

Game On!

Inspired CS Education with MakeCode Arcade

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Outline

- Intros: Us, You, & MakeCode Arcade
- “Hello, Gaming!”: First Game
- Hardware Example
- 15 minute Break
- Breakout Sessions & Group Share
- 15 Minute Break
- Map Madness
- Resources
- Conclusions & Discussion
- Evaluation

Bill Siever

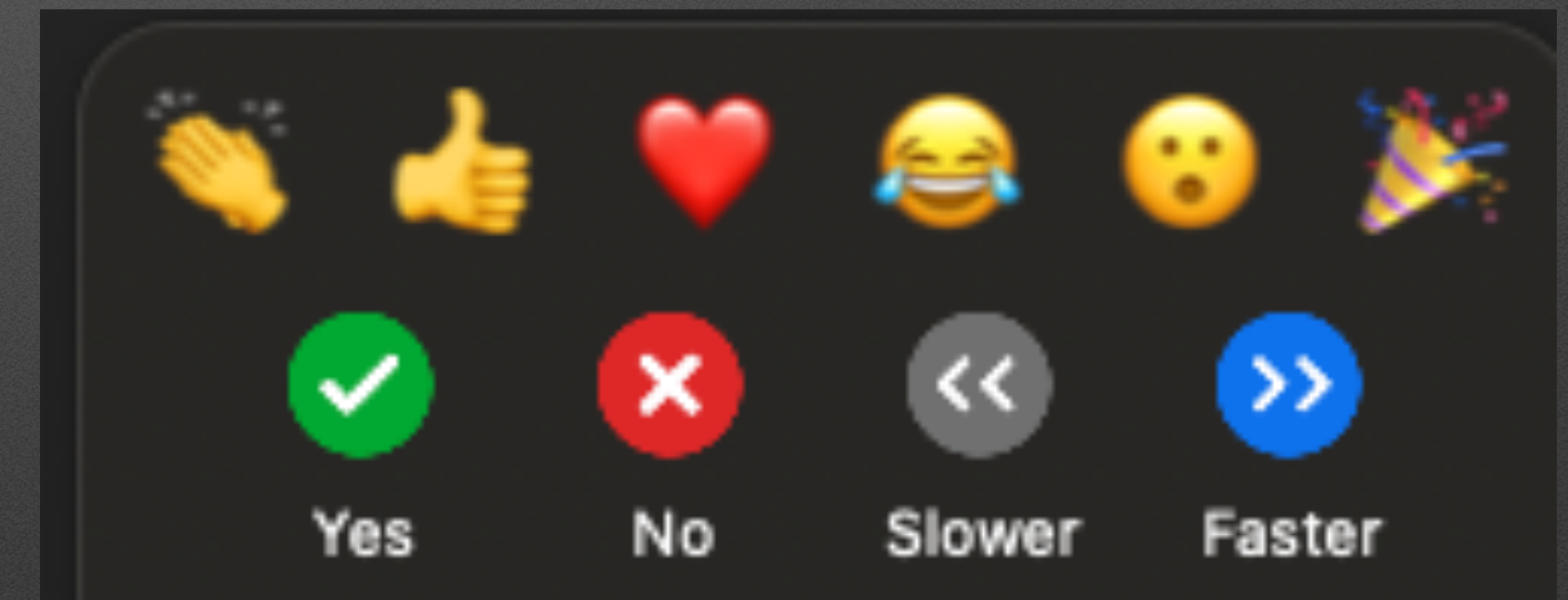
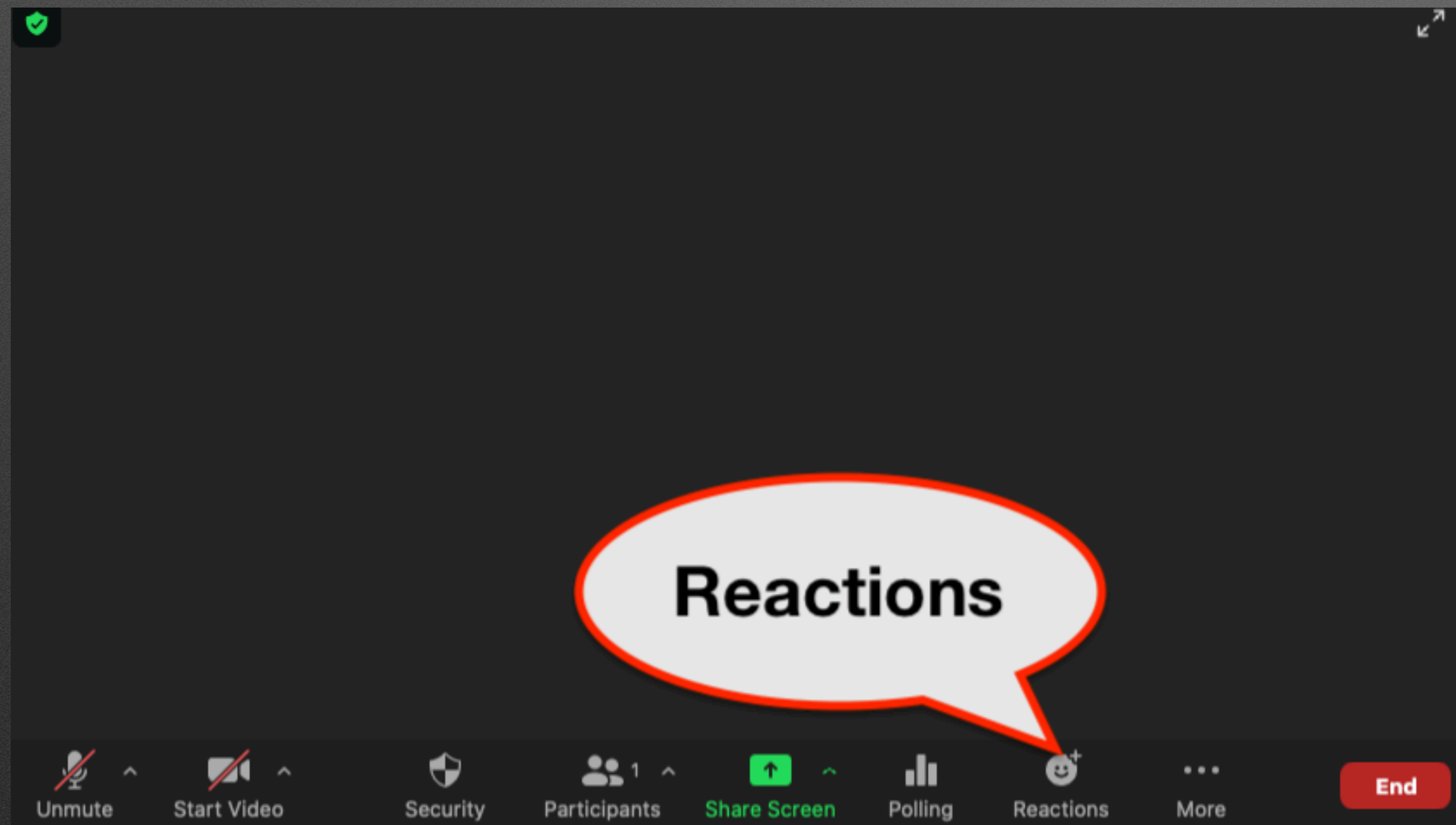
Michael Rogers

