Computational Thinking Oriented Summer Professional Development
University of Alberta

Hello All

This is just a note to make you aware of a number summer Professional Development opportunities dealing with the use of computers, computing and project based learning.

First, the University of Alberta`s Computing Science Department will be hosting a Google CS4HS Summer Academy again this year. The Academy will consist of five 2-day work fairs on a variety of topics.

These fairs are similar to workshops but with more focus on having teachers acquire, create and/or develop materials that will be of personal value. The fairs will tend to use project based approaches and will allow participants to work at their own level. The expectation is that all participants will leave the fairs with materials they can use in their classrooms.

The sessions are:

1. **An Introduction to Python, Python Gaming and the Raspberry Pi** - July 29th and 30th

2. **Incorporating the Raspberry Pi and Cisco Networking into your Classroom** - July 31st and August 1st

3. **Creating Project Based Learning Materials with Scratch** - August 8th and 9th

4. **Game Maker - A Computer Science Tool for Grades 7-12** - August 19th and 20th

5. **Assessment in Computer Science** - August 21st and 22nd

The **Creating Project Based Learning Materials with Scratch** and **Game Maker - A Computer Science Tool for Grades 7-12** work fairs should be of special interest to junior high teachers. Both fairs will deal with interesting learning environments and teaching approaches that could be incorporated in the up-coming Career and Technology Foundations program of studies.

For more information please go to the U of A's Launch CS site at http://launch.cs.ualberta.ca/cs4hs and/or contact Harvey Duff at hduff@ualberta.ca.

In addition, the Faculty of Education is offering two sets of courses dealing with computational thinking and PBL.

The first is a one week course called EDCT 400/500 Computing Oriented PBL to be held from August 12th to 16th. As the title suggests the course will be offered at the 400 and 500 level.

These courses will have participants deal with the design, development, implementation and assessment of project based learning (PBL) materials that focus on the development of computational thinking and creative computing.

They will be of especial value to Middle School teachers (Grades 5 to 9) interested in using the Career and Technology Studies program of studies for computing oriented PBL and to CTS teachers interested in the computer oriented Occupational Areas such as CSE, DES, COM, INF, FIN, NET, ELT, etc.

The courses would be of value to **any** teacher interested in PBL approaches that help students learn how to use computing technologies to solve interesting problems.

The courses can be accessed on Bear Tracks by searching for CTS Summer Term classes (designated by prefix EDCT). The course topics are described as **Jr High Pro Lrng: BIT/Comp Sci**. Additional information will also be available at https://sites.google.com/a/ab-cse.com/copbl/.

The Faculty of Education is also offering another similar one-week class. The course is EDCT400/500: Introduction to Robotics and will run from August 19th to 23rd. This course will also be offered at the 400 and 500 level.

These courses will have participants deal with the design, development, and testing of a number of projects using the Lego Mindstorms NXT robotic environment and the NXT-G programming language.

They will be of especial value to Middle School teachers (Grades 5 to 9) interested in using the Career and Technology Studies program of studies to do a Robotics program or to any teacher looking at incorporating Robotics into their subject area.

The courses can be accessed on Bear Tracks by searching for CTS (EDCT) Summer Term classes. The course topics are described as **Robotics Lrng: Cnstrct Pract**.

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