Tuesday, May 28, 2013 9:50 – 11:30 a.m. Gates Academic Center Room 416 Viewpoint School 23620 Mulholland Drive Calabasas, CA 91302

Annual Computer Science Open House



Demonstrations of Computing Ability

Students learn to compute and process data across many different Science, Technology, Engineering and Mathematics topics using a proven mathematical approach to programming.

The Computer Science department at Viewpoint School teaches creative and inventive programming concepts while exposing them to key topics of STEM disciplines.

During this event, students will demonstrate projects including the following topics:

- prototypical interactive whiteboard system incorporating a Kinect system that plays Tic-Tac-Toe and Mine Sweeper games, and may also solve algebraic equations using character recognition, render 3D graphics and performs facial recognition
- 3D graphics rendering engine
- program that models the energy levels and eigenvectors of an atom (particle-in-a-box)
- networked game (programmed by eighth graders)
- various games developed by introductory programming students

RSVP: danderson@viewpoint.org

Brought to you by: Viewpoint School 23620 Mulholland Hwy. Calabasas, CA 91302 (818) 591-6500 For more information contact Daniel Anderson Computer Science Teacher <u>danderson@viewpoint.org</u> (818) 591-6402



Summer School Opportunities:

Programming Fundamentals

Dates: June 18 – June 29 (2 weeks) Times: 9:00 a.m. – 4:00 p.m. (with a 50-minute lunch and 10-minute breaks on the hour) Instructor: Mr. Dan Anderson

Grades: 8 – 12

Description:

This course provides an intensive (and extensive) continuation of the concepts of computer programming and data structures that use the Scheme language developed at MIT. While the course starts at the beginning, by the end of the second week students will have covered much of Viewpoint's Computer Science and Intermediate Computer Science courses, including many different data structures used within the context of programming video games.

Artificial Intelligence Boot Camp

Dates: July 1 – July 12 (2 weeks) Times: 9:00 a.m. – 4:00 p.m. (with a 50-minute lunch and 10-minute breaks on the hour) Instructor: Mr. Dan Anderson **Grades: 8 – 12** Prerequisite: Programming Fundamentals Camp (or consent of instructor)

Description:

Artificial Intelligence is rapidly becoming indispensible to modern business methods. This course is an intensive overview of the standard methods of Artificial Intelligence including: Bayesian networks and their application to spam detectors; Laplace smoothing; Markov chains; and hidden Markov models. Time permitting, linear regression, gradient descent, and neural networks will also be covered, along with their application to character recognition. In this class, students develop programs for solving problems for which standard programming methods are ineffective. Depending on time and class interest, image processing may also be discussed.