete a planning document. Then, students work with the teacher to fill out a planning document for an environmental campaign. Finally, students begin working on the planning document for their final project design.

Learning Objectives

- Reflect on the previous lesson’s challenge problem to create a t-shirt design using a for loop.
- Learn about the final project planning document.

- Practice using the planning document on an environmental campaign with the teacher's help.
- Begin filling out a planning document for the final project design.

Content Standard(s)

CA NGSS, EP&Cs, CCSS-ELA, CCSS-Math, EP&Cs, History/Social Studies, Visual and Performing Arts, Computer Science, Health, CTE, PE
Insert the standards' codes and language verbatim

CS Standards:

2-AP-12. Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.

2-AP-15. Seek and incorporate feedback from team members and users to refine a solution that meets user needs.

2-AP-16. Incorporate existing code, media, and libraries into original programs, and give attribution.

College and Career Connection(s)

This lesson allows students to create a campaign for change and to learn about the role that programmers play in designing and creating programs to impact society.

Equipment, Instructional Resources, and Materials

- Computer with projector (teacher)
- Access to digital curriculum resources (teacher)
- Computers (one per student)
- Internet access

Suggested Student Grouping

The final project can be completed with students working independently, in pairs, or in teams of 3. If working in teams, make sure roles are defined for completing tasks.

Vocabulary

Social Justice - the view that everyone deserves equal economic, political and social rights and opportunities.

Environmental Justice - the view that everyone deserves equal involvement in the development, implementation, and enforcement of environmental laws, regulations, and policies in their community.

The Lesson

Preparation

For this lesson, teachers should review the lesson slide show and watch videos included with Lesson 6 which cover the lesson topics. Teachers should familiarize themselves with the [final project planning document](#) and the examples used in this lesson. Teachers should have a computer with an internet connection and a device for projecting the computer screen for students to see.

Lesson Procedure

Link to Lesson Slide Deck: [Lesson 6 Slide Deck](#)

Activity/Task	Description	Time (min)
Exploration: Share your t-shirt designs	Students do a think-pair-share with the previous lesson's challenge problem. Students receive feedback on their t-shirt designs. Students complete a self-assessment rubric.	10-15 min
Lesson: Introduce the Final Project & Assessment Rubric	Teachers introduce the final project assessment rubric and check for understanding.	5-10 min
Lesson: Introduce the Final Project Planning Document - "Say Her Name"	Teachers introduce the final project planning document and fill out an example using the Say Her Name Campaign from the WNBA. Teacher uses an I Do strategy.	10-15 min
Exploration: Final Project Planning Document - "Keep Tahoe Blue"	Students practice using the final project planning document by filling out a slide template using the Keep Tahoe Blue Campaign. Teachers and students use a We Do strategy.	10-15 min
Challenge: Final Project Planning Document and/or Slide - Student Projects	Students use the final project planning document to begin outlining their final project designs. Students use an I Do strategy.	10-15 min

Challenge: Final Project Design Elements (if time allows - can be completed in next lesson, too)	Students work on their final project designs and note the design elements they will be using. This document will help students highlight where they might need help as they work on their projects.	10-15 min plus homework
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Assessment

Please insert the relevant assessment, including if this is done synchronously, asynchronously or as a homework assignment.

- Students will submit a completed Planning Document slide and/or handout for the Keep Tahoe Blue Campaign in class.
- Students will submit an outline using [a slide template for their final project planning](#) as a homework assignment.
- Students will submit [a slide template for their final project design elements](#).