

Schools engineer ingenuity

Educators hope to spark interest in hard sciences



Daily photo by Bayne Hughes

Somerville Road Elementary Principal Dee Dee Jones tests her card structure to make sure it is teddy bear worthy during an activity in a workshop on the "Engineering Is Elementary" curriculum. Jones and Austinville Elementary Principal Beth Hales built the 3-foot tower with index cards, testing the ability to work together and figure out ways to make the tower strong and attractive.

curriculum.

Solving problems

Each unit has a corresponding book featuring a child character who has a problem to solve and a friend who is an engineer.

Somerville Road Elementary Principal Dee Jones said she likes the project because it works with the math, science and technology initiative.

"I can see where this could spark some real interest in engineering," Jones said.

The Boston Museum of Science designed the project after a survey found that children do not know what engineers do, and that those who go into engineering usually had a parent, relative or someone close to them who is an engineer.

**By Bayne Hughes
Staff Writer**

Who designed the Great Wall of China? Who took electricity and converted it into light? Who designed the rockets that carried man to the moon?

If you answered "engineer" to all three questions, then you probably know more than most elementary students.

A new project, "Engineering Is Elementary," is teaching elementary students what engineering is and what engineers do.

Brenda Terry — executive director of the Alabama Math, Science and Technology Coalition at The University of Alabama in Huntsville — conducted a workshop to introduce the project to Decatur's elementary principals.

Terry, a former Gordon-Bibb Elementary (now Banks-Caddell Elementary) teacher, said the project is not a full curriculum.

It's one unit, or about four lessons, for each of grades two through five, that teachers can integrate into their Alabama Math, Science and Technology Initiative

Terry said parents know that math and science are important, “but they have this attitude that ‘everything is OK with my child and school.’ ” She said parents and students don’t see the real world

correlation with math and science.

She said a lot of children don’t have the capability of earning an engineering degree in college, but engineering touches everyone.

Most humans spend 95 percent of their time interacting with technology such as pencils, chairs, toothbrushes, cell phones and buildings.

“We need more technology literacy than ever before,” Terry said.

“A lot of jobs are technical. They require problem-solving and critical-thinking skills.”

Study plans

Second grade’s “Engineering Is Elementary” unit is called “A Sticky Situation.” Terry said the unit uses what the students learn in a previous unit on soil. The students have to decide which soil would be best for building a wall.

Then they’ll mix the soil with water and rock and let it dry.

In third grade, the students study agricultural engineering.

They study bees and how they pollinate flowers.

Their related project is to design a pollinator that can hold pollen like a bee and pollinate a flower.

Fourth-grade students study electrical circuits as part of the curriculum.

The engineering unit requires them to help Emily solve a problem in the Australian Outback.

The students have to design an alert system that reminds Emily when she needs to feed and water her animals.

Fifth-graders learn about sources of power like wind and solar energy.

The students design a windmill structure to help Leif in Denmark “catch the wind.” The students also get NASA-produced lessons on acoustical engineering and how it’s used on the space shuttles and other rockets.

Every Decatur fifth-grader will get to tour the United Launch Alliance facility.