

Farmer & Miner

Find the force

Students study renewable energy sources as oil supplies dwindle

Michael Neilson

February 16, 2005 - "It's possible in your lifetime there won't be any oil or gasoline — for sure in your children's lifetime" said Rick Shin of the National Renewable Energy Laboratory in Golden.

Coal Ridge Middle School sixth-graders struggled to understand that statement. "No oil? You mean, like, there won't be any?" muttered one puzzled student.

That is the message being brought to schools and public events around the state through the governor's Energy Education Initiative.

It arrived last week for Coal Ridge science students via a high-tech van boldly painted with the label RnE2EW — Renewable Energy and Energy Efficiency on Wheels.

Jolene Gittlein and Tara Calloway's students got hands-on experience with two sources of renewable energy: creating electricity with water and the more familiar solar energy.

Knowing the source of solar energy, the students popped back from the end-of-oil message when Shin told them the sun would be around for another 4 billion years. (An assignment due at the end of the week may slip past sixth-graders, but they're confident that 4 billion years is plenty of time.)

Outside the school, students gathered around Matt Kuhn from the Golden laboratory. He showed the youths how to use small hand-held solar panels to convert the day's bright sunshine into electricity to run tiny fans. Many had seen such displays before.

Inside the classroom, the experiment was a bit more mysterious.

Pairs of students hooked up components of plastic tubes, wires, clips and a small battery. Then they peered intently as bubbles formed to mark the separation of water (H₂O) into hydrogen and oxygen.

Then the H and the O were recombined. And as they did, electricity was produced and used to run a small fan.

That, the students declared, was "way cool."

Calloway wrote a grant request that was approved for a scholarship to bring the two laboratory scientists and their van to Coal Ridge Middle School. The school couldn't have afforded the educational display otherwise, she said.

By the end of the day, Shin and Kuhn helped more than 240 sixth-graders produce electricity without plugging a cord into a wall socket.



Coal Ridge Middle School sixth-graders Allyson Fenimore, left, and John Bourn study the pieces they will assemble during their science class to create electricity from water. Photo by Michael Neilson

