Email Proposal

*Submitted to Mr. Booher 3/3/26

DT Coders Project – Two-Month-Long Computer Science Course

Program Overview

Over the course of two months, Day Treatment students will participate in **CS Fundamentals Course C and Sprite Lab (Game Design) through Code.org**.

CS Fundamentals Course C introduces students to core computer science concepts through hands-on, engaging lessons designed to spark creativity, critical thinking, and real-world connections. Lessons use visual, block-based programming in a structured, progressive format that builds skills step-by-step.

Students will learn foundational coding concepts such as:

- Sequencing (putting steps in order)
- Events (when something happens, do something)
- Loops (repeating actions efficiently)
- Conditionals (if/then logic)
- Variables (tracking score or values)
- Debugging (finding and fixing errors)

The course culminates in students designing and building their own interactive game, applying everything they've learned.

This structured progression provides both guidance and independence, making it developmentally appropriate for our students while promoting confidence, persistence, and engagement.

Student Project Outcome

By the end, each student will create an original interactive game.

Students will:

- Choose the title of their game
- Select and add characters (sprites)
- Add movement and interactions
- Create background scenes
- Add sound effects
- Build scoring systems using variables
- Create events and conditional responses
- Design win/lose conditions
- Add a final message or lesson

At least two students will present at the board meeting on May 21st and explain:

- What their game does
- What coding concepts they used
- A challenge they faced and how they solved it
- What they learned from the experience

Two-Month-Long Progressive Learning Plan

This structure gradually builds skills without overwhelming students. Coding instruction will take approximately 20-30 minutes per class period, expanding during project build weeks.

WEEK 1-2: Foundations & Confidence Building

Goal:
Reduce anxiety around coding and introduce core computer science concepts.

Students will:

- Begin CS Fundamentals Course C lessons
- Practice sequencing and events
- Complete guided puzzles with immediate feedback
- Learn how to test and debug

Focus: Exposure, structured success, and comfort with the platform.

WEEK 3-4: Expanding Logic & Control

Goal:
Strengthen understanding of loops, conditionals, and problem-solving.

Students will:

- Progress through Course C lessons
- Practice using loops to simplify code
- Introduce conditional statements (if/then logic)
- Begin mini creative coding challenges

Teacher Role:

- Encourage persistence
- Model debugging strategies
- Reinforce that mistakes are part of the coding process

WEEK 4-5: Game Design Planning & Initial Build

Goal:
Transition from guided curriculum to independent creation.

Students will complete a written planning sheet:

- Choose which project to build in the Project/Sprite Lab domain
- What is my game called?
- What happens in my game?
- How does someone score points?
- How does someone win?
- Is there a way to lose?
- What message do I want to share?

Once approved, students begin building their game using the concepts learned in Course C.

Focus: Executive functioning, sequencing, and creative ownership.

WEEK 6-8: Build, Debug, Polish & Presentation Prep

Goal:
Finalize projects and build communication skills.

Students will:

- Debug and fix glitches
- Improve design and interactions
- Add final details
- Practice explaining their work clearly

Student Presentation Script Practice:

“My name is ___. I built a game called ___.
In my game, you ___.
I used coding concepts like loops, events, and conditionals.
The hardest part was ___.
I solved it by ___.
I learned that coding is ___.”

Why This Will Work for Day Treatment Students

This project intentionally builds:

- Frustration tolerance
- Problem-solving skills
- Following multi-step directions
- Executive functioning
- Creative ownership
- Public speaking confidence
- Technology competence

Students receive immediate visual feedback from their code, which increases engagement and motivation. The structured two-month-long design allows students to experience repeated success before culminating in independent creation.

This initiative reflects forward-thinking, skill-based programming that builds both behavioral growth and real-world competencies.

Presentation Plan

1. Teacher Introduction (2–3 minutes) *pass out handout

- Overview of Code.org and CS Fundamentals Course C/Sprite Lab
- Why we chose computer science
- Emphasis on skill development (problem-solving, persistence, executive functioning)

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2. Student Speaker (1–3 students)

Each says:

“My name is ___. I built a game called ___.
In my game, you ___.
I used coding concepts like events, loops, and conditionals.
The hardest part was ___.
I solved it by ___.
Coding taught me ___.”

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3. Live Demo

- Student runs their game
- Board members see interaction in real time

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4. Close With Impact Statement

You say:

“This project was not about coding alone. It was about structured growth. Students practiced persistence, logical thinking, and creative ownership. Through a two-month-long progression, they moved from guided instruction to independent creation — and that confidence is the real outcome.”
