



NFI

NUTRIENTS FOR LIFE

NFI

FALL
2011

FFA Honors

{ 2011 NFL GOLF
TOURNAMENT }

THE VIRTUAL
CLASSROOM



{ from the board }




I am the Executive Chairman of the Board of Intrepid Potash, the largest potash producer in the United States with two production facilities in Utah and three in New Mexico. I have the unique perspective of being Chairman of The Fertilizer Institute (TFI) and serving on the Nutrients for Life Foundation Board of Directors. Nutrients for Life and TFI are separate organizations, each with its own Board of Directors, books, agenda and committed staff, working collaboratively in the best interest of the industry. I am often asked about the relationship

between the two organizations, so please allow me to explain.

Nutrients for Life works with educators and students across the country. Its messages are based on sound science and are all about straightforward education. TFI is another organization that represents the fertilizer industry on a national level. However, TFI is the legislative arm of the industry, working with Members of Congress and those in the regulatory agencies regarding policy issues that may affect fertilizer. To maximize resources, TFI donates over \$350,000 each year to the Foundation as in-kind support, which includes office space and shared resources. With a firewall between the two, Nutrients for Life and TFI represent the fertilizer industry honorably.

As a leader in the fertilizer industry, I became involved in the Nutrients for Life Foundation 7 years ago and was nominated to serve on its Board of Directors in 2008. In 2004, TFI's Board of Directors realized the need for a separate educational foundation to address fertilizer's role in our world in classrooms across this country. TFI accurately acknowledged that it could not devote its time to classroom education, citing there could be a conflict of interest. TFI's 39-member Board of Directors supports NFL's educational mission, but it does not influence Nutrients for Life, allowing the foundation to present a fair and balanced view on plant and soil science. To be certain, Nutrients for Life has worked hard to ensure the credibility of its educational materials by working with organizations such as the Smithsonian Institution.

As our planet's population continues to climb toward an estimated 9 billion by the year 2050 (a level 50 percent higher than year 2000 levels), experts estimate that food production must increase more than 2 percent annually just to maintain current diets. Fertilizer is essential to our life today, and its importance will only increase. The role of fertilizer is not questionable; it is critical to the world population's survival. In the United States, Nutrients for Life and TFI provide vastly different roles centered around the same important product - fertilizer. Potash, nitrogen and phosphate are critical elements for plant life, and I am not only proud to be involved in the production of the product, but the education efforts about it as well.


Sincerely,
Bob Jornayvaz

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FALL
2011



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{from the editor}

New School Supplies for the New School Year

The sound of the yellow school bus traveling down my road never gets old. Excitement, anticipation and anxiety are separate feelings all rolled into one as the school year begins. For students, the homework, the class schedules and the social calendars are top priorities. For teachers, it's grappling with a whole new set of faces and names, perhaps new class subjects and new materials. If you are teaching plant and soil science, or if you are the keeper of the school garden, we've got something for you!

Plant and soil science is exciting and interactive. Your students will be thrilled to learn that they can play in dirt (no matter what age) as part of the curricula learning lab. Our plant and soil science curricula series, *Nourishing the Planet in the 21st Century*, offers students in all grades the chance to learn about important plant nutrients in a fun and interactive way. The Smithsonian-reviewed lessons are designed to complement your core curriculum as five (elementary) or six (middle and high school) module lessons.

In the elementary module, the lessons are built around healthy soil for gardening. Students explore plants, soil properties, how plants are nourished and plants' effect on soil. Students apply all the information they learn to plant a successful garden with particular attention to the importance of healthy, nutrient-rich soil.

In the middle and high school modules, the focus is slightly different. Students begin with the basics of essential elements, soil properties, plant-soil interactions and plant nutrient deficiencies. These basic lessons set the stage, not just for the discussion of fertilizers and the environment, but feeding our growing population as well. With the forecasted population growth, students will connect science to social issues and learn how farmers are learning to produce more food on less land to feed a hungry population.

As farming is far-removed from the lives of many of our students, we've developed an innovative way to invite a farmer, horticulturalist or agronomist into your classroom with our new virtual classroom designed to complement our curricula. Nutrients for Life blogger, gardener and stay-at-home mom Dee McKenna hosts interactive activities for each lesson. We've also introduced an engaging poster representing important nutrients for plants and humans, as well as a flashcard set to play some of my all-time favorite classroom games – Beat the Clock, Circle Up or Around the World. Turn to page 12 in this magazine for more information on ordering these materials.

As you begin the new school year, I hope your classroom is full of new and useful educational tools including those from Nutrients for Life. Cheers to an enjoyable year in the classroom!

Harriet E. Wegmeyer

Harriet Wegmeyer
Executive Director, Nutrients for Life Foundation



{ students }

Test Your Plant and Soil Science Knowledge

1.

What are the three primary nutrients found in fertilizer?

Answer:

Nitrogen
Phosphorus
Potassium

21.

What nutrient helps plants store and move energy?

