



**2008 Oregon Technology Educator of the Year
Honorable Mention
Dale Yocum
Catlin Gabel School**

For 10 years, Dale Yocum has been teaching engineering principles through the use of LEGO robotics. Currently, Dale serves as the Robotics Program Director at Catlin Gabel School. Over a decade of teaching, Dale has turned on hundreds of students to the joys of engineering. As Dale recounts, "Many of these students didn't even know what an

engineer did when I started, now some have graduated and are pursuing degrees in science or engineering."

Dale proposed and implemented a high school robotics program based around the FIRST Robotics competition (FRC). Catlin Gabel school agreed to provide a large, dedicated lab space on campus, equip the lab, and underwrite the team. The school now boasts its own lab space with 40,000 Lego parts and 22 computers. Catlin's High School robotics program is a year-round endeavor. Students start in the Fall by trying out different roles on the team and earning certifications in various areas. Some of those include Design, Fabrication, Control Systems, Software, Pneumatics, Animation, CAD and Marketing. Students who earn a sufficiently high certification in the Fall are then part of the competition team in the Winter. Students on the competition team put in a minimum 120 hours a year, but many put in three times that amount. The Catlin Gabel community is especially proud of the fact that Dale's students design and build robots themselves' adults don't touch the robot or the keyboard.

Dale has expanded his reach by educating other teachers. He developed the RoboLab multimedia and NXT Multimedia Tutorial used by tens of thousands worldwide. The NXT tutorial is currently ranked in the top four sites by Google (out of 12 million) for those who type "NXT". On a more regional level, Dale has taught or co-taught Lego robotics at SuperQuest for the last five years. Dale has also organized countless outreach events to inspire more kids to become involved with science and engineering.

The results of Dale's efforts are reflected in the changes he notes at Catlin Gabel School:

"Before I came, Catlin Gabel was a school known primarily for liberal arts. There was nothing for students interested in engineering to be involved with. Now, thanks to our top shelf robotics program, engineering is on the radar screen of the entire student body. In fact, last year 8% of the high school students were on the robotics team!"