## **Environmentally-friendly Practices: Land**







2. Ecosystem restoration



3. Playing outdoors





5. Raising chickens



6. Agricultural heritage in the city



7. Yard with tree and plant



8. More than a butterfly



9. Urban community garden



10. Polish Maypole



11. Container garden

- Biking in Cook County Forest Preserve: Exercise, clean air, and energy efficiency are all direct benefits of a ride on the bike trails. Using bike trails is also another way in which we can interact with and enjoy our natural resources.
  - Image: ©The Field Museum, ECCo, Josh Ostergaard
- 2. Ecosystem restoration: In the absence of fire invasive species can take over and vegetation can become too dense to support a wide range of organisms. Thinning by using fire or removing invasives by hand, as you see here, is necessary to restore healthy ecosystems that support diversity and natural functions. What do you do to support or enjoy Chicago's natural areas? Image: Courtesy of Leslee Jackson
- Playing outdoors: Nature has been a caregiver and playground to us for millennia. Outdoor activities that don't require fuel or electricity don't directly contribute to climate change. They foster love for the outdoors and promote inquisitive minds, physical coordination, and an appreciation for life. Image: ©The Field Museum, ECCo, Mario Longoni
- Beekeeping: Bees are a critical component of a healthy environment. They help many species of flowering plants to pollinate, and thereby reproduce. Flowering plants, called Angiosperms, include many of the fruits and vegetables on which we depend for food.
  - Image: ©The Field Museum, ECCo, Hannah Anderson
- Raising chickens: Hens not only make great pets, but they also are a source of free and renewable food (eggs). They can save you money, reduce the number of trucks transporting eggs to local stores from distant sites of mass-production, and produce natural fertilizer.
  - Image: ©The Field Museum, ECCo, Sarah Sommers
- 6. Agricultural heritage in the city: Immigrants often continue agricultural traditions. Chicago's Roseland neighborhood was first the farms of Dutch immigrants, depicted in this contemporary mural (right). Today, African Americans in Roseland continue the traditions they brought from the American South, growing vegetable gardens in this very urban area. Here we we see one grower's peas. Is gardening part of your family or community heritage?
  Images: @The Field Museum, ECCo, Lori Baptista

- 7. Yard with tree and plants: Green lawns may be popular, but often require fertilizer and lots of water, and don't offer much in the way of shade, a windbreak, or variety. Trees, however, shade a house in summer and can slow the winter wind, saving homeowners on their energy bills in both seasons. Many plants, in particular native prairie plants, have a better ability than a lawn to soak up and hold water. Image: @The Field Museum, ECCo, Hannah Porst
- 8. More than a butterfly: Native plants and animals are important parts of people's heritage and shape how they see themselves in the world. The monarch butterfly pictured here is a symbol of migration for Chicago's Mexican American community. Monarchs annually migrating to and from Michoacan mirrors this community's human migration. Are there animals or plants that are particular important to your community or family? Image: Courtesy of Chicago Wilderness, Photo by Dick Todd
- Urban community garden: A community garden provides many benefits to its caretakers. It can produce fresh fruits, vegetables and herbs as well as beauty and community pride. It also allows gardeners to save money and directly control the amounts of pesticides, herbicides, and chemical fertilizer that go onto the food they'll eventually eat. Image: @The Field Museum, ECCo, Hannah Porst
- 10. Polish Maypole: Polish children dance around the Maypole at the annual Polish Constitution Day Parade. Many communities commemorate their agrarian heritage as part of preserving a valued sense of identity. How does your community connect to nature? Image: ©The Field Museum, ECCo, Jennifer Hirsch
- 11. Container Garden: For people who do not have a yard, container gardening can be a fun way to still have some green around the house. Some houseplants help clean the air, while pots on a balcony let apartment dwellers grow their own herbs. What do you like to grow? Image: ©The Field Museum, ECCo, Johanna Wawro

### QUESTIONS:

How can your home and community benefit from environmentally-friendly land practices such as community gardens or raising chickens?

What are the different environmentallyfriendly land practices currently in use in your community that you see others using?

Anything you think or dream about doing that you see in the pictures but have not done yet?

Why do you think the idea of doing XX appeals to you?