Answer:

Phosphorus

26.

What is it called when a plant does not have enough nitrogen and its leaves turn yellow?

Answer:

Chlorosis

To order a full set of flashcards, turn to page 12.

{ teachers }

Seed Survivor Tours Washington, DC Schools

Students in nine elementary schools in Washington, D.C., had the chance to learn about plant nutrients via a mobile classroom this June. This multi-media learning trailer made its way from school to school, offering an entertaining and hands-on learning experience.

"Thank you for bringing the Plant Nutrient Classroom on Wheels to John Burroughs students! It was an enriching and unforgettable learning experience for our students and teachers," said Mel Jones, STEM Coordinator at the John Burroughs Education Campus in Washington, D.C.

Seed Survivor Mobile is a plant nutrient classroom on wheels. The truck and trailer unit arrived at pre-registered schools and students progressed through Seed Survivor stations. The free, curriculum-based, interactive, learning experience encourages children in grades 2 through 6 to master the elements plants need to grow.

Students explore multi-media and virtual reality games, a sunflower seed planting station, talking walls and much more. Students spend half the presentation outside the trailer in a guided plant nutrient lesson and half the presentation inside the trailer playing each station.

Nutrients for Life partnered with Seed Survivor's creator, Agrium, to bring this opportunity to classrooms in Washington, D.C. For the 2011-12 school year, Seed Survivor will be touring schools in California.

Pictured above: Students at John Eaton Elementary School in Washington, D.C., learn about plant nutrients from volunteer and retired Environmental Protection Agency employee Tom Dixon. Once inside the mobile learning unit, the students played hands-on games all about plant and soil science.



For more information about Seed Survivor, visit **www.growingthenextgeneration.com**, call (800) 962-9065 or visit Nutrients for Life on Facebook and Twitter (@Nutrients4Life).



Garden Monsters in Your Classroom?



Materials:

Potting soil
Grass seed
Recycled lids
10"x10" nylon net
Wiggle eyes
Nails
Double sided tape
Tiny zip ties

Looking for new ways to bring gardening into the classroom? This activity is fun for all and is great to share with anyone who loves to watch things grow and wants to learn about the science behind plants. Just gather up the necessary materials and watch your own Garden Monster grow!

Instructions:

- 1 Heap a spoon full of grass seed on center of netting
- 2 Put a scoop of potting soil directly on top of seed grass
- 3 Gather up netting at corner and create a solid tight ball
- 4 Pull zip-tie tight to hold ball
- 5 Trim zip tie
- 6 Trim netting
- 7 Attach dirt ball to cap with tape
- 8 Push in eyes attached to nails



2011 Ag in the Classroom



{ industry }

Nutrients for Life Day at PotashCorp

Nutrients for Life Days were celebrated at PotashCorp's facilities during the week of July 11-15. This first-of-its-kind event brought cook-offs, luncheons and fun-all with the purpose of raising awareness and funds for the Nutrients for Life Foundation.

"We are so grateful for the opportunity PotashCorp granted us in hosting the first-ever Nutrients for Life Days," said Nutrients for Life Executive Director Harriet Wegmeyer. "The team in the field making these essential nutrients available for plants and our crops has such a unique perspective. We were able to share with them how we work with classrooms across this country, and how they could do the same in their own communities."

Nutrients for Life Days involved nearly 2,500 PotashCorp employees in the United States, with 70 percent participating in this endeavor donating over \$100,000. These funds were matched dollar for dollar by PotashCorp through its corporate match program. In total, PotashCorp and its employees donated over \$200,000. This same event was held by Nutrients for Life Canada.



Pictured: During the Nutrients for Life introduction in Trinidad PotashCorp President and CEO and Nutrients for Life Chairman Bill Doyle, Nutrients for Life's Harriet Wegmeyer, Canadian High Commissioner Karen McDonald, PCS Trinidad Plant Manager Ian Welch and PotashCorp Executive Vice President and Chief Operating Officer David Delaney discuss the impending launch of Nutrients for Life Trinidad and Tobago.

If you would like to host a Nutrients for Life Day at your company, please contact the Foundation's Harriet Wegmeyer at hwegmeyer@nutrientsforlife.org.



Pictured: During Nutrients for Life Day at PCS Aurora, the Nutrients for Life team toured the impressive phosphate mine.

welcome.

Iowa Residents Have New Resource in **Debra Kearney**

Iowa is the most recent state to add “boots on the ground” with the addition of Debra Kearney as the Iowa Regional Representative. Kearney will provide educational, grassroots and public awareness services in the state of Iowa. Her primary role is to work with educators in the school system in the promotion of the Foundation’s plant and soil science curriculum, *Nourishing the Planet in the 21st Century*; work with industry members in sharing the Foundation’s core programs; and enhance community relations. Kearney began her duties on July 11.



“We are excited to bring Debra to work on behalf of the fertilizer industry in this key educator role,” said Foundation Executive Director Harriet Wegmeyer. “She has a concrete understanding of fertilizer’s invaluable role, and is a natural fit for Nutrients for Life.”

