

## Coding and Gaming Club – Helping Kids Learn to Create the Games they Play



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When you walk into a Coding and Gaming club session in the Valley View Library Media Center's computer lab area it is anything but quiet. An average of 20-30 students can be seen talking, laughing, and working together

on their latest programming projects. The productive noise of collaboration and sharing are the norm for these kids who are all here to learn how to program computers and make things like their own games using tools like MIT's Scratch and Microsoft's Kodu.

The Valley View Coding and Gaming Club is new at our school this year and is open

to any 4th or 5th grade student. We meet one day a week after school and two other days after lunch. The main activity is learning to program, but we are also looking forward to celebrating International Scratch Day on May 17, 2014. There are approximately 80 kids in Coding and Gaming Club, with about an equal number of girls and boys. Students at Pioneer, the other elementary school in Ashwaubenon, also have the opportunity to be in a coding and gaming club. Parents are invited to attend with their student and it is really exciting to see their involvement. The number of participants shows that we are addressing a need at school for something students are really interested in learning.

The club kicked off during Computer Science Education Week in December 2013, when almost the entire school participated in Hour of Code activities. Students were very excited to use Code.org's tutorials, which worked well in Coding and Gaming Club because the resources on their site use the same style of visual programming tools that Scratch and Kodu employ. Students put blocks of code together to create programming rather than having to generate code line-by-line with the keyboard.

Scratch has been the main programming platform so far, but we will add Microsoft's Kodu this spring. I try to blend teaching explicit programming concepts with personal choice for the students to keep them engaged. We recently started a badge system where students can show the ability to code certain things, like animating a sprite or controlling their movements with keyboard keys. Students earn their Scratch badge by demonstrating 15

different skills, and then they are challenged to create a game of their own design. Some students have already earned the badge, and some probably never will because they are motivated by other aspects of programming. The goal is to give them the knowledge they need to do what they want to do while not placing unnecessary requirements on them.

Kids play a lot of games, so I am excited to help them learn to be game creators and builders instead of just game consumers. One of their current challenges is to create their own Pac Man game. If they can do that, they will have demonstrated the ability to use a lot of the Scratch programming basics that they will use to build whatever they want later. It has been exciting to see them struggle productively while figuring out how to do it.

One thing I emphasize is that this is a lifelong activity that they can do for more than one afternoon a week. Some students and their parents have set up Scratch accounts so they can build and save projects at home that they excitedly share the following week. One student remarked, "My mom challenged me to make a game at home, and using what I learned I did!" That is a true success indicator for me, and by that definition our Coding and Gaming Club has been successful so far.

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## "Hire My Kids!"

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forepersons at lunch and walking them through the next set of tasks and problem-solving as a group so that less time was wasted on miscommunication during the shifts. Another leadership set was developed between a young lady known for her velvet-gloved, confident diplomacy and my rather curmudgeonly student aide. He would snarl a command and they would look to her to translate; once translated, all would smoothly comply. It was a strange dynamic to witness, but it certainly worked for their crew. Only once did the leadership selected by the shift truly lead to more comedy than function. A four man group of close friends campaigned to their shift that between them they had all of the leadership skills needed to have success. Dubbed 'the Oligarchy', this crew soon found that true collaborative leadership is not based on a popularity campaign. It took a bit of guid-

ance and a lot of teacher-hosted foreman lunches, but their shift managed to be successful too.

This year's Mass Assembly will roll out in the next two weeks. There is sure to be the usual mayhem, learning curve, and knowledge-gaining moments, but guaranteed, my students are going to succeed in their manufacturing tasks, and they are going to make me proud too; every day.

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