CODEQUEST

YOU'VE PLAYED THE GAMES, NOW DESIGN ONE!

By Eric Atkinson

Grown ups think video games, and even computer games are like the black pit of evil for kids: time wasters, and the corrupters on youth. Even when they let you play, they feel guilty about it. If you love gaming and have a knack with math, here's a way to make your parents feel good about your hobby. Learn to program your own video games. There are a number of places you can learn to do this – summer camp programs at universities for example, or the Children's Technology Workshop has a program for grades 4 to 8 where you can build and take home Windows-based video games. (www.hands.on.ca/CTW 1-866-704-2267).

But I wanted to learn some hard core programming, and if you think you're ready for a challenge Real Programming for Kids might be just the right thing for you. There are almost 500 kids enrolled across Canada, 130 from the GTA. Bob Burgess and Elliot Bay are co-founders of the program. They teach programming in a way that is hard to learn elsewhere, and hire only under-graduate university students that love teaching to do the job.

The curriculum RP4K uses teaches kids how to solve problems, practical applications of math, as well as the syntax for whatever computer language the students are learning. They have also chosen not to use "canned" software like GameMaker but instead teach common computer languages. Participants stay interested because they are making a game that they can be proud of and that will be fun to play. The games are generally classics like Pacman, Frogger, and Mario, but you get to add your own features and customize the games

It really takes a special teacher to figure out how to cram all this technical computer language information into the kids' brains. RP4K look for people who can get through to kids and are real individuals. For example, a C++ teacher for Real Programming showed up for an interview on roller blades! Another was instantly hired after he exclaimed he was immature so could relate to the kids. The way they choose teachers pays off because I've always had a great time and learned a lot in all the classes I've had.

RP4K classes involves the gradual development of your project from week to week. With help and advise from your instructor and your own problem solving, you manage to type in something you hope is close to perfect that has a ton of build errors (build errors are small parts of code that are incorrect, either due to typos or because you forgot to add something). This is followed by debugging, which you start yourself. However, you usually come to that one little error that just plain doesn't make sense and the instructor comes to help you. Sometimes they'll give you a "recess" break if you've worked really, really hard . (We always play Half-Life when we get a break; it's installed on all the computers for the Half-Life Mods class). The best part is that there are never more than four people in a class so the programming progresses quickly.

The games you make in Real Programming classes proceed in a number of stages. First off, you add in the code that will draw your character on the screen. Next, the code for moving the character is created. After this, you get a background drawn. Now you synchronize the characters position with the background so that he walks on floors, can't move through walls, etc. This is everyone's favourite part of the process: we get to kill the character! Enemies are added at this stage, if applicable. Finally, cheat codes and game customizations are added to finish it (the last stage is different for every participant).

Real Programming is an excellent way to learn how to build computer software. Courses are offered weekly during the year and there are day camps during the summer and March Break.

There are locations all over the GTA, so if you're interested visit **www.realprogramming.com /index.html**.