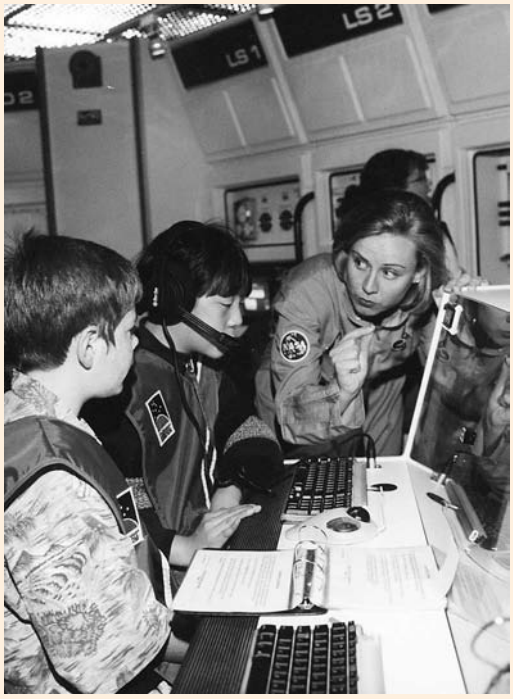
sunoco neighbors

Sunoco supports launch of Oregon Challenger Center

Students from around the region will soon be able to use their math and science skills in a hands-on environment that simulates NASA's mission control and space station. The Oregon Challenger Center is expected to open in November for students in grades five through eight.



Students from around the region will soon be able to use their math and science skills in a hands-on environment that simulates NASA's mission control and space station.

The Challenger Center, which focuses on middle school children, consists of a space station with communications, medical, life and computer science equipment. It also has a mission control patterned after the NASA Johnson Space Center.

Sponsored by the Lucas County Educational Service Center and COSI (Center of Science and Industry), the facility will be located in the Shuer Center on Seaman Road in Oregon. Sunoco has pledged $25,000 to the Challenger Center over the next five years.

"Thank you for your generous support of the Challenger Learning Center," said Tom Baker, Superintendent of Lucas County Educational Service Center. "Your donation will make it possible to enhance our science and math programs, build students' interest in technology and space and open their minds to the boundless opportunities that await them once they take what is learned in the classroom and apply it."

(continued inside, right)

Sunoco's actions demonstrate its commitment to the environment

The goal of Sunoco's Toledo Refinery is to operate in a safe, reliable and environmentally sound manner.

"It is essential that a business, whether it is a refinery, factory or retail store, be both safe and environmentally sound," said Toledo Refinery Manager Roger Lyle. "That means not only producing a product that is better for the environment but also producing it using a method that is better for the environment.

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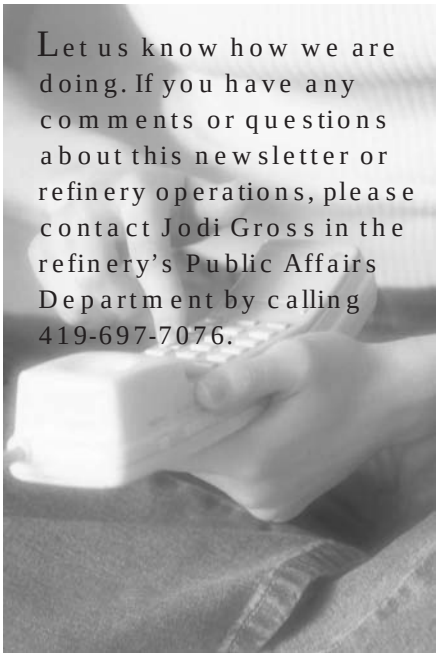

Let us know how we are doing. If you have any comments or questions about this newsletter or refinery operations, please contact Jodi Gross in the refinery's Public Affairs Department by calling 419-697-7076.

Sunoco to modernize refineries for Clean Fuels production

Families are accustomed to the mobility that comes with owning a car for work, for school and for recreation. So, a steady supply of affordable, clean-burning gasoline and diesel fuel is central to our economic well being and way of life. For decades the oil industry has been making affordable fuels that have simultaneously improved the standard of living for American families and contributed to a cleaner environment.

Since lead was removed from gasoline beginning in the early 1970s, the refining industry has continued to make additional improvements in the processing of gasoline and diesel fuel. These improvements have helped cars and trucks run cleaner and more efficiently and have reduced pollution in the air we breathe.

The Environmental Protection Agency has set new fuel standards, which lower the sulfur content for gasoline and diesel fuels. Sulfur is targeted in these new fuel standards because it significantly reduces the efficiency of automobile catalytic converters. This new fuel standard will improve the effectiveness and efficiency of low-emission control technologies installed in today's cars and helps further reduce air pollution.

Sunoco has supported these efforts to reduce the sulfur level in fuels, and has already begun reducing sulfur levels in today's fuels as much as possible using existing technology.

However, to achieve these new standards, Sunoco like other refiners will be required to make an unprecedented number of process changes to modernize facilities for the manufacture and delivery of these new low-sulfur fuels.

This will require new equipment, new technology and in some cases a new process for converting crude oil into useful fuel at all refineries across the country.

These changes will require investments topping $100 million per refinery, and some companies have already announced that they will close the refinery instead of modernizing the facility.

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Sunoco's commitment to the environment (continued from front)

"At Sunoco, we have been doing both and are committed to improving the product we produce and the way we produce it."