With successful regional representatives based in Florida and Idaho, the industry recognized a need for more ‘on-the-ground’ educational resources and expanded the regional representative program. This position in Iowa is the third of its kind made possible with support from CF Industries. CF Industries is a global leader in plant nutrient manufacturing and distribution headquartered in Deerfield, Ill., with major operations in Iowa.

“Through Nutrients for Life, we are committed to educating the public about the vital role that plant nutrients play in feeding the world,” said CF Industries Chairman and CEO Steve Wilson. “The global population is projected to reach seven billion later this year, and as much as sixty percent of our food production can be attributed directly to fertilizer. We believe it is important to convey a full understanding of the relationship between plant nutrients and food production to as many people as possible, and especially to our youth, in order to support science based decisions about global food supply.”

“I look forward to working with the Nutrients for Life Foundation team and educators throughout Iowa to promote the important role fertilizer has in feeding our world,” said Kearney.

Kearney obtained her bachelor’s degree in agriculture education from Iowa State University. She currently operates her family agri-entertainment business, sharing with others the important role agriculture plays in Iowa. Debra is based in Knoxville, Iowa, and can be reached via e-mail at dkearney@nutrientsforlife.org or by phone at (641) 891-4182.

Julie Buratowski Joins Nutrients for Life Team

With education being at the core of Nutrients for Life’s mission, the Foundation tapped former teacher Julie Buratowski as its educational specialist. Buratowski will share the Foundation’s message to increase the understanding of how responsible use of plant nutrients improves our soil, the plants that grown in it, and ultimately, the foods we eat.



As education specialist, Julie focuses on developing new educational curriculum for educators; conducting curriculum awareness in schools; working with industry members in sharing the Foundation’s core programs; and increasing the Foundation’s social media presence.

“Julie brings with her a successful teaching background, and an optimistic and energetic personality that fits well with the Nutrients for Life team,” said Foundation Executive Director Harriet Wegmeyer. “Julie’s teaching experience in the classroom will not only aid us in the development of educational materials, but provide a valuable resource to teachers across the country.”

Buratowski is available for teacher workshops and training meetings regarding the *Nourishing the Planet in the 21st Century* plant and soil science curriculum (grades k-12). Schools interested in arranging a meeting with her to teach the curriculum are invited to contact Nutrients for Life at (800) 962-9065.

“We have an important message to share with educators and students throughout the country about the importance of fertilizer in feeding our world,” said Buratowski. “I am so excited to be working with such a passionate and creative team at the Nutrients for Life Foundation.”

Buratowski obtained her bachelor’s degree in English from the University of Arkansas in Little Rock and taught English and technology in Arkansas. She works in the Washington, D.C. office, and can be reached via e-mail at jburatowski@nutrientsforlife.org or by phone at (202) 515-2714.



1

Fertilizer Is Life's Main Ingredient Posters

A series of four educational campaign posters.

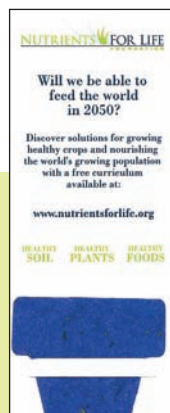


2

Fertilizer Is Life's Main Ingredient Bumper Sticker

Showcases the Foundation's message of Fertilizer, Life's Main Ingredient.

Materials Available



3

Seed Bookmarks

Deliver these cute and creative seed bookmarks to the classroom. The bookmark coordinates with the *Nourishing the Planet in the 21st Century* curriculum. Students can remove the "plant container," plant it in the soil and watch the flowers grow.



4

There's What in My Food?

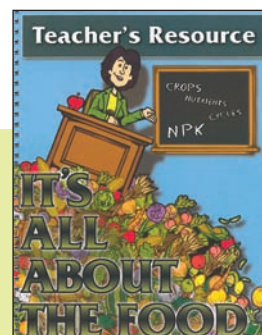
A fun and valuable resource for teenagers and adults, *There's What in My Food?* offers insight to improve understanding about modern production agriculture and why it is so important in assuring plentiful, affordable and safe food supplies.



5

Fun With the Plant Nutrient Team

The perfect piece to help children (grades 3-5) understand the basics of crop nutrition.



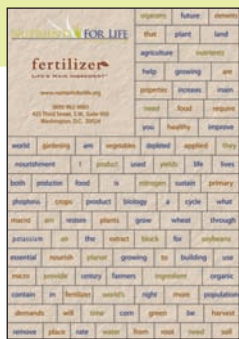
6

It's All About the Food

A resource for middle school teachers that focuses on problem solving and critical thinking in relation to food. *It's All About the Food* is divided into three sections to teach students about food production, plant nutrients and fertilizer.



For more information on items featured here, please contact the Nutrients for Life Foundation, at info@nutrientsforlife.org.

