

Adults taught youngsters during "Take Our Children to Work Day."

'Take Children to Work Day' Inspires **Ford Employees' Next Generation**

subjects they study every day are used to create the vehicles they see on the road, as well as how everyone can use those subjects in the future.

During the April 26 Ford "Take Our Children to Work Day," Ford President and Chief Executive Officer Alan Mulally took part, hosting a town hall discussion with employees' children at Ford's Conference and Event Center.

Mulally led a discussion on the children's impressions of the company, and also answered their questions about Ford vehicles and the automotive industry.

The children also spent time at Ford's Research and Innovation Center, which generates many of the company's future technologies. They visited various laboratories at the center and conducted scientific experiments, such as:

• Engineering a way to keep an egg safe in a crash, mirroring testing tools used by Ford crash safety engineers to design safer vehicles;

• Using a tool seen in popular video games called human motion measurement to develop cars

• Experiencing how the ex- grams like this one.

Hundreds of children got a tremely cold temperature of chance recently to see how the liquid nitrogen changes the mechanical properties of common objects:

· Looking through light and electron microscopes to view objects in a new way;

• Exploring a multifunctional seat prototype that responds to voice commands.

"It's important for our future generations to be excited about how school subjects like math and science can be applied in everyday life, including the role they play in the auto industry,' said Paul Mascarenas, Ford chief technical officer.

"It's gratifying to see a spirit of innovation alive and well in these children and in their parents as we develop new technologies for our vehicles.'

While it may have been just another day at work for Ford employees, it offered an opportunity for the employees' youngsters to experience how the jobs performed by their parents help bring about future products and advanced technologies.

Organizers say they hope the spirit of innovation that guided company founder Henry Ford will be embraced by the next generation, partly as a result of exposing them to special pro-

GMC Sierra Seats Vibrate to Warn Drivers

The 2014 Sierra, available in dealerships this summer, offers advanced active safety features, including Forward Collision Alert and Lane Departure Warning.

With GMC's optional Safety Alert Seat, Sierra owners get feedback transmitted as a vibration through the surface of the driver's seat bottom cushion.

When the Lane Departure Warning system's camera detects the Sierra is leaving a lane without a turn signal active in that direction. a vibration in the left or right seat directs the driver's attention to the side of the lane encroachment. When a potential collision is detected ahead by the Forward Collision Alert system, both sides of the seat vibrate.

"It's akin to someone tapping on vour shoulder in a crowd to get your attention," said General Motors Active Safety Technical Fellow Ravmond Kiefer. "Using the tactile sense to communicate crash threat direction provides an effective and intuitive way to cut through the clutter of visual and auditory sensory information that drivers routinely experience.'

According to Kiefer, GM research shows that the seat may direct driver attention to the location of a crash threat more quickly and accurately than beeping alerts.

Forward Collision Alert uses a camera behind the windshield to monitor traffic ahead and estimate time to collision. A green vehicle-shaped icon on the instrument cluster lets the driver know the system detects a vehicle ahead.

When the Sierra gets too close to a vehicle ahead, the icon turns orange. When approaching a vehicle too rapidly, red lights flash on the windshield and the driver is alerted either audibly or through the optional Safety Alert Seat.

Using the same sophisticated camera technology, Lane Departure Warning uses an icon of a vehicle crossing a dotted lane marker and shines green when detecting a lane ahead at speeds above 35 mph.

The icon glows amber and flashes when a warning is active. Both Forward Collision Alert and Lane Departure Warning can be deactivated if the driver desires. Both, along with the Safety Alert Seat, are available on select trim levels.

Sierra's other active safety features include standard Stabili-Trak and optional technologies like a Rear Vision Camera and Front and Rear Park Assist. Sierra also benefits from available trailering safety technologies like Trailer Sway Control and an Integrated Trailer Brake Controller.

In addition to active safety features, the 2014 Sierra offers six standard air bags and highstrength steel in the A-pillars, Bpillars, roof rails and other body structures to create a solid and protected safety cage around the passenger cabin.

"The 2014 Sierra is our most capable light-duty pickup truck ever," said Tony DiSalle, vice president of GMC Marketing. With a full array of advanced features that protect owners before, during and after a collision, it's also our safest."



The Sierra's seats are designed to be comfortable and interactive.

Expo to Showcase Military Capabilities

fense Industry Association (NDIA) Michigan Defense Expo will take place at the Macomb Community College Sports Expo Center in Warren on Tuesday, May 14, and Wednesday, May 15. The expo is designed to show-

case the latest capabilities the military has to offer.

"We are proud to partner with the NDIA for the Michigan Defense Expo," said Automation Al-

The fourth annual National De- ley executive director Ken Rogers. "Automation Alley is dedicated to promoting the defense industry in Southeast Michigan and providing local companies the tools to expand and diversify into the defense industry."

> The event is free for Automation Alley members. Non-NDIA members are welcome. For information on how to register, visit www.ndia.org.



Henkel's New Flex Process Lets Ford Maximize F-150 Aluminum Content

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"We Care"

Henkel Corporation's automo- substituting zirconium oxide. tive group has introduced the North American production of its Bonderite Flex Process of the 2013 Ford F-150.

Used on the body of the F-150, the Flex Process enables a significant increase in aluminum content on vehicles by replacing the traditional zinc phosphating process with a zirconium oxide pretreatment. The process is helpful in the manufacturing of the F-150, which has an all-aluminum hood.

According to Henkel experts, cent, the use of zinc phosphate cant environmental benefits. becomes more difficult to control and leads to an increase in Ford F-150, Henkel's Bonderite sludge generation. The Flex Flex Process is currently used on Process offers a solution to the the 2013 Chrysler 300, Dodge Challimitations of zinc phosphate by lenger and Dodge Charger.

"Treating aluminum with zirconium oxide gives vehicle manufacturers the flexibility of processing up to 85 percent aluminum on vehicles, versus 25 percent with a conventional zinc phosphate coating," said Manish Dave, director, Surface Treatment, North America, Henkel Corporation's automotive group.

"In addition to enabling an increase in the amount of aluminum used, zirconium oxide provides better corrosion proonce the aluminum content on tection and reduces sludge waste vehicles reaches about 30 per- by two-thirds, resulting in signifi-

In addition to its use on the 2013