

Exploring the 2009 Naturally Illinois Expo

First Floor

1 Exotic Insect Invasion Do you ever wonder what those large rectangular purple traps are that hang on ash trees throughout the state? Here's your chance to look inside one and identify the emerald ash borer. (1st Floor Hall)

2 Mushrooms of Illinois You'll be just in time for the popular morel season. Learn about which Illinois fungi you can eat—and which should just be admired. (1st Floor Hall)

3 Mussels of Illinois Did you know that mussels are an important indicator of stream health? Learn about Illinois mussel species, their characteristics and habitat, and why many are threatened or endangered. (Room 168)

4 Celebrating the Chicago Lakefront 2009 is the centennial of the 1909 publication, *Plan of Chicago*. This historic document provided a powerful vision for the twentieth century development of Chicago and its world-class lakefront. See how this vision was realized (or not) in the city's present-day lakefront. (Main Foyer)

5 Insects of Medical Importance Mosquitoes and ticks can ruin an outdoor gathering or adventure faster than you can say ouch! Learn about these pesky Illinois insects and the diseases they can transmit. (Main Foyer)

6 Mining Coal Resources in Illinois Maps, photos, and a video will help you visualize the state's coal resources and mining history. Take a few minutes to learn about one of Illinois' most interesting and economically important resources. (Main Foyer)

7 Midwestern Regional Climate Center The Midwestern Regional Climate Center maintains records of past weather data and climate information for the nine-state Midwest region. Discover how past weather data is used to answer questions from the general public, businesses, and government. You'll also learn how this information is used to study climate changes and how weather affects our everyday activities. (Room 139)

8 Rain Check Network: Check It Out Kids of all ages can be involved as weather watchers. Get a free rain gauge and add your precipitation information to the database maintained on the Illinois State Water Survey Web site. (Room 139)

9 Publication Sales and Teacher Resources Now is your chance to browse or buy our most popular recent posters, maps, and publications. Field manuals, guides to Illinois' insects, mammals, fossils, and rocks, Good Guy/Bad Guy cards, coloring posters, and games are just some of what we want to show you. During your visit, enter our drawing to win a free publication. Teachers, we also have information about teacher workshops, curricula, posters, and other materials relevant to earth and environmental sciences. (Room 123)

10 Underground Cavern Display View a simulated cave environment featuring stalagmites and stalactites. Internal illumination of one stalagmite—which started growing 80,000 years ago—reveals the abundant growth rings that tell the story of the geologic processes and climate changes that took place during its formation. (Northeast Entrance)

11 Groundwater: A Moving Experience Watch our groundwater model demonstration to see how groundwater moves through the subsurface toward a pumping well. Learn how earth materials of different grain sizes affect the movement of groundwater. Discover how surface contaminants can affect the quality of the groundwater that provides most of our water supply in east-central Illinois. (Room 101)

12 Groundwater: Understanding the Mahomet Aquifer See how computer modeling helps us understand the Mahomet aquifer—the extremely important source of water for hundreds of communities and cropland in east-central Illinois. You'll discover how the computer simulations are used to study the impacts of ever-increasing water withdrawals on the aquifer. (Room 101)

13 Build Illinois Geologists are storytellers! They read the rocks like the pages in a book and recreate for your imagination the vanished landscapes of ancient Illinois. Hop into an imaginary time machine and head back through time in this wonderfully engaging demonstration of Illinois' geologic history. (Room 101)

EWF: Earth, Wind and Fire 5K Run and 2.5K Walk

The race kicks off at 9:00 AM on Saturday, March 14. For more information on the event or to register, go to www.inrs.illinois.edu/expo/5krun.shtml, or contact the race director, Don Luman (217-244-2179 or dluman@isgs.illinois.edu). (Registration inside main foyer. Race starting line: northeast of Natural Resources Building)

Second Floor

14 Natural Hazard Identification and Mapping Are you surprised to find that flooding causes more damage in Illinois than any other natural disaster? Learn about flood hazard maps that are now available in digital formats. You'll also find out about the tools that are available to identify and estimate community risks from flooding. (Room 261)

15 Geologic Time The Earth is a very old and very dynamic place. It is often difficult to imagine just how old the Earth really is. This display illustrates part of the Earth's history and shows how the location of Illinois on the planet has changed during past epochs. You'll see examples of the kinds of animals or plants that lived in Illinois. (2nd Floor Hall)