Sunoco uses a variety of federal, state and locally approved methods to monitor its air emissions at the refinery and has worked diligently to reduce emissions. That effort has paid off in a substantial reduction of air emissions in several areas since 1988.

Since 1988, emissions have been reduced by 85 percent to levels well within legal standards developed by the EPA to protect the health of both employees and neighbors.

"The decision to spend the significant money needed to improve our operations and reduce emissions was an easy one for Sunoco," Lyle said. "We are committed to the environment and our actions demonstrate that commitment."

Over the next three years, Sunoco will invest nearly $100 million in the Toledo Refinery to improve technology to allow for the production of cleaner burning fuel with a lower sulfur content.(See Clean Fuels story on this page.)

"Whether it is through significant dollar investments in technology to produce cleaner burning fuel that is better for the environment or by constantly focusing on ways to reduce emissions at the refinery, Sunoco is committed to doing everything it can to help maintain the environment," Lyle said. ■

Sunoco supports launch of Oregon Challenger Center

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Families of the Challenger astronauts founded the Challenger Center in 1986. The center exposes students to teamwork, problem solving, communication and decision-making. The goal of the Center is to foster community involvement and long-term support for teaching science and space curriculums.

Currently, there are 50 Challenger Learning Centers in the U.S., Canada, and United Kingdom. ■

Visit to the Challenger Center more than a field trip

A visit to the Challenger Center is more than the typical field trip. There are three main components to the Challenger Learning Center experience.

Pre-visit activities

Prior to their students' mission, teachers must first attend an in-service training program. During this one-day workshop, they receive extensive preparatory materials that they will use in their classrooms. These materials are specifically designed to prepare students for their mission, and include skills-building activities in the areas of teamwork and communication. The teacher is also given curriculum material to help the students understand the topic of their simulated space flight.

The Mission

When students arrive at a Challenger Learning Center, a short briefing is held in which the students are given an overview of the mission and their assignments. The group is then divided into two groups - half the students are assigned to Mission Control while the others are transported to the Space Station. Each student is assigned a partner on one of eight teams: Medical, Life support, Isolation, Remote, Probe, Navigation, Communications and Data. At the mission's halfway point, the partners exchange places so every student can experience both learning environments.

Post-visit activities

Once the students have returned to their schools, there are specific programs designed to help extend the Learning Center experience. The data gathered during the mission is the basis for analysis and reflection. Students conduct post-flight briefings, news conferences and other activities to transfer what they have learned into the everyday world of their classroom and school. ■

Mission Scenarios

As students participate in one of four available mission scenarios, they use the study of science as a springboard to a wealth of curricular and extracurricular themes.

Encounter Earth: In the summer of the year 2137, a Low Earth Orbiting Satellite has malfunctioned and must be replaced. The elite Emergency Response Squad has been activated to construct a new satellite, deploy it and retrieve important data about Earth and its environment.

Return to the Moon: The year is 2015, and astronauts are on their way to the moon. This time, they plan to stay. Navigating their way into lunar orbit, students launch a probe and analyze a variety of data to select a site for establishing a permanent moon base.

Rendezvous with a Comet: In the not-too-distant future, scientists are on their way to take an up-close look at a comet as it streaks its way across the sky. Constructing a probe and plotting an intercept course, students take the helm in a specially equipped space station.

Voyage to Mars: Humans have established the first permanent base on Mars and crew members participating in this mission serve as the first settlers. ■

Sunoco one of five S&P 500 firms to get top corporate governance rating.

As the U.S. business community continues to recover from accounting and other recent scandals, a private rating company has started tracking and ranking companies according to their corporate governance practices.

Sunoco was one of the companies in the Standard & Poor's 500 Index to earn the highest rating for corporate governance, according to Governance Metrics International. Governance Metrics, which provides the rating service for institutional buyers, developed the rating system that weighs 600 corporate characteristics across seven categories, including board accountability, disclosure, executive compensation, shareholder rights, and corporate behavior and social responsibility,

Corporate governance is a phrase that describes the system for the conduct of the business of a corporation, including the relationships among the shareholders, the board and its committees, management, employees, and other constituencies.

"While we are honored to be rated so highly by Governance Metrics, we recognize that good corporate governance is something that has to be constantly attended to," said Jack Drosdick, Sunoco's Chairman, Chief Executive Officer and President. "While it is important for the right governance policies and practices to be in place, there must be substance behind these policies and practices. The key to good corporate governance is full disclosure between management and the board. It requires nothing less than total intellectual honesty on both sides of the equation. It is something we pay much attention to at Sunoco," Drosdick explained. ■

Sunoco to modernize refineries for Clean Fuels production

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Sunoco has already started planning and analyzing the most cost-effective method to modernize its refineries, including the Toledo Refinery, with the goal of delivering a high-quality, cleaner-burning fuel at a reasonable price.

One of the initial steps in modernizing a refinery to meet the new fuel standards is the permitting process.

The refinery must obtain a permit for the new gasoline treating process. To obtain a permit, the refinery must complete detailed application forms (typically several hundreds of pages long), negotiate with a number of permitting entities, and undergo public review. The process is both complicated and time consuming.

The permitting process is one of the most challenging and critical factors in meeting the federal government's new requirements for these new fuels. ■

United Way

The Toledo Refinery employees and retirees raised $114,125 for the United Way during the 2002 fall campaign.

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