

# AS EASY AS RASPBERRY PI - PD14425

1. Project Description Describe/show to what degree the project was carried out as planned. Include what went well and what proved to be a challenge. Include a synthesis of your journal entries.

- Our original concept for our PDIG was Raspberry Pi as I was told Lord Aylmer had 15 kits. Unfortunately, the parent who had the kits gave them to someone else so we had to revamp our project.
- The programming or coding part of the project remained in tact and we looked at other tools and other programs to introduce students to the concept of coding.
- We explored various programming languages including Scratch which was created at MIT.
- With Scratch, students will be able to program interactive stories, games, and/or animations
- Coding (and Scratch specifically) helps student learn to think creatively, reason systematically and work collaboratively all essential to life in the 21<sup>st</sup> century.
- During the four days, teachers experienced what the students will experience and were given the opportunity to collaborate with their peers at the same time.
- Teachers were given the opportunity to create resource and evaluation criteria for their students

2. Project Goals Describe/show to what degree the goals of the approved project were met. If the goals were only partially met or not met at all, describe the reasons for this.

- Student engagement
- Coding
- 21<sup>st</sup> century goals/skills
- Experience different type of coding from various tools such as BeeBots, Ollie, Ozobots and lasting Scratch online
- Discovering appropriate vocabulary - coding, communicating, collaborating, sensors,
- Exploring various concepts in programming as well as sharing, ah ha moments, problem solving.
- Learning the coding language of Tickle, and Scratch as well as exposing other block coding tools
- Create presentation tools in order to share introduction to coding
- Create How To documents to support teachers and learning

## Day 1:

GOAL: Explore what is robotics and how can we scaffold learning using various tools.

### ACTIVITIES:



- [www.tts-group.co.uk/on/demandware.static/-/Sites-TTSGroupE-commerceMaster/default/dw9a623d95/images/images/1001794\\_02\\_TTSBOT\\_18\\_large.jpg](http://www.tts-group.co.uk/on/demandware.static/-/Sites-TTSGroupE-commerceMaster/default/dw9a623d95/images/images/1001794_02_TTSBOT_18_large.jpg)) Explored Beebots and learned had to get the bee to move in a square, follow a specific path and explore different challenges created by the RECIT



- <https://store.sphero.com/products/ollie>) Using Ollie, the teachers had to program the device to move using an app on the ipad. Teachers used the free app called tickle and they had to have the Ollie move forward, backward, make a square. The teachers then had to create a maze for the other team to navigate through using coding.
- The teachers then used their computer to complete an Hour of Code <https://code.org/learn> and explored the various levels of coding possible.

## Day 2

GOAL: Explore further the programming language called scratch

### ACTIVITIES:



- Explore Scratch - <https://scratch.mit.edu/>
- Described the screen and what it looks like
- Teachers were then instructed to have their sprite (character) from one side of the stage to the other, they had to get their sprite to make a square, make a triangle, incorporate sound, and change the background.

## Day 3

GOAL: Resource creation

### ACTIVITIES:

- The teachers divided themselves into groups and each created the "how to" for BeeBots, Ollie, Scratch and Hour of code.
- Teachers created presentation tools
- Teachers created lesson plans

## Day 4

GOAL: Bring back ideas and sharing the student success

## ACTIVITIES:



- (<https://ozobot.com/>) presented teachers with a new programming tool called Ozobot.
- Ozobots can be used in two different one. They have pre-programmed light sensors that track a path or they can be programmed using coding language very similar to Scratch.
- Teachers explored various tools and then we explored how such a tool could be integrated into classroom practice.
- The teachers spent the rest of their time finalizing the lessons and the how to documents

### 3. Project Outcomes Describe/show the gains that the participating teachers achieved through this project.

- Successfully completing connection of the tools by the teachers and the students
- Launching the computer and access the various apps and software
- Successfully creating an animation with the software Scratch
- Lessons were created and "how to" documents for the students and teachers, ensuring their learning of the software as well as the integration of the tool into their learning.
- Student success was demonstrated through their ability to create and solve the problems.
- Through observation as well as written evidence, teachers were able to assess if the students were well prepared for their LES' and able to complete the various tasks
- Through observations, teachers assessed the students

### 4. Reinvestment Clearly describe how the resources created and/or the learning achieved by the participants can be of benefit to the educational community at large. If applicable, comment on whether or not this project should be carried out by other teams and if so, how it could be improved.

- The teachers were very keen on the project and wanted to share the power of coding with others in our school board
- We had submitted a PDIG for next year in hopes that they might be given funds to release them to go to various different school
- We had planned to possibly hold mini PD session by region as our board is so geographically vast.
- All the documentation will be found in a Notebook by the end of June. The site of the notebook is; [Robotics \(Web view\)](#)