16 Nitrates in Lake Decatur Drinking Water What is the concern about Lake Decatur water? We've been monitoring the lake for 15 years to find out. You'll discover how to measure the amount of water that flows downstream—when you're there, and even when you aren't! See what kinds of instruments are used for low and high water conditions. What does it take to sample water? See a demonstration of a typical stream gauging station and our sampling results for the Upper Sangamon River watershed. (2nd Floor Hall)

17 Illinois Rivers Online The online Illinois Rivers Decision Support System is designed to provide scientific support and access to high-quality information about the rivers and watersheds of Illinois. You'll be able to find out how to navigate the site to create maps, view animations, search a knowledge base for additional resources, and much more. (Room 227)

18 Fun with Gases, Liquids, and Solids Join us for simple experiments in physical chemistry that show the characteristics of liquid nitrogen and the influence of sub-zero temperatures on certain gases. You'll be able to observe sublimation and watch a demonstration of pressure and vacuum. (Room 223)

19 Fun with Water Chemistry See how much fun science can be! Join us for demonstrations and hands-on activities that highlight water chemistry. You'll get to use indicators, test strips, and meters to study the pH of household substances; observe properties of supersaturated solutions; use polymers to make "slime"; and remove the color from Kool-Aid. (Room 211)

20 Build a Patchwork Map Come learn what a map is by building a "patchwork map." Using aerial photographs as a guide, you'll use map symbols to draw your part of the map. (Room 209)

21 Trees Tell Stories Trees are more than just a pretty decoration on the landscape. Learn how to identify trees and read the stories tree rings tell about past climates and landscape changes. (Room 203)

22 Illinois from Space Have you wondered what your farm, city, or hometown looks like from space? You'll be able to see the unique landscapes of Illinois at this interactive exhibit. The images you'll see have been acquired from satellites orbiting the earth from approximately 400 miles away. Take home a map of the entire state—or of the Chicago metropolitan area—to hang in your room! (2nd Floor Hall)

Main Tent

23 CoCoRaHS! Let us tell you about our unique, nonprofit, community-based network of weather volunteers of all ages and backgrounds: The Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS). Each day hundreds of CoCoRaHS volunteer observers throughout Illinois report rain, snow, and hail measured in their backyards. Anyone in Illinois can participate! Find out how you (or your family or school) can become part of one the largest citizen-scientist programs in the country.

24 Climate and Climate Change in Illinois Climate change is an important topic these days. Ever wonder how the climate of Illinois has changed in the past, how it is changing now, and what might be in store for the future? Stop by and learn more about the climate of Illinois and how it impacts our lives.

25 Fun with Weather How cold, hot, or wet was it? Find out the area weather for any week of the past 20 years. We've got it all: from air temperature and rain to the amount of sunshine, the speed of the wind, and even the temperature of the soil. Get an idea about the kind of weather that might occur on your next birthday, a friend's big event, or your grandparents' anniversary.

26 What's in Our Rain? Want to try your hand at being an environmental chemist? Find out about the quality of rainwater from locations across the United States? You'll be able to test the pH of common household solutions and samples from the National Atmospheric Deposition Program. You'll see how pH varies across the United States and how pH relates to local sources of air pollution.

27 Kids Fossil Dig Kids of all ages can dig for plant and animal fossils—keep one of the fossils you find! Fossils range in age from 300 million to 480 million years old.

Greenhouse

28 Glacial Geology of Illinois See how the huge glaciers that repeatedly covered parts of Illinois during the ice age caused both erosion and deposition as the ice advanced and then retreated. Glacial deposits are the parent materials of Illinois' richest soils.

29 Sloth Says...Ice Age, WHAT? This "hands-on" exhibit lets you learn about the materials deposited by glacial ice in Illinois. You can touch samples of "glaciers;" watch how water sorts sediment; examine till, striated rocks, and gravel containing erratic pebbles; and learn where to look in Illinois to find these materials.

30 Corrosion Showcase Hidden minerals in water cause scale. We have 45 examples of scale and corrosion to show you. Come see them and learn about the causes of the scale buildup in the pipes in your home. You'll be able to do an experiment and watch the scale particles come out of solution.

31 Illinois Wetlands: A Water Resource Receive an introduction to Illinois wetlands, and discover why they are important to us. The interactive demonstrations, including the "bog in a bucket," will help you learn about wetlands without getting your feet wet. You'll also see examples of wetland research studies conducted by INRS scientists.

