

Workshop Notes: Game Development

Why Game Programming?

- Gaming is more prevalent now than ever
- Most students have played video games
- Interactive programs are generally more interesting and satisfying
- More and more platforms have been introduced in which to program
- Attracts students interested in graphics and programming

Languages and Platforms

- [Game Maker/Game Maker Studio](#): 2D game programming engine. There are several books out on the market that offer curriculum/workbooks for students. Licensing is fairly inexpensive.
- [The Game Factory 2](#): 2D game programming engine. Similar to Game Maker. Some work books available.
- [Clickteam Fusion](#):
- [Unity](#): 3D game programming engine. There is a free and pro version. Digipen's Zero Engine is somewhat like Unity.
- Digipen:
 - ProjectFUN - 2D development engine; being retired at Digipen in ProjectFUN workshop and CS0 course.
 - Zero Engine - 2D/3D development engine; Used for Digipen's current ProjectFUN workshops and CS0 course.
- [Scratch](#)
- [Snap](#)
- Python
 - [Pygame](#): Available in version 2 (Mac & Windows) & 3 (Windows)
 - 9-12 grade students; no math requirement
 - One instructor used a lot of kinesthetic activities (think CS4FUN) to teach Computer Science concepts (took about 3 weeks with this before starting to use computer)
 - Focus on the Computational Thinking first
 - Great way to teach Python
 - Used book, "[Hello World](#)," to teach Python
 - Programming in Python, Stuart Reges:<http://homes.cs.washington.edu/~reges/python/>
- Visual Basic
- Java
 - [Greenfoot](#)
 - Gridworld
- C#
 - [XNA Studio Express](#)
- [Lisp](#)
- [CS in Math: Bootstrap](#)- teaching Algebra with games

Other Notes

APCS counting as Math or Science Credit

- Counselors not recommending students take APCS for Math or Science
- Perhaps take this on as a group to find out what colleges in the state are accepting and what high schools in the are are providing in terms of credit

Android Development:

- Android Studio (in beta)
- Washington Technology Alliance: Provides grants for teachers for Android tablets and training in App Inventor
- Marty's Android course @ Stanford: <http://web.stanford.edu/class/cs193a>
- CS Principles curriculum has been developed and based on AppInventor

Thanks to all that participated today.

Remember that we will not have a meeting in February as the Tech Out event will be going on that month.