CAPE COD TIMES

Science savvy

By ELSPETH PIERSON
CONTRIBUTING WRITER
April 06, 2008

BREWSTER — Science projects aren't what they used to be.

The staples are still there — three-fold poster boards and displays involving strange liquids, food coloring, and faux volcanic explosions. But the process behind these old stand-bys is changing — quickly.

A visit to the Laurel School's Science, Math, and Technology Fair last week in Brewster proved this clearly enough.

I graduated high school in 2003 and already I couldn't quite keep up. When asked about the process they went through to research their projects, each child had the same response: searched the Internet for credible Web sites, did a bit of reading, and typed up a report.

Some had gone so far as to master the graphing complexities of Excel, complete with standard deviation bars and color-coded keys. They are 10 years old.

At 10, there was no Internet research. When I came up with an idea, I went to the library and took out books. If there were no books on the topic, I was forced to pick a new one.

Fifth-grader Adrian Singer took a somewhat different approach. The idea that sparked his project — Melty Medicine, in which he attempted to determine whether Aspirin, Motrin, or Aleve would dissolve fastest in lime juice — did come from a book. Following this moment of inspiration, however, he performed all of his research online.

"I checked on the most probable to be correct Web sites and got the most probable to be correct answers," Singer said. "I found that salt helps activate the dissolving process in the body, and that aspirin has the largest amount of salt."

From there he formed his hypothesis — that Aspirin would dissolve the fastest, which he then proved correct. The 10-year-old's father, Andrew Singer, said he tries to remind his son that not all Web sites are created equal. "We try to remind him to make sure the sources he uses are credible," Singer said, "not necessarily peer reviewed, he's only in fifth grade, but accurate."

Like Singer, all of the school's older students are incredibly adept online, according to the fourth- and fifth-grade teacher Stephanie ElSehrawey of Brewster. "These kids are so tuned into the computer," she said, "it's their immediate search. They know all about USB flash drives and e-mail — they're very savvy and very comfortable, and in that respect I'm ten steps behind."

Still, ElSehrawey reminds her students that there are many ways to gather information. She said sometimes the Internet can be too large of a resource, and that the library is still often a good place to start.

That's also where first-place fair winner Jetta Cook began, according to her mother Mary Hake.

"It's hard to balance technology and just going to the library to get a book," said Hake. "I think it's important for her to be multidimensional in the way she takes on a project and to learn not only through surfing the Internet."

After perusing the pages of an aromatherapy book, Cook decided to study the effects of smell on human emotion. Perched on a stool in front of her poster board, she waves bottles of vanilla, orange oil, and several other scents below my nose. "Do you have any memories?" she asked, and pointed to an Excel graph her father helped her make. "I found that most for most people, scent did affect their memories and bring up emotions."

I tell her that I feel happy. She explains this result is what she would expect based on her research and some Google articles she read. "I've been using the Internet for a long time," she added. "I am comfortable with searching."

According to second- and third-grade teacher Karin Pearce-Small, even the younger kids are adept Internet explorers. "The main technology at this age is searching online for information, and sometimes typing," she said, "they know how to do a lot." Pearce-Small adds that she does her best to keep things hands on and "messy."

Second-grader John-Paul LaBarge's project was evidence of this philosophy. LaBarge devised a racecar jump for his project, "Catching Air," and attempted to determine based on car size and shape which model would fly the farthest. He revealed his demo: a hands-on test launch, complete with a measuring stick and a trash can catch basin.

LaBarge did not do any online research, but his older sister Olivia's project suggested that perhaps it is only a matter of time before the he turns to the Web.

The fifth-grader said she used a Web site to research the light bulbs used in her test of whether fluorescent or incandescent bulbs would stay on longer when powered by a solar panel. The siblings' youngest brother, Mac, is still a few years away from Internet research as a first-grader. But with the increasing amount of time kids spend on the computer, he may grow up to be even more Internet savvy than his older brother and sister.

Even as kids' tech knowledge has grown, however, the questions at the root of science projects have staid the same for the most part. "The approach to research may be different," as Hake put it, "but if you look back 50 years, the projects are similar. There are still the basics — what rots the fastest, does ice melt."

Glancing up, Cook interjected. "Mom, I think everyone knows ice melts," she said.

Good point — and one she probably didn't learn on the Internet.