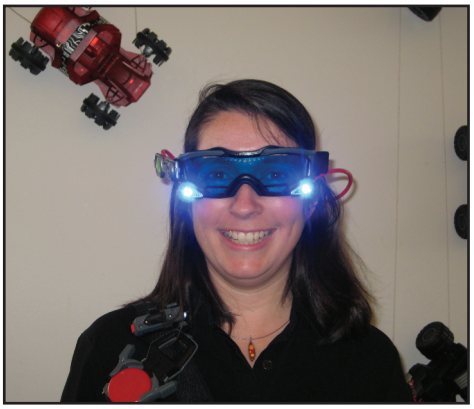
Physics

At Work

Katie Broughton



Senior Project Manager, Wild Planet Toys; San Francisco, CA

Even though Katie Broughton grew up wanting to be an astronaut, her father, a professor and self-described "tinkerer" inspired her to tackle a career in toy design. After taking some design classes in college and then in graduate school at Stanford University, Katie realized that toy design no longer had to be just a hobby.

She has been working for Wild Planet Toys since 2005, a company that was founded in 1993 and is based in San Francisco, California. The company's mission is to create quality products that spark the imagination and provide positive play experiences for children. The company is best known for their high-tech *Spy Gear* and active learning games, including the popular brands *Hyper Games* and *Smart Step Games*.

According to Katie, the most exciting aspect of her job is making science look like magic. "One of my favorite ways to use magnets is to produce a hidden switch. You can bury a magnet inside one part of a teddy bear and hide another switch in a doll. Then, when the bear kisses the doll on the cheek, the hidden switch is flipped, causing the doll to giggle," said Katie.

Katie believes that an understanding of physics is essential in her field. "If you want a motor to move arms or wings on a robot, you need to understand that bigger wings are heavier and might require a stronger motor." But an artistic eye is just as valuable as her science background. "It is important to be able to draw. It is sometimes much more effective to be able to communicate my ideas in a sketch."

Even though she still thinks being an astronaut would be a lot of fun, she would not choose outer space over her toys. "If I didn't work for Wild Planet Toys, I would probably be designing toys somewhere else," she said.

Slater Harrison

Technology Teacher and Founder of Science Toy Maker Web Site; Jersey Shore, PA

Slater Harrison always had a fascination with science toys. His career was largely influenced by his volunteer work in the country of Bangladesh, where he went to aid in the country's technical development. The experience inspired him to create science toys that use everyday, recycled materials.

As a technology teacher with his own Web site, Harrison's ultimate goal is to make science fun and accessible. "The toys on my Web site are easy enough for young kids to make; others are more difficult." Harrison's latest project is an electrical engraver for metal that uses an electromagnet, powered by a 12-V car battery charger.

Karen Levitt

Director of the Leading Teacher Program, Duquesne University; Pittsburgh, PA

Karen Levitt has been teaching undergraduate and graduate courses in science method for elementary teachers at Duquesne University for 13 years. She also adapted the Teaching Science with Toys program, a workshop that began at Miami University (Ohio) and promotes using toys to teach physical science in elementary and middle school. "These workshops use simple explanations that will not intimidate the teachers and promote the need to start teaching science at a young age," she said.

Karen admits that toys are educational, but also a lot of fun. "I use them in my presentations and to engage my students, but they are fun for adults, too."