32 How Streams Work Streams are fascinating! We don't have a real stream, but we've got the next best thing. Our stream table functions just like a real stream. You'll be able to experiment with stream dynamics and get a close-up view of how streams work and how they change. Be careful, or you might get a little wet!

South Drive

33 Illinois' Petroleum Resources Visit the traveling exhibit of the Illinois Petroleum Resource Board to see working models of oil field equipment. You'll have a chance to learn about the importance of oil and gas in your daily life and increase your awareness of the science and business aspects of the Illinois oil and gas industry. For more information, visit the IPRB Web site: <http://iprb.org/>.

34 Borehole Geophysics Watch our excursion logging vehicle and probes during a well logging simulation. You'll learn the "how and why" of geophysics and its many applications. Used by us as early as 1942 for groundwater applications, logging today supports a variety of research activities using more than 15 different probes at depths of up to 3,500 feet.

35 Drilling Demo How do scientists get their information about the subsurface? Watch us drill a borehole to see the methods used to extract a core of sediment, install a monitoring well, and conduct various borehole geophysical tests. Geologists, hydrogeologists, and geophysicists will display, describe, and interpret core samples and demonstrate equipment used to measure various geophysical and hydrologic parameters.

36 Magnetometer Survey Try to find a buried utility line using a magnetometer. Or see if you can stump a friend with a hidden magnet.

37 Make the Earth Shake Beneath Your Feet! What seismic methods are used to visualize geology below the surface? You'll find out at this exhibit. Plus, you can send seismic waves through the ground yourself and watch how the ground shakes beneath your feet when you walk.

38 The World of Arthropods Enter the INHS Mobile Science Center and explore The World of Arthropods. Over 80% of all named species of animals are arthropods, and this exhibit explores their incredible diversity. The mobile unit contains large display cases, microscope stations, information panels, and a lighted quiz board.

Garage

39 Sampling Illinois River Sediment Come see some examples from our core collection. We obtained the sediment from the Illinois River in ten-foot-long core samples. The samples were then analyzed for soil qualities and properties, including chemical contaminants. The information these cores contain is useful for projects being undertaken to restore the river ecosystem.

40 Mud to Parks Our scientists have led this project that takes large amounts of sediment from places where it is clogging rivers and deposits the sediment where it can be used to restore area habitat.

41 Grease Gator Imagine continuously washing the dirtiest, greasiest machine parts with a cleaning solution that never gets dirty. This demonstration will show you how an aqueous cleaning system cleans faster than other solvent systems, without fluid exchange services or harmful emissions and waste products.

42 Go "Green" with Ease Cut down on energy, reduce your use of harmful solvents, and serve the environment with these easy, helpful tips.



DIRECTIONS AND PARKING

Park free both Friday and Saturday in Lot E-14 west of the Assembly Hall. Free shuttle buses will make a continuous loop from the parking lot to the Engineering Open House and ExplorACES. The shuttle stop closest to the Naturally Illinois Expo is on the corner of Sixth Street and Peabody Drive, the northeast corner of the Natural Resources Building (NRB).

Metered on-street parking is available along Pennsylvania Avenue, Peabody Drive (between First Street and Sixth Street), and Sixth Street. Visitor parking is also available in Lot E-19.

On Saturday only, visitors may also park in lot E-2 (directly north of the NRB), E-11 (directly east of the NRB), E-13 (on the corner of Sixth Street and Pennsylvania Avenue), and E-15 (west of the NRB on Pennsylvania Avenue).

www.inrs.illinois.edu/expo

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The 2009 Expo celebrates the formation of the University of Illinois' Institute of Natural Resource Sustainability (INRS), which unites the four state scientific surveys—the Illinois State Geological Survey, the Illinois Natural History Survey, the Illinois State Water Survey, and the Illinois Sustainable Technology Center (formerly the Waste Management Research Center).

The 2009 Naturally Illinois Expo presents over forty exciting exhibits of interest—especially for those who may be interested in science-related careers. Current societal issues related to climate change, water quality, and mineral resources make earth science education more important than ever. With the support of these sponsors, we hope to expand successful educational outreach programs, making it possible for more people to take advantage of these valuable educational opportunities.

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Dennis Stover

March 13-14, 2009

ILLINOIS