Pepperdine OMAET VirtCamp
Extreme LEGO Learning Challenge

Objectives:

Students will develop a sense of community while working collaboratively to solve a complex technology-based problem. Each group of three participants will construct and program a LEGO 'robot' while being conscious of their own learning process and documenting their team's construction of knowledge. Each team will publish the learning reflections and the history of their project in a multi-media website.

Tasks:

Build a LEGO construction designed to meet the requirements of the specifications provided to each team.

Write a program in Yellowbrick Logo to control the LEGO invention.

Test, debug and enhance the construction and the program as necessary.

Record key aspects of the project development through still photos, video and personal learning journals.

Archive notes, sketches and thoughts regarding your project.

Think of the powerful ideas and curricular concepts explored during the development of your project.

Create and publish a web site containing a history of your project's evolution, personal learning reflections of each teammate, thoughts on the collaborative process, links to related resources and anything else that will tell the story of your team's learning process. Video clips, photos, sound and graphics may be used to help tell your story.

Test your web publication for errors, broken links and multimedia problems. Use www.websitegarage.com to check your site.

Post the URL for your web publication in your cadre's newsgroup.

Cleanup and reassemble your LEGO building set before you leave!

What May You Use?
Students may collaborate with each other, ask questions of faculty, speak with other teams, and use any relevant materials real or virtual in addition to the LEGO and computer-based materials. Please keep track of such interactions and auxiliary materials you use and include this information in your web-based project history.

Project Schedule
Friday morning – Quick tutorial on the RCX (programmable brick) and Yellowbrick Logo. Build and program your LEGO invention.
Friday afternoon – Learn to publish on the web or to edit digital video.
Sunday afternoon – Tie up loose ends. Assemble the web site reporting on your project development and the related learning processes. Publish it on the web. Test the site.
Monday morning – Demo your invention and web site.

Friday, Saturday and Sunday evenings may be used as lab-time to work on your team project. You will be responsible for managing your time and completing the project by Monday morning.

Things to Remember
Failure is not an option.
You will succeed if you work together, flex your creative muscles and are persistent.
Please be careful not to lose LEGO pieces.
Save your work OFTEN! Yellowbrick Logo may crash.
More time will probably be spent constructing with LEGO than programming.
Keep track of your team's videotape.
Download digital still photos from the camera to a hard drive often. Few cameras must be shared by many people.
Remember that stills may be captured from digital videotape.
Keep track of the computer your photos are saved on and the folder in which they are saved. Name things in memorable ways.
Store your construction and materials in a safe place so that they don't fall prey to an accident or espionage ϑ
Ask for help! Faculty members, teaching assistants and other classmates can answer questions and provide a sounding board for the exploration of new ideas.
No whining!
Have fun!