Problem 2.3.1

Create Performance Task: Cooperative Driving

THIS PROBLEM IS STILL UNDER DEVELOPMENT.

Built-out problem coming soon.

goals

- Decompose a project into smaller parts
- Apply coding fundamentals and iterative processes
- Develop an program as part of a team to solve a problem

description of task

Develop a program that utilizes machine vision course correct and navigate a group of self-driving vehicles through an environment

Essential Questions

1. What is my role on the team and how will we mange equitable contributions?
2. What is the purpose of your program?
3. Where does the program integrate mathematical and/or logical concepts?
4. What does one of the algorithms do in the program?
5. How does an abstraction you created manage complexity in the program?
6. What part of the code did you develop?

essential Concepts

- Design and Testing
- Decomposition
- Algorithms, Variables, Arguments, Procedures, Operators, Data Types, Logic, Loops, and Strings, and Arrays

Problem Introduction

The Process

This problem is limited to app creation, and you will not have as much time as you will in the final development (Unit 4). Your teacher will help you get started and can provide guidance as to whether the idea you want to pursue can be done in the time given. You should target completion of this project with your team in 8 days.

Problem Timeline

Day 1	Brainstorm: Find an Idea to Pursue Document Your Development Milestones
Day 2	Prepare, Investigate, and Plan
Days 3–6	Design, Create, and Test
Day 7	Evaluate and Reflect
Day 8	Present

PLTW DEVELOPER'S JOURNAL Document all problem work in your PLTW Developer's Journal.

The Development Process

Part A: Find an Idea to Pursue

Part B: Document Your Development Milestones

Part C: Prepare, Investigate, and Plan

Part D: Design, Create, and Test

Part E: Evaluate and Reflect

Part F: Present

Conclusion

1. How did you interpret and respond to the **essential questions**? Capture your thoughts for future conversations.