

# Future Fabrics May Have Built-In Thermostat

WASHINGTON — Clothing of the future may be made of fabrics that respond to changes in temperature, according to textile researchers with the U.S. Department of Agriculture.

"We are developing temperature adaptable textiles with built-in thermostats to warm you when you're cold and cool you when you're hot," said Tyrone L. Vigo, a chemist for USDA's Agricultural Research Service.

According to Vigo, one of the most promising uses for the thermal fabric appears to be in clothing meant to protect wearers from extreme cold or heat, like that experienced by explorers or rescue teams.

"Besides clothing, other potential uses," he said, "are in building insulation, draperies, carpets and even packaging material. We think these treated fabrics would stabilize the temperature around whatever they enclose—like a hand in a glove."

How much the treated fabric will store and release depends on the kind of fiber, the chemical applied, and the amount applied, he said. "A 50- to 100-percent enhancement of heat absorption or release is

probably a realistic goal."

Vigo has been treating fabrics with a class of chemicals called PEGs, short for polyethylene glycols, or with other compounds known as plastic crystals. In preliminary laboratory tests, the fabric absorbed and stored heat when the temperature rose and released it when the temperature dropped, he said.

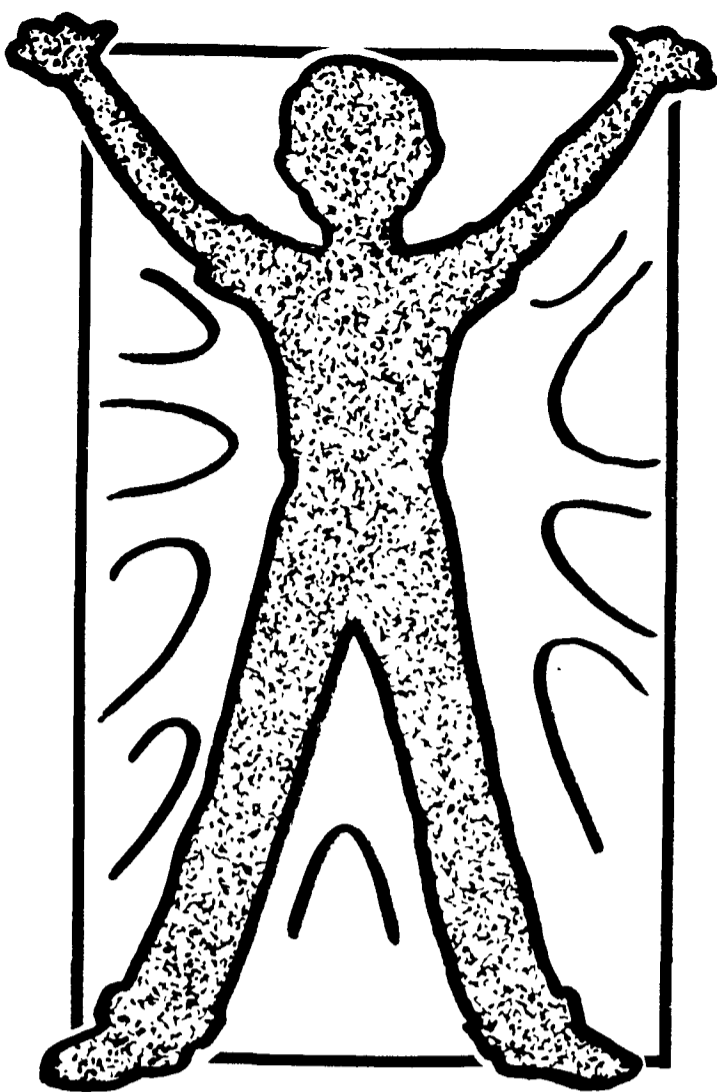
Vigo and colleagues, experimenting with temperature-adaptable fabrics since 1981, also found a shortcoming—the treated fabric could not withstand laundering or exposure to moisture.

Now the researchers, working at

the agency's Southern Research Center in New Orleans, have uncovered a way to overcome the problem. They have made the treatment durable by chemically binding PEGs to cotton and cotton-polyester blends.

Vigo said, "We still have a lot to learn about these fabrics. For instance, we don't know how much chemical must be used to produce a pronounced retention or release of heat. Nor do we know how long the effect would last in different environments."

Patents are pending on the processes the research team has developed.



## Children Have Different Needs That Require Unique Approach

One summer my neighbors decided they would like to have a garden full of flowering shrubs. As a newly married couple, they approached the task with great enthusiasm.

Together they dug the soil and carefully worked it with the 20-pound bag of fertilizer they bought on sale at the local discount store. The same day they selected four shrubs that they wanted to have and carefully planted them where they would have full sun all day long. The shrubs were never thirsty because my neighbors watered them thoroughly every evening.

Within a few weeks all but one of the shrubs had died. My neighbors were distressed. Next time, they said, they would use more fertilizer, more water, and hope for more sunshine.

Fortunately, before the next summer came around, I was able to buy them a gift I knew they

needed. It was titled "Basic Gardening."