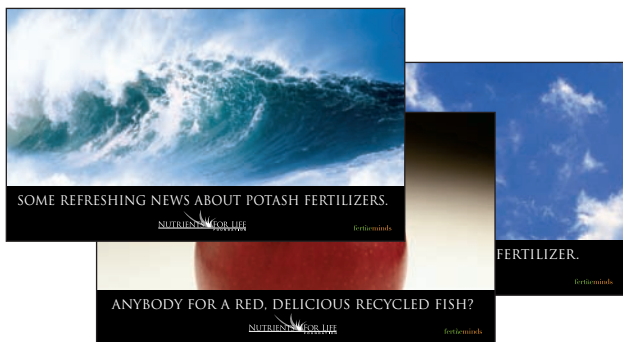


11

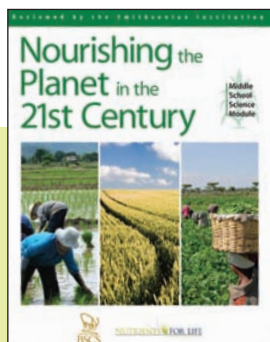
Magnets

Make sentences about gardening, growing crops and nutrients with these word magnets.

10



Apple, Air and Ocean Postcards
Series of three postcards highlighting the origins of nitrogen, potash and phosphate.



7

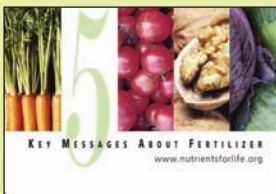
Nourishing the Planet in the 21st Century Curriculum

Nourishing the Planet in the 21st Century is a science-based curriculum supplement for middle and high school students. The supplement offers six lesson plans designed to teach students about feeding the growing world.

8

5 Key Message Cards

The wallet-sized 5 Key Message Card concisely states five of the top truths about fertilizers.



9

Ruler

Six-inch ruler that publicizes the *Nourishing the Planet in the 21st Century* curriculum.



12

Take A Closer Look Series

Fertilizer for Better Bread: Find out how the protein content in wheat correlates to the nitrogen fertilizer applied to the field.

Nutrition and Your Diet: Learn how fertilizer nutrients ensure that food meets micronutrient requirements.

Fertilizer in Your Salt Shaker: Whatever the intended use, as a food supplement or a fertilizer nutrient, the potassium chloride consumed is exactly the same.

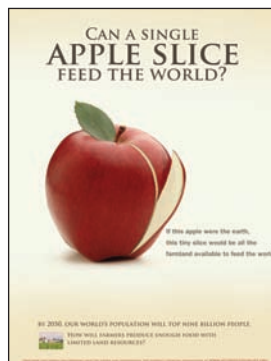
Nutrients in the Soil: Take a look at the role fertile soils play in producing high quality food.

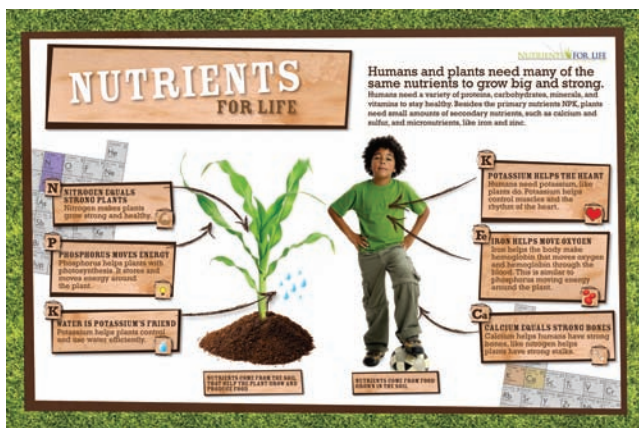


Apple Poster

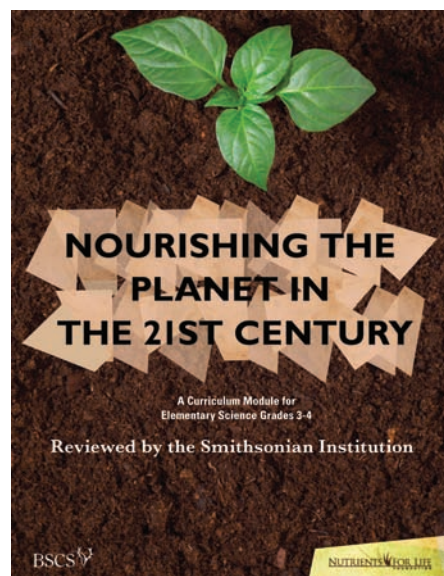
Can a single apple slice feed the world? This is a great resource poster for teachers to use as they address the challenges of feeding a growing population.

13





14 NPK Poster
Plants, like humans, need nutrients. This resource poster is a great addition to your classroom showing the basics of primary nutrients.



15 Elementary Curriculum
Smithsonian-approved, these five supplemental lessons teach plant and soil science, while using gardening to make the lessons fun, interactive and educational.

