

Tech News

Report on first meeting

The Spring Hill Tech Club met for the first time last Tuesday, with 4 boys and 3 girls attending (6 5th graders and one 6th grader—I'm still hoping to have a couple of 4th graders attend).

We started learning to use Scratch to do computer animation. Because all the 5th and 6th graders had learned some Logo, they were familiar already with the coordinate system and could move quickly into doing animations.

I started by showing a "name" animation that Abe and I spent most of winter break writing, then showed them how to use both "glide" and repeated "move" instructions to move sprites around. We also covered changing "costumes" to get more realistic walking, and "wait" commands to get the timing correct. Then students started their own projects. Some got quite a bit done on their animations.

This week we'll learn to run parallel threads and to broadcast messages to start new threads. We'll also look at making sprites interact, which will be useful for video games later on.

Running scratch at home

There are pointers to the version of scratch we are using (as well as some example programs) at

http://www.soe.ucsc.edu/~karplus/scratch_programs

Flash drives are the best way to transfer animations between home computers and school computers. The biggest project we've done takes less than 1Mbyte, so even an old, tiny flash drive should work fine.

I checked local stores and on the web, and the best deal I found was at

<http://www.pexagontech.com/>

which has 512Mbyte drives for \$15 and 1Gbyte drives for \$19 (plus \$4 shipping). The price includes engraving a name on the drive, which I highly recommend.

Future Activities

We'll keep doing programming in scratch, but we will sometimes do other projects. Here are a few ideas:

- Sound crew: learning to use the schools new PA amplifier.
- Soda-bottle rocket launchers: making launchers like we used in 5th grade science.
- Family Science Night: develop projects for Family Science Night. We might also have demos of the scratch animations then.
- Hot-air balloon. I have a large demonstration hot-air balloon that we could launch. This should work well in the current cold weather, if there isn't much wind.
- Dyeing fabric with indigo. (This involves some somewhat high-risk materials, like dye remover and lye, and has the potential for permanently staining clothes, so it may not happen.)
- Building a solar oven.
- Building a solar furnace with a Fresnel lens.
- Building a catapult.
- Flying a camera on a kite to take aerial pictures.

I'm still looking for other fun ideas—send me your ideas at

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