They read that one of the shrubs they planted did not do well in full sun. Another did not tolerate the kind of fertilizer they used. And the third died because of too much water.

This made me reflect on how much children are like these shrubs. We sometimes try to treat them with the same dose of rewards and punishments and expect them all to react alike. We forget they have unique needs and individual personalities.

Parents have the best opportunity to know what problems their child is likely to have, what works best in helping their child handle a problem, and what is least effective in changing the child's behavior. Sharing such information with the teacher at the beginning of the school year can help establish a good parent-teacher relationship in education for the rest of the year.

## Emerson Is Del. Dairy Princess



Eighteen-year-old Denise Emerson was crowned Delaware Dairy Princess in a ceremony last week at the Delaware State Fair. She lives on a dairy farm near Middletown and plans to enter the University of Delaware this fall as an education major.



## BACK HOME

By Michelle S. Rodgers

Berks Extension  
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### Thinking Ahead

It's officially August. Somehow just the mention of the month brings panic. My mind connects the word August with sweet corn, swimming in the ocean, back-to-school shopping and school! It's the last word that inspired my panic, as I feel like I have only a few more weeks to get everything done before going back to school. August really is a transition month. It's a time to finish summer and prepare for school.

Besides the typical back-to-school shopping, now is an important time to build enthusiasm for learning. Your home is a gold mine of handy, inexpensive material that you can use to arouse a child's imagination and start them learning. Activities in the home can be a "learning laboratory," in which easily

arranged games and projects can strengthen your child's basic reading, writing and computation skills. Here are some August activities to do that may help to clear out the mind's cobwebs and encourage learning.

- Point out the labels on cereal boxes, soup cans or toothpaste tubes and ask children to find three A's, a C or two B's for example.
- Adapt the same game to simple math skills by substituting numbers for letters. Fold a paper towel or napkin into fractions from easy halves to tiny sixteenths and label the parts. Or ask older children to check the items you take from the grocery bags against the cash register receipt.
- To practice writing, try cutting out comic strips and asking children to fill in the captions with their own words.

- For a lesson on counting money, use a shopping catalogue. Give the child a hypothetical allowance and then ask what he would buy with his money.

- On a trip ask your children to figure out how much gas you bought and what the cost was for each gallon. Let an older one keep gas and mileage records.

Success in school involves more than mastering the skills of reading and writing. To be a good learner a child must develop self confidence and know how to listen, think, solve problems and make decisions. You can help develop these traits. When a child is hesitant about taking on an unfamiliar task, you can bolster confidence by reminding him of past accomplishments. Make compliments specific instead of general.

And don't overdo praise. If a child straightens his room, commenting that he's a good bedmaker will have more meaning than an overblown "you're terrific."

By asking children to do a job, they develop the feeling of being important at home. When my mother worked the evening shift I was often responsible for dinner and my sister mowed the lawn. These types of jobs build confidence and provide opportunities for success.

So as August marches by and I, too, make plans to go back to school, I offer a reminder for all of us to take the opportunities that arise and turn them into learning experiences.

## Take Your Time When Hiring Baby Sitter

BY PAMELA REDMOND SATRAN

Copley News Service

Hiring a baby sitter is enough to throw even a seasoned personnel director into a panic.

You're looking for someone you can trust without question with your most precious possession, and you realize that no amount of interviewing can give you the answers you really need.

There is the fear that the person who seems so nice will turn out to be a child abuser or a sex deviant. Or that the sitter's idea of child care is parking your little one in front of the television with an endless supply of pacifying sweets.

If you hire a sitter to come to your home, you worry that the sitter will spend all her time scrubbing the refrigerator instead of playing with your child. Or that you'll have to spend your own evenings cleaning up the mess the sitter leaves.

And if you bring your child to the sitter's house, you worry that your

child will take last place behind visits and telephone calls from the sitter's family and friends. The sitter may be nice enough, but what about her husband or her teenage daughter?

The whole prospect of finding a new baby sitter can be so intimidating that more than one woman I know has considered leaving her job instead.

But there are questions you can ask, things you can do to help make a good choice. For instance:

— Ask the prospective sitter "what if" questions, like, "What would you do if a child was crying for a cookie before lunch?" "What would you do if a child wet her pants?" Her answers should be close to what you would do; if she doesn't know, she's not experienced enough.

— Ask the person questions unrelated to child care, open-ended things like, "Tell me about yourself." You'll get insight into the person's character, way of thinking and communicating, all important to how she'll be with

your child and with you.

— In a natural way, leave the sitter alone with your child for a few minutes. Excuse yourself to go to the bathroom, to make an "important phone call." When you return, pay attention to how the sitter is acting with your child: it's a good indication of what will go on when you're not there.

— Don't try to replace yourself. Trying to find someone with the same education, imagination and background as you may be a mistake. If you know you would be bored or impatient caring for a child full time, realize that someone on your level will be, too. You're looking for a happy companion for your child, not a friend for you.

If your situation permits, arrange to have a new sitter watch your child for a day or two before you need her full time. Then arrive home, or at the sitter's house, half an hour before you've said you would. Trust what you see as an indication of what goes on when you're not around.