

EDUCATION & CAMPUS

BRIDGE BUILDING CONTEST

The 5th Annual Light Weight Bridge Building Contest, sponsored by the **SAMPE New Jersey Chapter** and the **New Jersey Science Supervisors Association (NJSSA)**, was held in May. This year's contest was expanded by the donation of more than 400 solar panels from **Public Service Electric and Gas of New Jersey (PSEG)** and also the financial contributions of **Atkins and Pearce Technology, National Starch and Chemical, Union Carbide, and PSEG**.

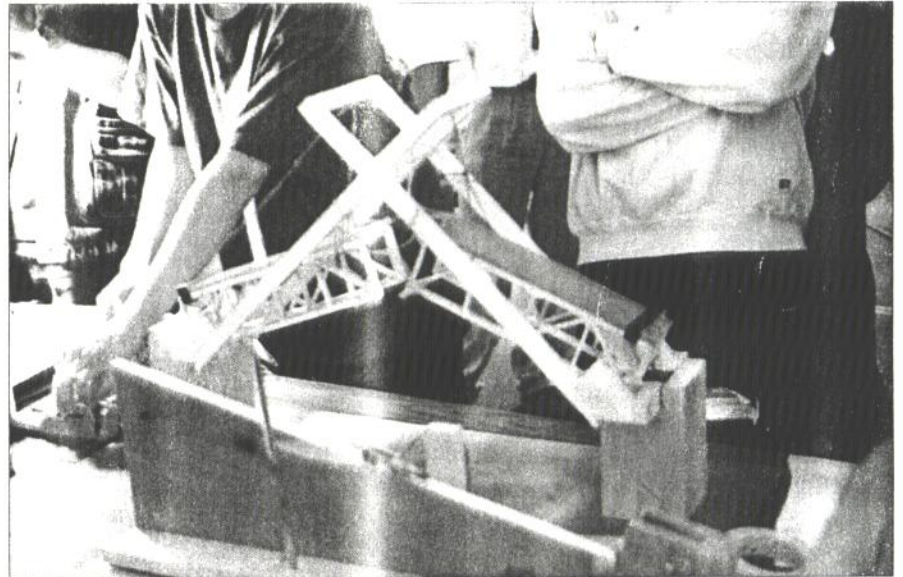
Student teams from 25 high schools throughout New Jersey were provided with kits that contained composite materials such as fiber, fabric, braid, resin, honeycomb, solar panels, a motor, and gears. The contest required teams to build a light weight, solar powered drawbridge. The bridge not only had to support 75 pounds over a 22 inch span, but, also had to demonstrate the ability to raise and lower using the solar panels as the energy source. Since the contest was held indoors, electric light bulbs substituted for the sun.

Ten New Jersey SAMPE members made up the judging panels. Points were awarded for lightest weight bridge, solar power design, effective use of kit materials, and oral engineering report.

Prize winners included **South Brunswick High School (1st Place)**, **Summit**



This fully loaded bridge was a carbon fabric strap with a fiberglass rod on top to which provided stability.



This bridge, with a Nomex honeycomb road surface, was one of the more complex structures. But, it worked!

High School (2nd Place and Most Innovative Composite Design), Park Ridge High School (3rd Place), and Hopewell Valley Central High School (Best Solar Energy Design).

Prizes included cash, graphite fishing rods and reels donated by **Abu Garcia**, and sports bags and graphite tennis racquets donated by **Prince Sports Product Group**. Finally, every student participant walked out with a solar calculator provided by **F.W. Woolworth**.

Companies which graciously donated materials for the contest and the kits included: **Allied Signal, Atkins and Pearce Technology, Akzo Carbon Fibers, Baltek, BASF, Dow Chemical, Hexcel, Hoechst-Celanese, JPS Glass Fabrics, Kirkhill Rubber, M&Q Packaging, Plascore, Sargent Welsh Scientific, Textile Technologies, and Utility Development.** — *Howard S. Klinger, New Jersey SAMPE Chapter.*

UNIVERSITY OF ARKANSAS WINS SOLAR-POWERED BOAT COMPETITION

A boat designed by students at the **University of Arkansas, Little Rock**, won the sprint race in the 1995 Solar Splash world championship collegiate boat competition held in June on Lake Michigan, Milwaukee and sponsored by the **American Society of Mechanical Engineers (ASME)**.

Arkansas' aluminum-constructed, solar-powered craft featuring a motor adapted from an industrial forklift, sprinted the 300 meter straight-away course in 26.38 seconds, beating a boat from Japan's **Kanazawa Institute of Technology** by more than four seconds. The winning boat cost about \$2,000 to design and construct, considerably less than the estimated cost of the Kanazawa solar-powered boat. ♦