More Materials Available



16 Recipe Cards
A series of eight recipe cards. Recipes include *pumpkin soup*, *chocolate chip cookies*, *raspberry crumb bars*, *moist carrot cake*, *apple cookies*, *baked spaghetti cakes*, *broccoli quiche* and *vegetable soup*.



17 Flashcards
Play a fun game (Around the World, Beat the Clock or Circle Up) and test your students' plant and soil science knowledge. Designed specifically for the elementary curriculum, these cards can also be used with the middle school curriculum.



For more information on items featured here, please contact the Nutrients for Life Foundation, at info@nutrientsforlife.org.

{ consumers }



Dig It! Exhibit Moves to Washington State

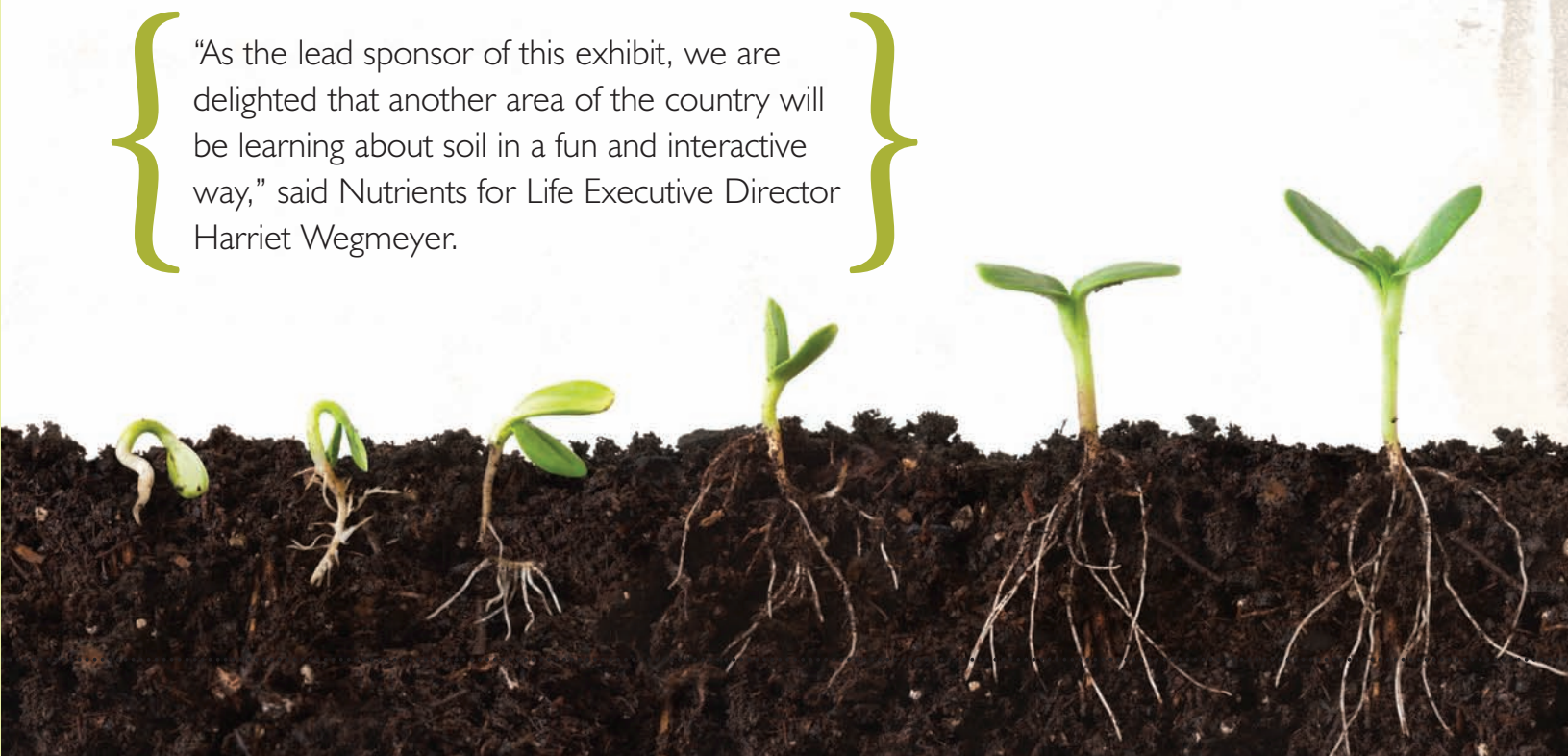
Residents of the Spokane, Wash., area may know a thing or two about dirt, but 2012 will bring a whole new opportunity to learn more with *Dig It! The Secrets of Soils* Smithsonian exhibit. The Museum of Arts and Culture (MAC) will feature *Dig It!* from February 4 to September 22, 2012.

