THE FACULTY CORNER

FROM THE ANACAPA SCHOOL SCIENCE DEPARTMENT. . .

Science Adventures in Sedgwick:

Upper School Biology and Lower School Physical Science

From the whir of the blender pulverizing cow liver, to the hum of collaborative studying preceding the first biology test with Emily d., to a very competitive game of "Jeopardy: the Test Review" in which the definition of an isotope was hotly disputed, the science classes in Sedgwick have been abuzz. The year started off at a steady clip, with Upper School Biology students delving into the chemistry of life and Lower School Physical Science students pondering the nature of matter and energy. As we approach Thanksgiving (oh, the chemical energy to be released – or stored – upon digestion!), Biology students are polishing off their unit on plants and photosynthesis, and Physical Science students are just completing a tour of the periodic table and beginning to explore chemical reactions (no, we will not be blowing anything – too big – up).

In addition to labs, classwork, and homework, Biology class this year has an added component: the year-long project. The goal of this assignment is to provide students with the opportunity to explore in-depth a topic of interest to them, to apply the scientific method, and to work on their science writing skills. Students were given three options to choose from, including a research paper, an experimental project aimed at submission to the County Science Fair (held at UCSB, March 10-11, 2016), and a third option—dubbed "C is for Creative!"—which allows students to propose a completely different format for their project exploring biology at the interface of other disciplines (*e.g.,* Biotechnology, Biology and Computer Science, or Biology in Fashion or Architecture). Students have proposed some very exciting ideas, ranging from exploring the most efficient carbon-capturing plants to grow along highways, to creating a computer game based on the principles of photosynthesis, to growing bioluminescent fish and assessing the physiological ability of a sparrow to carry a coconut (Monty Python, anyone? The underlying biology will be rigorously assessed, don't worry). Physical Science students will also soon be embarking on a project of their own.

If you, as a parent, would like to get involved in science at Anacapa or provide extra support, here are a few ways you can do so:

1.) If you work in or have studied a science field, you could act as an extra mentor to a student for their project (*e.g.,* provide extra feedback on how to conduct a particular experiment, where to get supplies, etc.);
2.) Give a guest lecture or lead a guest activity in a science class on a related topic (or, suggest a guest speaker);
3.) Keep an eye out for students fundraising to finance their projects; I'm sure they'd appreciate your contributions! Please contact me if interested (emilydemoor@anacapaschool.org).

(over please)

Thank you, as always, for the support you provide to your student and their new teacher as we navigate through the wondrous world of science, dressed to kill/ dissect/ grow/ observe/ mix/ measure in our spiffy white lab coats and splash-resistant goggles. I have thoroughly enjoyed getting to know each and every one of my science students, and I look forward to developing these relationships further during the course of our future adventures.

~Emily de Moor

Robotics

This is the third year of LEGO Robotics at Anacapa. The robotics students thus far have built four versions of their robot and competed against one another in both "sumobot" and mission programming.

The "sumobots" are helpful for the students to become familiar with the Lego parts and how they can be useful for different tactics. The missions add more complexity to the robot design as well as add the programming dimension. Teamwork is a huge part of this class, and compromise does not always come easily. Working collaboratively is always an adventure in class, and the students are learning to work together and become better working partners.

As we enter the second quarter, we have turned our focus to applying the programming and usefulness of what this class is all about. On a recent field trip to the UCSB Nanotechnology Lab, we spoke to Anacapa alum dad Marty Robertson. He told us all about the lasers he uses in his work. These lasers are controlled by robotics in order to control each purposeful move in the production process of his nano-work. We will be taking another trip to UCSB for a tour of the UCSB Robotics Lab in the near future.

The energy that the students bring to class and the application they are learning are very exciting parts of their overall education at Anacapa.

~Bryan Anderson