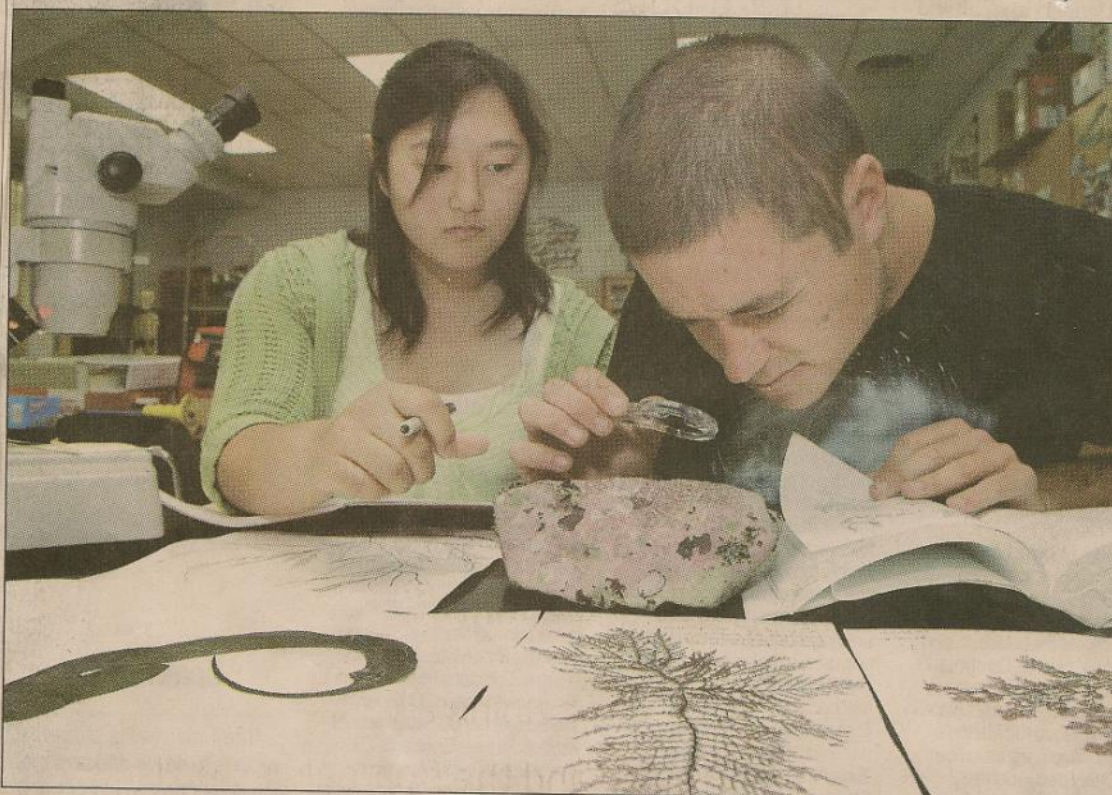


TEAM PLAYERS: Students making breakthroughs



Photos by Bryan Walton/Staff

Urina Kim, left, and Cassidy Anton study an algae-covered rock and presses as part of their project with St. Joseph High School's Science and Research Institute.

Projects focus on environment

By NATALIE RAGUS
STAFF WRITER

nragus@santamariatimes.com

St. Joseph High School's nascent Science and Research Institute has kicked off its second year this summer with several projects aimed at giving a boost to the environment.

Five teams of paid student interns have launched involved research projects on topics ranging from marine algae to population growth to underwater robotics.

Each project uses cutting-edge technology to explore possible solutions to pressing environmental issues, such as sustainable energy.

"It's amazing what we've been able to accomplish in just five weeks," said Gayle Pratt, an adviser for the intern team that learned to harness energy from ocean waves to power a light bulb. Proponents have called such tech-



Cassandra Randolph, left, Jonny Strellman and Katie Pena have been working on a computer project to determine how many people the Earth can support.

nology the "wave" of the future, as the population shifts from expendable to renewable energy sources.

Science teacher Larry Madrigal came up with the idea of launching the institute last year during a research trip to

Belize with a group of his students.

Upon his arrival home, bolstered by the support of Purdue University professor Jon Anton, Madrigal set about making his grand idea a local reality.

The institute opened its doors in June 2008.

Student interns begin their research during an intensive five-week summer session, but continue their projects throughout the year under Madrigal's watchful eyes.

The first class of interns made several notable breakthroughs.

Last summer, Cassidy Anton (Jon's son) and laboratory partner Paulette Rigali got the surprise of their lives when algae they had collected near Shell Beach turned out to be of a species previously found no further north than Carpinteria.

The 2009-10 interns primarily

See STUDENTS / A8

STUDENTS:

Continued from page A1

consist of St. Joseph pupils, but two college students and one Pioneer Valley High School junior round out the mix.

Each intern has established him or herself in his or her own right.

One intern team expanded the algae project with the help of a computer program that uses DNA typing to accurately and quickly

categorize algae species.

The program was developed by fellow intern Jonny Strellman, who also puts his high-tech skills to work as member of the team assigned to create a computer model to calculate the maximum population that Earth can comfortably hold.

The team will present the city of Pismo Beach with a catalogue of the algae species native to the Central Coast in the hopes that council members will post the document

for public viewing.

"We're trying to find a way to give back," Cassidy Anton said. "The public should know that we are living amongst something that's really environmentally incredible. Taking care of things comes from knowing their value."

Along the same lines as the algae project, the "brittle star" team seeks to categorize and identify different species of the lesser-known members of the star fish family.

However, the project primarily

focuses on understanding and tracking the brittle star reproductive cycle.

A robot capable of functioning underwater may prove useful in scientific experiments and "search and rescue missions" alike, say members of the intern team building such a robot. They'll enter their invention in a contest later this year.

Finally, the team that built a machine capable of harnessing enough energy from ocean waves to light a

light bulb dreams of a future where such structures become commonplace in coastal regions and power up to 70,000 homes.

"We're taking on the challenge that we need to face in the future," said intern Taylor Merlo.

Any Santa Barbara County high school student wishing to participate in the institute may to pick up an application at St. Joseph High School at Bradley and Foster roads.

For more information about the institute, call 937-0238.

COUPON

Santa Maria Beauty College



Where the Art of Hair Styling Begins

\$5 Haircut

Special with coupon • Expires 08/15/09

1778 So. Broadway • Santa Maria, CA 93454
(805) 928-1848

285 South St. #N • San Luis Obispo, CA 93401
(805) 543-3305

Supervised Student Work • Classes Forming

COUPON

"YOU'LL GET THE MOST THOROUGH CARPET & TILE CLEANING EVER, OR IT'S FREE!"

FREE MATTRESS CLEANING & SANITIZING

With purchase of carpet cleaning & carpet protector throughout your whole house

\$95.00 VALUE FREE

not valid with any other offer. minimum charge applies. exp 7/31/09.






Santa Maria
928-3210
www.carpetcleaningsantamaria.com

Upholstery Cleaning • Tile & Grout Cleaning • Pet Damage Specialist

Artistic Dentistry for the Family
Come and Meet our Friendly Staff



Most Insurance Accepted, including:

- TRICARE
- PacifiCare
- SecureHorizons



SENIOR DISCOUNTS
Call for your
Exam & X-Ray Special

- Dentures, Extractions
- Dental Implants, Crowns, Bridges
- Teeth Whitening in just One-Hour!

922-5122
www.dradriandds.com

Dr. Adrian Krulewecki
USC Dental School
El Doctor Habla Español

1414 South Miller, Ste. #8, Santa Maria
Behind Valley Medical Drive-up Pharmacy