Problem Solving and Computing
Lesson 8
Project: Propose an App

Teacher Resources

For Teachers!

Lesson Overview

To conclude this unit, this project combines the two major themes of Unit 1, the problem-solving process and the input/output/store/process model of a computer, to have students identify real-world problems and find ways to use technology to help solve them. This project will be completed across multiple days and will result in students creating a poster of a proposed app they design to solve a real-world problem, highlighting the features of their app that they will present to their classmates. A project guide provides step-by-step instructions for students and helps them organize their thoughts. The project is designed to be completed in pairs though it can be completed individually.

More guidance and resources for this lesson are available in the **Lesson Plan:**

- https://studio.code.org/s/csd1-2023/lessons/8

Warm Up

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Prompt:

Of the apps we've seen in this unit, what was your favorite? What problem did it solve?

Question of the Day

How can the IOSP model help us to design an app that solves a problem?

Activity

Project Overview

You will...

- Work with a partner
- Define a real world problem
- Brainstorm ways an app could help solve that problem
- Identify the inputs/outputs/storage/processing your app uses
- Share your ideas with another group for peer feedback
- Incorporate feedback to create a final version of the app
- Create a poster of your app to share with the class

Brainstorm Problems

You might think about...

- Things you'd like to improve in your school, neighborhood, or community
- A task in your everyday life that you wish could be completed more easily
- A cause that you feel strongly about
- Something that is currently inconvenient or annoying to do

Choose Your Problem

Your problem should be...

- **Interesting:** Both group members are interested in the problem
- **Well-Defined:** You can explain who specifically the problem affects, what needs to change, and how you'll be able to tell that the problem had been solved
- **Computing is Relevant:** The problem is an "information problem" that can be solved with "thinking work."
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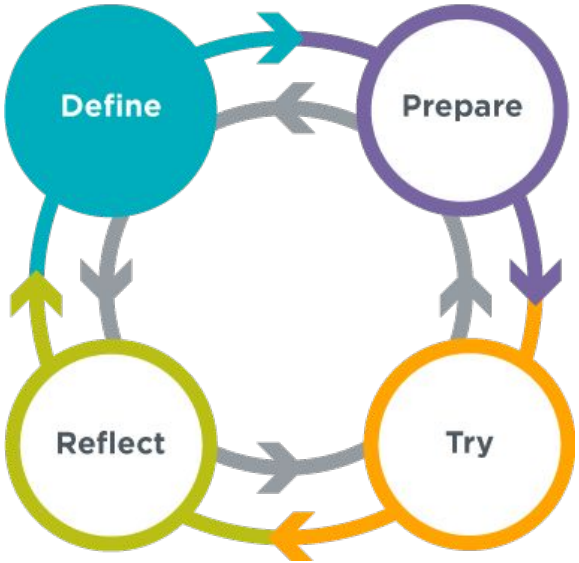
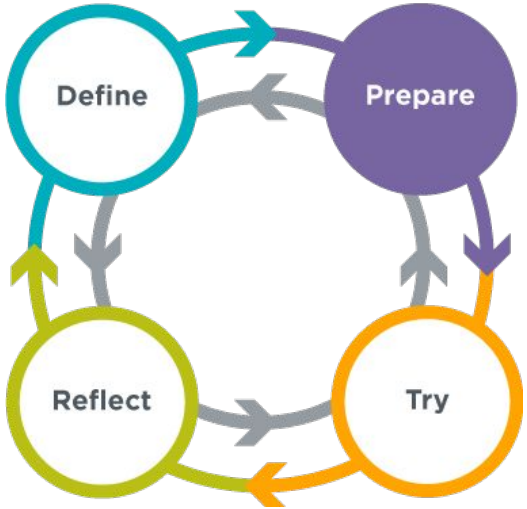
Define

- What is the problem?
- Who does the problem affect?
- How will you be able to know that a solution has worked?



Prepare

- What will your app do?
- What will it look like?
- What inputs and outputs will it use?
- What processing will it use?
- What types of information will it store?

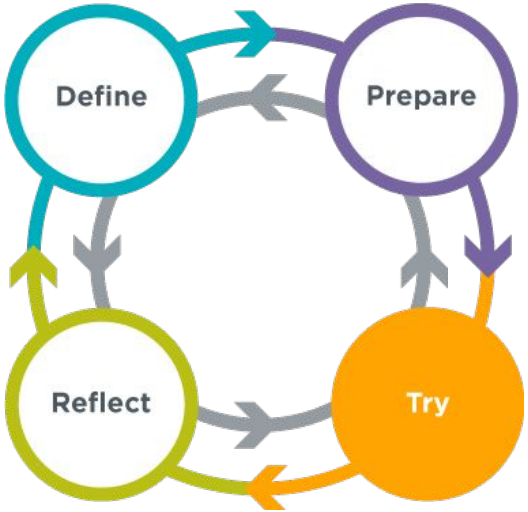


Peer Review

- Fill out the top part of the peer review guide, then swap project and peer review guides with another group.
- Read over the other group's ideas and give them feedback in the peer review guide.
- Trade back and look at the feedback you got on your app.
- Reflect on the feedback and decide what changes you will make based on the other group's ideas.

Try

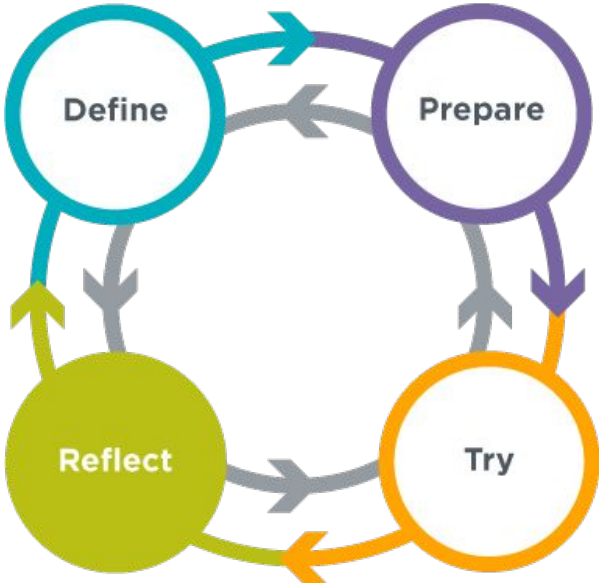
- Finalize your app .
- Create a poster based on your app.
- Get ready to present your ideas to the class.



Wrap Up

Prompt:

What are you most proud of in your project?



Question of the Day

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