

A yellow hard hat with a smiley face on it, positioned in the background of the slide.

# Buzzing through Science with BeeBots

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# Inquiry Question/Wondering/Theory of Action



If I encouraged a hands-on approach to teaching science and CT, then it will foster creativity, ignite conversations, and students will be engaged in the learning process.



# Student Learning/Outcomes



Allowing time for them to tinker with their programming ideas encouraged productive struggle.



Students realized programming wasn't easy, but it's fun so they persevered. Praising them also helped!

Name: Khamh

Programming Maze Response Sheet

1. While programming my robot, I learned to control it and learn about plants.

2. Are there changes you could make to move the Bee-Bot in fewer moves? If I want it to make fewer moves I would make shortcuts

3. What was your favorite part about this coding activity? When i got to make it move it.

4. What was difficult about this coding activity? To stop it and move it.

Name: Jadr

Programming Maze Response Sheet

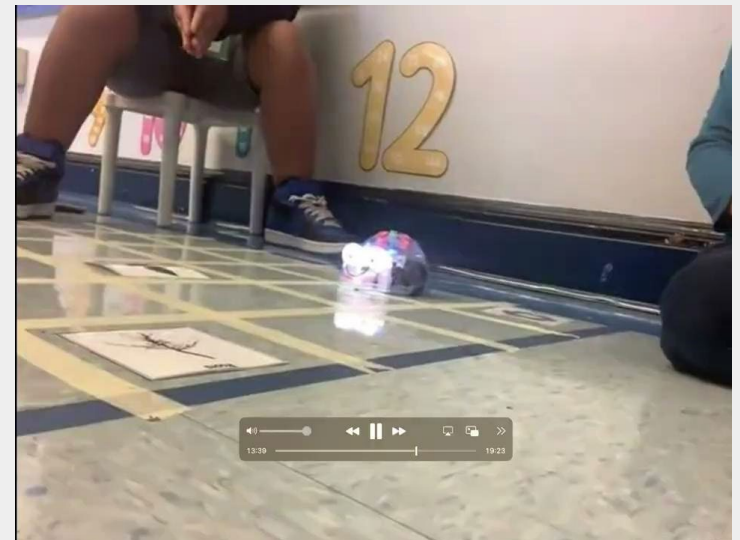
1. While programming my robot, I learned to be patient.

2. Are there changes you could make to move the Bee-Bot in fewer moves? No. because it's all ready good.

3. What was your favorite part about this coding activity? When we finally did it.

4. What was difficult about this coding activity? ~~I didn't understand~~ when I leave I didn't know what to press.

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# Student Learning/Outcomes



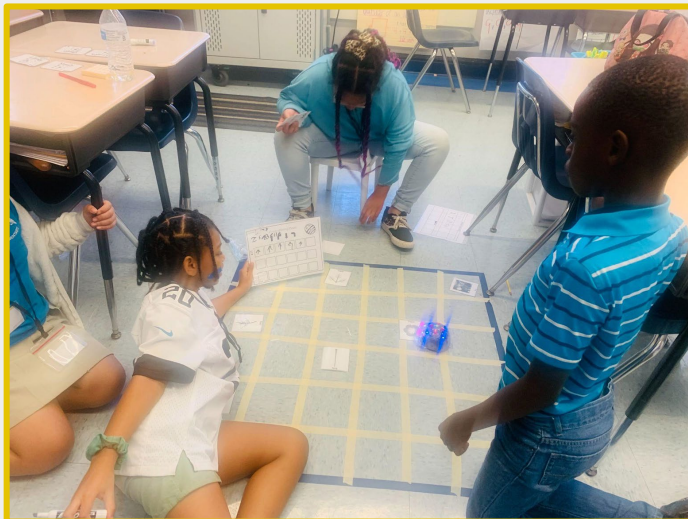
Hands-on experience increased their desire to learn science concepts and reinforced what they've already learned.



Students recognized the importance of working in groups. They helped one another tackle programming problems and gave additional science clues when peers were stuck.



Students will reflect on their work and make changes when needed and given the opportunity.



# Group Wonderings

Other common challenges your students faced in coding? Dr. G

I love that you asked your students to reflect on their CT - both what they learned and how they felt! You are building STEM thinkers with your questioning and encouragement! Dr. G

I love how your students were able to recognize their mistakes. Did you assign roles to your students?  
-Kedra Scott

Do you feel the work was better as a group or would it look different if they were on their own?

What data did you gather from the student reflection sheet and how would that guide your facilitation of this lesson in the future?


We always learn so much through student voice and reflections!

How much experience they had with using Beebot before this lesson?

# Next Steps/Conclusions

This activity created excitement for learning in my classroom. There were lots of hiccups along the way but students persevered, acknowledged difficulties within this task, work cooperatively as a group, and reflected on their learning. They also reviewed science content in a fun way!

After reviewing data from this cycle, I will...

 provide my students with opportunities to tinker and experiment computationally.

 assign more group work.

 engage students in productive struggle.

# Recommendations for the district and my school based on what I learned...

- Equip schools/classrooms with robots such as BeeBots, a Coding Mouse, or Dash to practice programming skills.
  - Opportunities to practice these skills will...
    - prepare students for careers of the future.
    - introduce students to computational thinking.
    - encourage teamwork and communication.
    - ignite learning in students.
- Provide opportunities for PD training in CT/STEM/CS skills.

