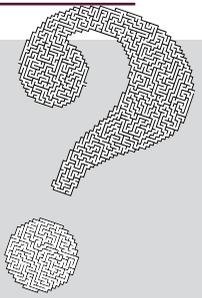


PUZZLES, DRONES and solving problems



"How can I solve that problem?" Anna Blake, the instructional technology specialist at Mt. Vernon Elementary School in McKeesport, encourages students to ask themselves this question when they run into coding glitches. I met Anna when I visited Elizabeth Forward High School during Remake Learning Days. Although she was talking about debugging, I appreciated the value of her lesson when I watched kids practice problem-solving skills during two activities called Spring Break Away and Drone With It.

SPRING BREAK AWAY

The girls in Megan Smith's tech ed class are having fun watching their classmates try to solve the problems they created.

I am with Assistant Principal Anthony Popowitz in the Command Center, a classroom where the girls are seated around four tables pushed together to make a big one. They are staring at a computer screen, watching a group of kids in real time as they attempt to solve brain bending puzzles inside the former Fab Lab trailer that the girls renovated into an escape room.

The story line is that the kids in the trailer are supposed to be in Mexico on spring break. While planning a beach party, they get "locked" in a closet and must solve puzzles to get out. This team gets two clues and 30 minutes to solve six puzzles that involve things like Morse Code, counting and figuring out what to do with a mysterious Mad Gab message that says ALT REESE ARI QUIL.

"They're doing the beach balls now," a girl in the Command Center announces.

From my computerized vantage point, I can't tell exactly what the kids in the trailer are doing, but I know the moment they solve each puzzle because they squeal and raise their hands in victory.

"They have three more puzzles. They're halfway there."

Suddenly the lights go out in the trailer. To decipher the next puzzle, the kids must use a black light, which makes the room glow eerie red on the computer screen.

"On the sides of the treasure chest there's a hole. You have to feel and figure out what it says."

"What?!" exclaims the designated leader, a girl wearing a grass skirt. Her face looms on the computer screen as she peers at an iPad mounted in the trailer to communicate with the Command Center via Face Time.

"They're at the last puzzle," a creator nods.

Now I'm watching the countdown clock because the kids have only 58 seconds left. With 43 seconds to spare, they finish and the team erupts.

"Listen to them screaming," laughs Mrs. Smith.

As the victorious kids celebrate by taking a group photo, I ask a boy "how was it?"

"Awesome!" he confirms.



Assistant Principal Popowitz with girls in the Command Center



The team successfully escapes the escape room



Selecting buddies



Showing high schoolers how to use Sphero

DRONE WITH IT

For Remake Learning Days, high school seniors Kevin, Hunter and Cameron wanted to create an obstacle course for a friendly drone competition between visiting fifth graders and various high school classes, but today they keep running into problems.

The first is wind. The small, flying robots are too light to contend with the breeze and gusts keep knocking over the orange hoops on the course. After consulting with tech ed teachers, Greg Schutz and Tom Glass, they set up two obstacle courses on the ground to race remote controlled cars, but one of the vehicles broke.

Now everybody has to improvise.

Miss Blake and her 5th graders arrive, carrying metal suitcases filled with small iPad-controlled robot balls called Spheros. Their heads swivel toward the bleachers when they hear the rumble of feet tromping down metal stadium stairs.

"The high school kids are coming down. Show them what you know," Miss Blake says, instructing her students to pair up with a teenage buddy.

"How do I move this little thing around?" a girl asks her younger companion, who fiddles with the iPad to demonstrate.

Two girls pay close attention to a boy who holds a bag of Cheetos in one hand and a remote control in the other. "First, we're going to take off, then I'll show you guys how to go forward and backwards," he casually explains as he munches on the puffs, which turn his fingers orange.

A ball speeds past my feet, followed by a high school girl chasing it down the field. "This is so cool. Do it again!" she giggles as she runs by.

"Miss Blake, what time are we staying here 'til?" a boy asks.

"One thirty."

"Dang! I wanted to stay until 2:30."

Miss Blake looks at me and smiles. "As you can tell, this is the best day of their lives."

All problems solved. ■

Writer, teacher, and speaker, Ann K. Howley, is currently working on a young adult novel.