The *Dig It!* exhibit was originally displayed from June 2008 through January 2010 in the Smithsonian National Museum of Natural History – the world's most visited natural history museum. The goals of the exhibit include gaining public support for actions on behalf of soil resources and raising awareness for the understanding of soils. The exhibit, which is 5,000 square feet, includes soil monoliths (soil profile examples) from every state in the United States, along with Puerto Rico, Guam and Washington, D.C., as well as interactive pieces explaining the meaning and importance of soil horizons; educational quizzes; humorous cartoons; and movable charts – all with the common goal of explaining how the welfare of people and the planet are connected to soil.



NORTHWEST
MUSEUM
OF ARTS
& CULTURE

"As the lead sponsor of this exhibit, we are delighted that another area of the country will be learning about soil in a fun and interactive way," said Nutrients for Life Executive Director Harriet Wegmeyer.







FFA Chapters Honored as Students Develop Community Based Education Programs on Soil Science and Nutrients

mind {attitude}

Are you an FFA advisor in California, Florida, Idaho, Iowa, Ohio or Washington? If you are, your school could win up to \$7,000 through the Nutrients for Life Foundation's *Helping Communities Grow* chapter program.

"After two successful years of offering the program, we are expanding its availability to FFA chapters in Ohio and Washington," said Foundation Executive Director Harriet Wegmeyer. "This program offers students the chance to be creative in how to teach others about plant nutrition."

FFA chapters in California, Florida, Idaho and Iowa competed in the Nutrients for Life Foundation's *Helping Communities Grow* program during the 2010-2011 school year. Students in participating FFA chapters developed and executed community-based education programs based

upon the Nutrients for Life Foundation curriculum, *Nourishing the Planet in the 21st Century*. The program encouraged FFA students to help the public become better informed about plant nutrients and related agricultural issues. During the project, students gained skills in leadership, public speaking, team building and community awareness while increasing knowledge of soil science and agricultural issues.

California

Buena Park High School's FFA Chapter won first place with a powerful project that brought the fundamentals of gardening to an urban low-income community. Middle school students learned about places and ways to grow food, plus increase production through the use of nutrients and fertilizer.

Le Grand FFA members centered their education efforts around a community garden. Chapter members worked with the local garden club and the Master Gardeners on planting and garden design. Le Grand locals will enjoy the fruits of the FFA's labor in this beautiful garden for years to come.



Bronson High School FFA was the repeat winner in Florida. Pictured are Kaitlyn VanHusen, Nutrients For Life Florida Regional Representative Joan Kyle, Sarah Trimm and Bronson FFA Adviser Marcia Smith.

El Capitan FFA in Lakeside, Calif., won third place with its efforts to produce quality oat hay, which can be marketed to local horse ranches and feed stores.

Florida

Bronson High School's FFA Chapter was the first place winner of a \$6,000 grant for the second year in a row. The Bronson Senior High Chapter's winning program featured multiple activities that made a great impact on the local community. Students got busy with school gardens, teaching 41 high school agriculture students and 90 fourth-grade elementary students about plant nutrients and fertilizers, and a wall mural tribute to the late Dr. Norman Borlaug, the father of the Green Revolution.

In second place, students in award-winning Dixie County High School in Cross City, Fla., educated faculty members and parents about agricultural Best Management Plans designed to improve nutrient use efficiency and crop yields, while protecting water quality. In this sophisticated project, the FFA students described the 4R Nutrient Stewardship principles (Right Source, Right Rate, Right Place, Right Time) with the Dixie Soil and Water Conservation District. They also taught second graders and 10th grade biology classes about plant uptake of fertilizers.

In Zephyrhills, Fla., FFA students at RB Stewart Middle School earned third place with their study of the nutritional needs of plants, the effect of fertilizers on plant growth and crop yield in hydroponic systems, which also imparted lessons about meeting the world's food demands while conserving land.

Idaho

Hansen FFA in Hansen, Idaho, repeated as first-place winners with its eye-catching educational highway billboard and Fertilizer Education Day held in conjunction with Arbor Day. During the

Arbor Day celebration, FFA students spread the word on fighting world hunger through fertilizer and gave informative presentations on gardening.

Malad FFA members' second place project focused on educating middle school students about plant nutrients, how plants take in and use nutrients, as well as sharing with elementary students the role of plants as a means to feed the world. Additionally, the FFA chapter hosted a community gardening day to highlight these concepts to the younger students.

Cambridge FFA took home third place honors by teaching fertilizer education lessons to elementary students in conjunction with the school greenhouse. FFA members studied plant nutrition throughout the year, using various types of crops, fertilizers and testing procedures.

