Monday 2/6/18

The students in Mrs. Goodrich's class got started back with robots today. Much to the delight of Coach Fitz and Mrs. MacDonald, most of the kids did robots last year and they were eager to get started.


The first challenge was to power up the robots and connect to the iPads. Coach Fitz gave the kids 1 minute of silence, to work as partners to see if they could do it on their own. Many groups figured it out on their own and one of those groups demonstration how they did it to the whole class.

A few problems arose, however, because the robots were so close to one another. It was not always clear which robot was which when the kids got started. To help, the adults visited with teams that were having difficulty and helped them get squarred away. Sometimes, it helped to make the robot and the ipad a little further away from everyone else so that only one robot appeared on the ipad at a time. It helped a lot to have Luke Fitzgerald, from the Green Mountain Gears FTC team, present to help trouble shoot.

Once everyone was connected, Coach Fitz gae the kids a few minutes to just play. Most of the kids wrote cool programs using sound.
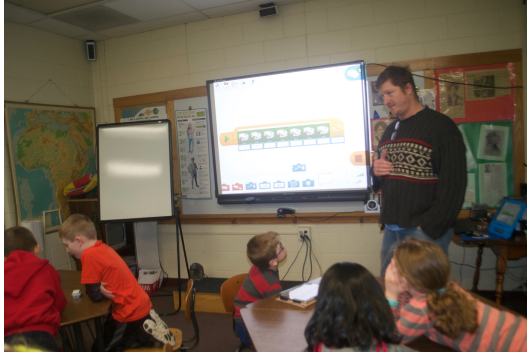
After a rew minutes of playing, Coach Fitz redirected the group to listen about lights. We talked about how lights keep us safe, like with stop lights or police lights. We talked about how we all understood how green means go and red means stop. Coach Fitz then asked if the teams thought they could make a stop light with their robot. Everyone got started. He told the teams to make "thumbs up" when they had finished their work.

After a minute or two, several hands shot up. Coach Fitz visited with the team to see their work. He brought the ipad to the front of the room and showed it to the whole class. Everyone was able to see how that group used a light block to make colors like red and green.

As more hands shot-up, more ipads were displayed on the main screen.

Affer a few minutes, everyone had a working program.

Demonstration Program-"Yes, we did it!"
https://youtu.be/2cHC-IyY1y8

Coach Fitz led the group is a discussion of real stop lights. We talked about whether they changed right away, or not. He then challenged the teams to make more realistic stop lights and to raise their hands when they were done.

After few minutes, some hands burst up. The first group made the lights last longer by adding multiple light blocks. Coach Fitz praised this team.

A few moments later, another team shot up. This team approached the problem from a totally different perspective. This team used a wait block, which kept the light shining for longer.

Based on these two presentations, the other teams worked feverishly to incorporate the wait blocks and repeated light blocks to make their programs more accurate.

After everyone had a working program that was more accurate, Coach Fitz asked if they teams could make their programs even more accurate. He asked he lights only work once a day, or do the lights keep working all day and all night.

The teams got to work again and within a few moments, the first hands shot-up. The main screen revealed their program, which had a long string of lights blocks that repeated red, yellow and green.

After a few more minutes, teams started to raise their hands to highlight a new programming block, the repeat block. The repeat block allowed teams to use fewer blocks and to use them repeatedly.

Demonstration of Program with Wait and Repeat blocks.
https://youtu.be/eKQ8hnkfexo

This was about the time that class ended for the day. Next week, Coach Fitz said they would learn some more new things about robotics and programming.