

Perspectives on Science and Everyday Experiences from the SEE Leadership

By Mona Bailey and Gwendolyn Boyd



Mona Bailey



Gwendolyn Boyd

The National organizations, Delta Sigma Theta Sorority, Inc. together with its over 900 chapters, Delta Research and Educational Foundation (DREF) and the American Association for the Advancement of Science (AAAS) are collaborating on a five-year national initiative to make literacy, competency and advocacy in science, mathematics and technology a priority among African-American youth and their families.

The collaborators envision that Project Science and Everyday Experiences (SEE), through a variety of informal everyday experiences, will bring about change that is positive and pervasive for African-American youth. In effect, the change that is evident in the SEE initiative captures the characteristics that Talcott Parsons maintained must prevail for positive social change to occur. Parsons stated that positive social change requires:


- A change in roles with those previously excluded now included;
- A change in role relationships in which there is no subordinate role; and
- A change in status providing not simply equitable inclusion but a respected position.

Those three changes permeate the SEE project. First, there is a change in roles as African-American youth and their families become creators and informed users of science, mathematics and technology rather than simply consumers.

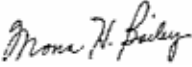
Second, a change in role and relationships for Project SEE participants will result from experiences that provide the impetus for participants to join with decision-makers in shaping policies and practices in science and technology that impact their lives, well being and career choices. Third, it is planned that Project SEE will bring about a status change for African-American youth resulting in their influence and contributions being recognized and respected.

These changes will produce a positive change in the culture with a worldview in which science, mathematics and technology are deemed important and worthy of participation and respect. Thus, these changes through Project SEE will facilitate and motivate the empowerment of SEE participants.

The pyramid for change, coupled with the symbol for energy and power symbolizes the positive impact Project SEE will have on the participants as they are trained throughout the vast network of Delta Sigma Theta Sorority, Inc. Science and Everyday Experiences is more than a title; it becomes a new way of life. It is an honor for the three collaborators to use their leadership in making this positive change a reality for AfricanAmerican youth and their families.



Gwendolyn E. Boyd



Mona H. Bailey

Science and Everyday Experiences Advisory Board Co-Chairs

Perspectives on Science and Everyday Experiences from the SEE Leadership

By Shirley M. Malcom, Ph.D.



Shirley M. Malcom

Science and technology are integral parts of our lives. Science and technology are often invisible parts of our lives, taken for granted, unseen or unnoticed. And yet if we look more closely we find the products of scientific inquiry all about us in an understanding of nature, including ourselves.

- We awaken each morning and turn on the television. The weather report tells us what we will likely experience that day. Based on that report we decided what we should wear, whether we need a coat, sweater or umbrella. Those who live in tornado alley understand the value of Doppler radar in providing early warning. This information that we take for granted is provided by a series of satellites that monitor the patterns of weather as storms move from West to East across the United States.
- Some of our strongest memories are associated with smells. For me childhood Sunday dinners are associated with the smell of yeast rolls baking in the oven. Often we do not think about the yeast as a living organism or what it means for bread to “rise.” While the ancient Egyptians were able to take advantage of a chance discovery of naturally occurring yeast, it was not until the 19th century that the mechanisms of fermentation were uncovered.
- After September 11 and anthrax attacks on media personalities and political leaders, concern resurfaced about the possibility of smallpox being used as a biowarfare agent. Those of us who are over 40 remember being vaccinated but seldom considered how the body provides immunity or how long the immunity, full or partial, might last.
- A number of people have had the experience of a “bad hair day” at the beauty salon. Applying chemicals that alter the texture and/or color of the hair is tricky business; order matters as well as length of exposure and individual hair type. It’s all about science.
- Persons who have been incarcerated for years have been released on the basis of DNA evidence that can demonstrate innocence. Sensitive testing of hair, fiber, and body fluids are fundamental tools of law enforcement, tools provided by science and technology.

Δ SEE aims to make science visible, available and accessible to African-American and other families. Supported by a grant from the National Science Foundation, a collaboration of Delta Research and Educational Foundation, (DREF) Delta Sigma Theta Sorority, Inc. (DST) and the American Association for the Advancement of Science (AAAS), will provide quality science experiences to African-American and other communities, across the United States. DREF brings its commitment to and support of families, education and lifelong learning; DST brings the strength of its chapters, its infrastructure and traditions of volunteerism and community service. AAAS brings commitment to and experiences providing quality informal education to diverse audiences.

In scientific usage Δ stands for “change.” The project acronym, SEE, stands for “Science and Everyday Experiences. Together we want to change the way that we see the world and relate to it. This enriches our lives and gives families the power of science and technology to support education, and through this, personal decision-making and economic development.

As the science collaborator for Δ SEE, AAAS is pleased to be a partner in support of this work and proud to be known by the company we keep.

Science in Everyday Life

Doing science doesn't require a lot of money or special equipment. Here are some everyday experiences that can become science experiences.

Animals	Watch a spider spin its web, take your pet to the vet, ask to see x-rays at the doctor's, follow a caterpillar as it changes into a butterfly, watch a mosquito bite, look for animal tracks in the mud or snow, ask about the tools a dentist uses, act out how different animals move, watch a cut heal.
Weather	Watch the sky, look at weather maps in newspapers, read thermometers, choose appropriate clothing, fly a kite in the wind, dry clothes on a clothesline, splash around in puddles, look for signs of seasonal changes, ask family and friends about the climates where they live, watch TV weather reports, ask older relatives about the worst weather they remember, keep a weather diary for one month.
Energy & Conservation	Replace flashlight batteries, find your electric meter and measure how much electricity your family uses, recycle household materials, experiment with kitchen magnets, rub a balloon on your hair to make static electricity, identify and use kitchen tools, save water, ride a bike instead of taking a car ride, see how far a marble will roll.
Earth & Space	Compare different street surfaces, observe changes in the moon's shape in the sky, notice the variety of building materials, read about NASA's space program in the library or newspaper, read maps of all kinds, grow and examine salt and sugar crystals, make models of airplanes and boats, collect rocks and group the ones that are similar, see how shadows change during the day, enjoy a sunset.
Plants	Plant seeds in a window box, sort vegetables and fruits, compare clothing fabrics, grow mold on bread, identify trees, care for house plants, create a compost pile, collect all kinds of seeds, sprout lima beans and other "kitchen" seeds, examine parts of a flower, adopt a tree and record seasonal changes, take a walk in a park.
Physical & Chemical Properties	Measure and mix ingredients while cooking, sink and float toys in the tub, oil the hinges on a squeaky door, make and play musical instruments, dissolve sugar in hot and cold tea, blow soap bubbles, sort objects (leaves, shells, rocks), organize the kitchen cupboards, turn water into ice and steam, find and compare plastics in your home, create heat in three ways, bounce light with mirrors.

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