Quick Intros: You

- Name
- Where you're at (geographically & institution / type of school / level or ages)
 - This year for you: On-line vs. In-person
 - Why this session? Outreach? In class? Other?

You & C.S. Content

- Answer the following questions with Zoom reactions



Do you have prior programming experience?

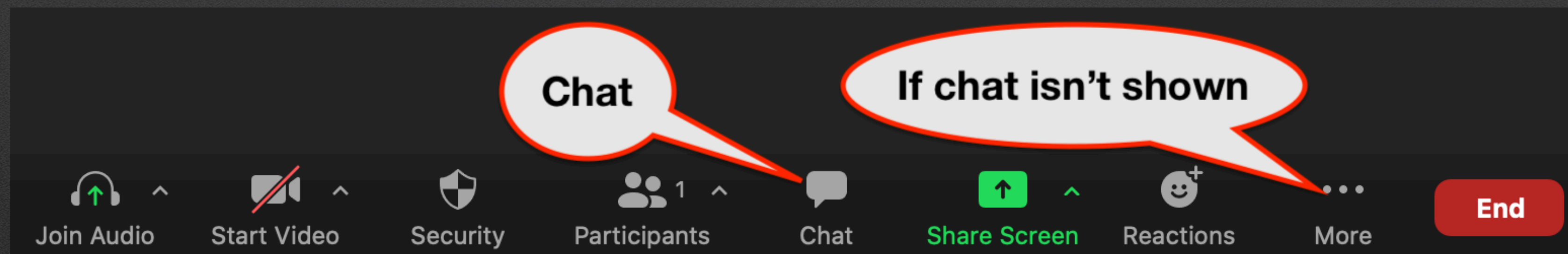
- Blocks (Scratch) 🙌
- Python 👍
- JavaScript ❤️
- Other 😂

Questions / Comments

- Voice for critical things (“Whoa! Do that again!”)
- Raise Hand reaction for a low importance question

 **Raise Hand**

- Zoom Chat for questions, discussions/shares, answering questions, etc.



MakeCode

- Collection of development environments
 - Browser based - No install!
 - Block-based + text languages (JavaScript / Python)
 - Hardware integration

MakeCode

Arcade Games

- What's your favorite arcade game? Enter in chat!
- Nostalgia time (for some of us): Arcade Games of the 70s-80s
 - Pong (1972), Asteroids ('79), Pac Man / Ms. Pac Man ('80), Dig Dug ('82)
 - Nintendo NES's Super Mario Bros (1985)
 - Nintendo Game Boy (1989)

Arcade: A Tour

Our First Game

1. Starting
2. The world and starting the game
3. A player & controlling the player
4. An objective / gameplay
5. Riffing!

2. The world and starting the game

3. A player & controlling the player

4. An objective / gameplay

5. Riffing!

Take Aways

1. Built in types (Sprites) and support for Game concepts
2. Palettes categorize features
3. Lot of room for creative flair
4. Interaction is often “contact”

Hardware Example
Thanks to GHI Electronics

Break 1: 15 Minutes

Breakouts: Group Sourcing

- Goal:
 - Meet people!
 - What games can be created?
 - How can they help communicate content?
- How:
 - ~3 people / ~15 minutes to evaluate three games
 - Answer some cue questions on Google Sheet

Share Out

- About 2-3 minutes per group
 - What was good bad?
 - Anything cool?

Breakout Rooms

Share Out

- About 2-3 minutes per group
 - What was good bad?
 - Anything cool?

Break 2: 10 Minutes

Example 2: Tile Maps

Discussion

- Scratch vs. Arcade?
 - Arcade: Transition to text based languages
 - Arcade: Game specific primitives
 - Arcade: Objects (?)
 - Scratch: Turtle coordinates and vector
 - Scratch: A little more flexible
 - Arcade: Potential for hardware (may be problematic)
 - repl.it / REPLIT.COM
- Course content?

Resources

- Microsoft SIGCSE session last Friday (Jacqueline Russell)
 - Videos, Files has PPT/PDF; Links to AP CS Principals
- Arcade's Resources: <https://arcade.makecode.com/>
 - Since it's 3/14 (Pi Day...)
- MakeCode Forums: <https://forum.makecode.com/>

Thanks!
Workshop Evaluation Survey

BrainPad Signup