Iowa

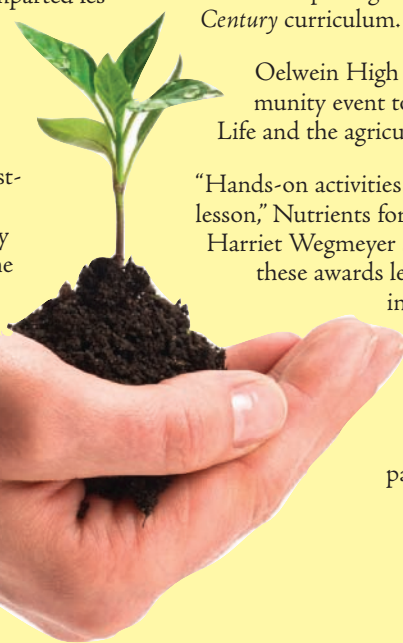
North Linn FFA Chapter in Tolly Mills, Iowa, won top honors with an innovative project that incorporated technology with food production and agriculture. Student used aeroponic chambers to growing over 200 plants in less than 8 square feet. This cutting edge technique could easily lend itself to areas with few agricultural space options.

Harlan FFA members learned about vegetable plant varieties, how to plant seeds and about proper fertilizer techniques for maximum production results. Students experimented with different fertilizers and learned about their importance, as well as completing the *Nourishing the Planet in the 21st Century* curriculum.

Oelwein High School FFA members organized a community event to raise awareness about Nutrients for Life and the agricultural industry.

"Hands-on activities help students dig deeper into each lesson," Nutrients for Life Foundation Executive Director Harriet Wegmeyer said. "The FFA chapters who earned these awards learned about the importance of fertilizers in the cycle of life and they inspired others around them to learn as well."

FFA chapters who entered projects but didn't win the top three awards each received \$300 mini-grants for their participation. 🌱



A photograph of four children of diverse backgrounds standing in a field of tall, golden grass, looking out at a large, realistic globe of the Earth. The children are seen from behind, with their arms around each other's shoulders. The sky is filled with soft, white clouds. The globe shows the Americas and parts of Europe and Africa.

{ LEARNING }

IN A **Virtual**
World

Are you looking for a way to bring the outside into your classroom to make learning more engaging? Would you like a visit to your classroom from a horticulturalist or farmer to help your students learn why soil nutrition is so important? With the addition of a virtual classroom to the Nutrients for Life curricula, this is now an option! The virtual classroom complements the Nutrients for Life Foundation's free plant and soil science curriculum for elementary, middle and high school classrooms. *Nourishing the Planet in the 21st Century* is a Smithsonian Institution-approved curriculum developed with, and tested by, science teachers.

The virtual classroom is hosted by Nutrients for Life blogger **Dee McKenna**. Dee interviewed horticulturists, farmers and more to help students relate the information they learn in the classroom to the real world. As a master gardener, former educator, and a stay-at-home mom with three girls who like to play in her garden, Dee will add value to each lesson you teach in the classroom.

Nearly 96 percent of teachers who have used this curriculum say it was helpful in creating lesson plans. The lessons are as follows:



Elementary Lessons:

Plants Around You – Students are encouraged to explore the outside world around them and identify the different plants, the different parts of plants, and what they need to grow healthy.

Properties of Soil – Students investigate different soils' characteristics and properties through comparison and contrast activities.

Plant-Soil Interactions – Students will learn about the root systems of plants, as well as the transport of water and nutrients through the plant.

Plant Growth Affects the Soil – Plants get their nutrients from fertilizer in the soil; however when plants are harvested, those nutrients are removed. Students will learn about this process and how farmers care for their land.

How Does Your Garden Grow – Students will have an opportunity to plan a garden and then learn about the importance of planning before planting.

Middle/High School Lessons:

In Search of Essential Nutrients – Students will learn how plants get the nutrients they require and which nutrients are needed at the micro and macro levels.

Properties of Soil – Students investigate different soils' characteristics and properties through comparison and contrast activities.

Plant-Soil Interactions – Students will learn about the root systems of plants, as well as the transport of water and nutrients through the plant.

Plant Nutrient Deficiencies – Students will assume the role of plant doctors to identify nutrient deficiencies and recommend solutions.

Fertilizers and the Environment/Nourishing the Planet in the 21st Century – With the forecasted population growth, students will connect science to social issues and learn how farmers are learning to produce more food on less land to feed a hungry population.

{ MINI GRANT AVAILABLE } FOR Curriculum Supplies

There are a variety of experiments to supplement the curriculum lessons, but schools may still need to purchase certain items to put these experiments together. If this is the case, Nutrients for Life offers a \$50 grant to qualified teachers to help cover the cost of these additional materials. Simply fill out the form found on www.nutrientsforlife.org and send it in.



NUTRIENTS FOR LIFE

WHAT OTHER CHANGES
DO YOU NEED TO MAKE FOR
MORE SUSTAINABLE
FARMING?



• Gardeners make decisions based on their location, their soil, and other environmental factors



NUTRIENTS FOR LIFE

19

Each of the lessons is accompanied with a hands-on learning activity, appropriate for the age-group and is easy to implement in any classroom.

The curriculum, *Nourishing the Planet in the 21st century*, offers five (elementary) or six (middle/high school) lessons that teach your students about the essential nutrients plants need to grow, why it's important to improve the health of soil and how to relate those nutrients to their own growth.

How does the curriculum meet science standards?

