All Terrain Art

WRC media, for high-school supplementary material, 2005 (one of 15 short pieces)

Arcata, California, May 2005: Just when you think you've seen it all, here comes Duane Flatmo's latest kinetic sculpture: 780-pounds of colorful ears, teeth, giant winking eyes, and bicycle parts. And like all kinetic sculptures, it moves. Flatmo calls this one "Extreme Makeover."

Inside Extreme Makeover, four people pedal as hard as they can on bicycle-like machines. Nearby, a 2-story cat moves slowly across the sand. There's a mega-lizard, too, crawling out of the Eel River. It's the annual Arcata to Ferndale Kinetic Sculpture Race! With a wink of its oddball eyeballs, Extreme Makeover rolls ahead.

All-Terrain Art

The Arcata to Ferndale Race is one of kinetic art's ultimate challenges, covering 40 tough miles of sand, mud, road, river, and sea. Sculptures are 100% human powered, so it takes three days. Organizers call this wacky competition the "Triathlon of the Art World."

Duane Flatmo has been entering the race for over 20 years. He knows what it takes to succeed. The art must move well across all terrains. It has to double as a boat. It must be light, yet sturdy, so it can be propelled easily. It also must be safe and legal to drive on roads, including headlights and brakes. Sculptures earn points for engineering, artistry and yes, even speed.

Flatmo is one of Humboldt County's most distinctive artists. His sculptures are always a highlight of the race. "Duane gives his art the attention needed to bring them to life," says Charlie Jordan, director of the race.

The Kinetic Sculpture Race has become so popular that several local artists created a Kinetic Lab in Arcata. Flatmo teaches classes in kinetic sculpturing. You can even take a field trip to see the Lab and the Kinetic Museum.

Artistic Engineering

Building a kinetic sculpture is a big project. "I have a love-hate thing with these kinetic sculptures. It's daunting," says Flatmo. It requires a mix of precision, engineering, and imagination. And definitely a sense of fun.

Flatmo applies all these talents to a high degree. The head-turning outside of Extreme Makeover is made of cardboard, paper maché, tape, Styrofoam, and fiberglass. The carefully engineered structure is based on 1-1/4" chrome-molybdenum aircraft tubing for lightness. Each of the four bicycle stations inside have 36 gears: a nifty engineering feat.

"There are basic physical properties such as up and down that are constant in our universe," explains Charlie Jordan. "How to get something to go up and down is easy when you use gears and pulleys and counterweight to balance heavy objects. All of that has to do with physics. Kinetics is a great learning ground because you get to be hands on."

The kinetic sculptures may be a lot of work. But Flatmo and his friends always look forward to building the next one. "You start thinking about how you can outdo what you did the year before," he says.

Question/Activity: You can learn more about the Kinetic Sculpture race and see pictures of other kinetic sculptures at http://kineticsculpturerace.org/. What do you think would be some challenges in making human-powered art that moves across both land and water? Read the race rules for hints.