You Did Not newly built oven.

This club member shows off his newly built oven.

Computer face recognition is the field of using computers to match a face to a set of known faces. It can be used to find fugitives or to identify people like a driver's license. Modern systems perform as well as humans in identifying faces, according to the FRVT 2006 evaluation. Facial changes, e.g. expression, facial hair, make-up, lighting, and age, make this task difficult. One way to identify faces is to extract features from the set of known faces and to find the best measure that divides them. Improving on this basic technique creates software that can do twice as well as humans in clear, uncluttered images.

Families create kelp beads at FUSE night.

Let's Explore Density of Water
As you learned in your density labs, the density of water (H₂O) is 1 g/cm³. What you may not know is that the density of water can change as the temperature of the water changes. When water warms up, the H₂O molecules that make it up have more space between them. This causes the water to be less dense. As water gets colder the H₂O molecules get closer together. This causes the water to be more dense. Water is not the only substance who's density is changed by changing temperature. All substances become more dense as they get colder.

5 Things You Did Not Know About...

1. Marie Curie!
   - She pioneered the field of radioactivity.
   - She won the Nobel prize in Physics (1903) and in Chemistry (1911).
   - The unit of radioactivity *Curie* (Ci) is named after her and her husband.
   - The notebooks she used are still radioactive.
   - She named the first new chemical element that she discovered *Polonium* for her native country Poland.

The LEAPS After School Club
By: Tom Rico, After-School LEAPS Program

With no homework or classwork to interfere with the fun, many students have visited the after-school LEAPS club to participate in fun science experiments happening every week. The club has been a hit because it is all about having fun while learning about science, not to mention there are tons of free snacks! Students have experimented and built many things in the past several weeks, including colorful jack-o-lanterns using home made circuits and powerful solar ovens, like the one in the picture. These ovens were used to amplify the power of the sun to cook pizza and s'mores for the club members to eat! Club members have much to look forward to in the next several weeks, with upcoming field trips and new experiments! If you think you are the kind of person that loves to have fun building and experimenting with science, new club members are always welcome!
LEAPS in the Classroom
By: Lina Kim, LEAPS Fellow

States of Matter

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About LEAPS

Let's Explore Applied Physical Science (LEAPS) engages UCSB graduate and undergraduate Fellows as instructors and mentors for inquiry-based science in Grade 8 classrooms. By establishing collaboration between Fellows, science teachers, and UCSB scientists in school classrooms, the LEAPS project implements hands-on, minds-on learning experiences in physical science. LEAPS partners with the Endowment for Youth Committee in Santa Barbara to coordinate after school clubs at junior high sites. The Fellows also help younger students to prepare for Family Science Nights that foster community interest to science education and opportunities.

Fellows

Reggie Archer
Lindsay Gary
Anthony Karmis
Lina Kim
Kimberly Kline
Thomas Kuo
Amir Rahimi

Teachers

Marilyn Garza
Julie Kluss

UCSB Participants

Beth Gwinn
Fiona Goodchild
Wendy Ibsen
Samantha Freeman

Visit the LEAPS website: www.leaps.ucsb.edu
Send questions or comments to msgarza@msgarza.com

Ribbit: Why does hair turn gray?

Causes they're old!
Because of genes in your DNA.
Because you know too much.
Not everything lasts forever.
Gray is the new black.

Susy Olmedo
Fernando Arellano
Jennifer Gutierrez
Carlos Torres
Sophie Sterling

See Page 1 for the scientific answer!