Nourishing the Planet in the 21st Century supports teachers in their efforts to reform science education in the spirit of the National Academy of Science's 1996 *National Science Education Standards* (NSES). The content is explicitly standards-based. A few of the specific standards that the curriculums meet are:

Abilities necessary to do scientific inquiry

Understandings about scientific inquiry

The characteristics of organisms

Life cycles of organisms

Organisms and their environment

Properties of earth materials

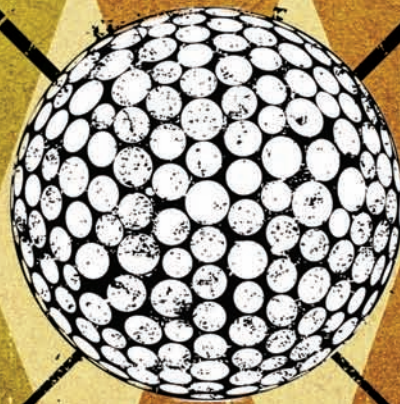
Types of resources

Changes in environments

The suggested teaching strategies in all of the lessons support teachers in meeting the teaching standards outlined in the *National Science Education Standards*. This module helps science teachers plan an inquiry-based science program by providing short-term objectives for students. It also includes planning tools for teaching the module, such as conceptual flow of the lessons and suggested timelines. The focus on active, collaborative and inquiry-based learning in the lessons helps support the development of student understanding and nurtures a community of science learners, in all grades.

The structure of the lessons enables you to guide and facilitate learning. All the activities encourage and support student inquiry, promote discourse among students and challenge students to accept and share responsibility for their learning. The use of the BSCS (Biological Sciences Curriculum Study) 5E Instructional Model, combined with active, collaborative learning, allows you to respond effectively to students with diverse backgrounds and learning styles. The module is fully annotated, with suggestions for how you can encourage and model the skills of scientific inquiry and foster curiosity, openness to new ideas and data and skepticism. 🌱

2011



TEEING-OFF FOR EDUCATION



Education Efforts Even Stronger After Raising \$114,477 in the Nutrients For Life 2011 Golf Tournament and Auction

2011 NFL GOLF TOURNAMENT & AUCTION

2011 NFL Champions – *Apache Nitrogen Products*

Supporters of Nutrients for Life added a live auction to its already popular golf tournament as a means of raising awareness and support for its educational programs. Together, supporters of the golf tournament and auction raised \$114,477 to be used for the Foundation's programming.

Golf Tournament Raises \$92,327

Players were eager to find out who would walk away with bragging rights and the Fertilizer Cup, since the defending champions – Terra Industries – did not enter. Nutrients for Life is pleased to announce that the tournament raised \$92,327 this year to be used for Foundation programming. The amount capped total funds raised at \$526,654 over the past seven tournaments.

Twenty-nine teams competed this year at the competitive and picturesque Troon North in Scottsdale, Ariz. on Feb. 7. After yet another extremely competitive tournament, Apache Nitrogen's team comprised of Bob Cashdollar, Doug Deaver, Andy Hunter and Craig Utterson came off the links on the top of the scoreboard – a first for Apache, but a repeat for three of the four players. In fact, Cashdollar, Hunter and Utterson had played with the Terra team who had won the tournament in 2010. Shreve Chemical came in a close second.





The 2012 Nutrients for Life Foundation Golf Tournament will be held Feb. 6, 2012, at the Maderas Golf Club in Poway, Calif. Those interested in sponsoring a foursome or a hole may contact the Foundation office at (800) 962-9065.

2011 NFL GOLF TOURNAMENT & AUCTION

Auction Raises \$22,150

Bidders were plenty at the first-ever live auction held in conjunction with The Fertilizer Institute's Fertilizer Marketing Business Meeting Feb. 9. With Nutrients for Life President Ford West serving as the auctioneer, bidding was fun and lively. A Hyatt bed, a hotel stay and once-in-a-lifetime experiences were auctioned off. The top bid was \$8,000 for a five-day stay at the Simplot Lodge in the Ketchum-Sun Valley area. Thank you to the following donors: Hyatt, PotashCorp, The Mosaic Company, Simplot and Starwood Hotels.

"We were so pleased with the response from our supporters in our first-ever live auction, that will do this again," said Nutrients for Life President Ford West. "Fun was had by all, and we were able to raise more awareness about the incredible need to educate people on fertilizer's role in our society."

Funds raised from these efforts will aid the Foundation as it further develops plant and soil science curricula materials and distributes its curriculum *Nourishing the Planet in the 21st Century*. Other main projects on queue for the Foundation include increasing its presence with teachers and the expansion of its "Helping Communities Grow" FFA Chapter Scholarship Program. 🌱

**Thanks again to all who participated.
Nutrients for Life Foundation looks forward
to seeing everyone on the links in 2012!**





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parting shot

*NFL Executive Director Harriet Wegmeyer visits
a class and reads about farming and soil nutrients*