P I P E R

CASE STUDY

How Piper Boosted Engagement and Improved Behavior

Educator: Jordan Duncan

Role at Time of Implementation: 3rd Grade ELA & Science Teacher

School/District: Orin Smith Elementary School - Chehalis, Washington

Products Used: Piper Computer Kit, Piper Make Base Station

Implementation Period: 4 weeks spread over a 9-week period

The Challenge

Two students required an accommodating learning plan:

- **Student #1** had an IEP, struggled with focus, behavior, academics, and socio-emotional learning, sometimes making alarming outbursts and becoming physically aggressive.

- **Student #2** was in the process of qualifying for an IEP and struggled with motivation and self-confidence.

Traditional differentiation strategies were limited because classroom expectations, workloads, and grading could not be adjusted.

> " We were literally throwing spaghetti at the wall, looking for anything that would stick "

Overview

When faced with two students struggling significantly with engagement, behavior, and socio-emotional skills, Jordan Duncan looked for an innovative, hands-on solution. The Piper Computer Kit and Piper Make Base Station offered a new pathway, combining curiosity, STEM skills, and positive behavioral reinforcement.

The Solution

Jordan introduced the Piper Computer Kit and Piper Make Base Station as special reward tools for positive behavior.

- **Appeal:** Bright packaging, realistic blueprints, and tactile components sparked curiosity immediately.

- **Method:** Students earned time with the kits through daily check-ins and positive behaviors. Once earned, time could not be taken away—avoiding punitive misuse, especially important for students with high ACE (Adverse Childhood Experiences) scores.

The Piper Computer was given to Student #1 with some reservations about durability, while Piper Make was assigned to Student #2 for a simpler, more flexible experience.

The Experience

- **Student #1:** Became highly motivated and collaborated with peers in the behavior management room to build the Piper Computer. This unexpected teamwork bridged social divides and reduced conflicts among students.

- **Student #2:** Worked through Piper Make missions on PlayPiper.com, reaching mission six despite a long pause for state testing.

- **Barriers:** State testing restrictions on electronics, lack of consistent supervision, and age-related challenges in independent coding.

- **Unexpected Benefit:** The kits became social equalizers! Students set aside conflicts to work together, shifting focus from behavioral challenges to collaborative problem-solving.

What Worked:
- Using Piper kits as "special interest" rewards
- Building curiosity through hands-on exploration
- Promoting student-led collaboration

The Impact

Behavioral Changes:
Noticeable improvement both in class and during transitions.

Engagement Levels:
High once students began working on the projects, though earning time was inconsistent due to student populations' unique challenges.

Teacher & Student Satisfaction:
Both enjoyed the projects, though independent coding for younger students proved challenging.

Learning Gains:
Increased motivation, improved collaboration, and more productive classroom behavior.

What's Next?

With a move to 5th grade and a smaller class size, Jordan plans to integrate Piper kits into the regular curriculum rather than using them solely as rewards. He plans to incorporate structured "Genius Hour" or station time in the classroom.

The goal is to use Piper projects to foster self-directed learning, perseverance, and SEL growth, while exploring partnerships with community organizations to support technology access and funding. Jordan would like to keep dedicated project space for ongoing builds and require student to keep logs/journals to track their progress and reflect on their learning.

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