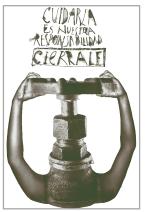


## **Environmentally-friendly Practices: Water**



1. Parking lot bioswale





3. Public campaign



4. Turning off the faucet



5. Storm sewer sign: "Dump no waste — drains to river"









8. Enjoying the beach



9. Canoeing and cleaning



10. Rain gutter emptying into lawn

- Parking lot bioswale: A clever use of vegetation and absorbent soils means that this small portion of the parking lot can absorb excess runoff and pollutants, thereby preventing flooding and the backup of waste water in nearby drains. Bioswales can be planted with native plants, helping to maintain our endangered local ecosystem.
  - Image: Courtesy of Center for Neighborhood Technology
- Fishing: Whether our motivation is subsistence or relaxation, enjoying the bounty of nature helps us to realize that we are part of it. Many anglers work closely with conservationists to ensure that the resources they enjoy are used responsibly, so future generations can share our joy.
   Image: ©The Field Museum, ECCo, Jennifer Hirsch
- 3. Public campaign: In Mexico City during the 1970s, the "Cierrrale" campaign ran on television encouraging everyone to conserve water. It showed people using water in wasteful ways and then a child would appear and say to them "Cierrale!" ["Turn it off!"]. Cierrale! became a household phrase equivalent to today's "Got Milk?" Today, residents of Chicago from Mexico City report still following this advice. Are there ways your interaction with the environment is guided by community values you first experienced somewhere else?
- 4. Turning off the faucet: Though Lake Michigan's water supply seems infinite, the Lake's water levels are in fact steadily declining. Taking easy, everyday water conserving steps is a good way to ensure enough water for future generations of Chicagoans. Turning off the faucet while brushing your teeth or shaving, taking shorter showers, using low-flow fixtures, and fixing leaky faucets are all easy and low-cost ways to conserve water at home.
  Image: @The Field Museum, ECCo, Sarah Sommers
- 5. Storm sewer sign: "Dump no waste drains to river": Colorful signs alert potential polluters to the immediate impact of convenient dumping. Reminders that our actions have consequences in our environment, such as the neighboring river, have the potential to make us more mindful of our impact in the world. Many cities have programs for garages to accept used motor oil for recycling, eliminating the problem of do-it-yourselfers not knowing what to do with used oil.
  Image: @The Field Museum, ECCo, Jennifer Hirsch

- 6. Assessing stream health: In this picture, environmental stewards uses inventories of fresh water clams to assess the habitat quality of a stream. In a time of rapid change in our environments, tracking habitat conditions can be a key to slowing degradation and guiding restoration work. In this way, human insight and hard work can help nature adapt. Image: Courtesy of Openlands
- 7. Reusing grey water: Most of the water we use at home goes down the drain nearly as clean as it was when it flowed out of the faucet. Some homeowners and builders are returning to practices of making use of this "grey water," having sinks and tubs drain into the yard. Here a Chicago resident pours into her garden the extra water that her air-conditioner produces.
  - Image: ©The Field Museum, ECCo, Hannah Porst
- 8. Enjoying the beach: We all depend on our environmental resources, even in some very urban areas. Enjoying outdoor activities, such as a day at the beach, helps us to connect with nature and our community. Safe and healthy beaches depend on all of us properly disposing of trash and food that can attract unwanted animals and foul the beach. Image: @The Field Museum, ECCo, Hannah Anderson
- 9. Canoeing and cleaning: Paddling and rowing are popular pastimes in the waterways around Chicago. They offer exercise, relaxation, and varied scenery all while not adding noise or other pollution to the environment. Enjoyment of natural areas often connects to stewardship: in this picture a paddler takes part in a clean-up event, picking up trash that can't be reached from shore.
  Image: Courtesy of Openlands
- 10. Rain gutter emptying into lawn: Why worry about the water bill when nature's giving water for free? Diverting rain to water your lawn or garden makes smart use of a valuable resource and reduces the threat of flooding. Try collecting rainwater in a barrel for greater control over when and what you water with it

Image: ©The Field Museum, ECCo, Mario Longoni

### QUESTIONS:

How do you conserve water in your everyday life?

What different types of water conservation practices do you see others use?

Anything you think or dream about doing that you see in the pictures but have not done yet?

Why do you think the idea of doing XX appeals to you?





## **Energy Efficiency**







2. Programmable thermostat



4. Insulating a home





7. Outdoor lighting fixture with CFL bulb



8. Unplugging charger



9. Stuffed toy insulation



3. Residential homes with window awnings



6. Shopping for vegetables



10. Residential home with window coverings

- Green roof: Green roofs help to reflect the sun's heat back into space, and provide insulation for the buildings they sit on. Roofs like this one on Chicago's City Hall also absorb rain water and help bring nature into the city.
  - Image: Courtesy of The City of Chicago
- 2. Programmable thermostat: Every degree on the thermostat matters! Lowering the thermostat by a few degrees is an easy way to save money and make our buildings use less energy. Programmable thermostats like this one can automatically raise or lower the temperature during the time of day when a building or home is typically empty, or people are sleeping, and can adjust the temperature to an optimal comfort level during periods of greater use. Image: Photo courtesy of U.S. Army
- 3. Residential homes with window awnings: Blocking the sun is an old fashioned way to keep our homes cool during the summer months. During winter the sun is lower in the sky and will strike these windows more directly, helping to light and heat the house. In these ways the sun can replace air conditioning, heating, and lighting bypassing the need for an expensive, modern solar system.
  - Image: ©The Field Museum, ECCo, Mario Longoni
- 4. Insulating a home: It takes less energy to heat and cool our homes when they are well-insulated. The worker in this picture is laying insulation into an attic where it will reduce heat loss in winter and keep the heat of the attic out of the house in summer. Image: Courtesy of Simon Williams
- 5. Clothesline: Hanging clothes out to dry used to be the only way to complete our laundry. The practice is still popular in a number of circles. In Chicago immigrants and environmentalists are among those more likely to line dry, sometimes inside their homes, sometimes out. This card, sent to a Chicago resident by her cousin in Poland, tells the story of a small girl who is proud of her ability to to wash and dry her own clothes outdoors. Air drying provides an easy way to save money, use less energy, and harness the air around us for an everyday use.
  Image: Courtesy of Curtis Witek
- 6. Shopping for vegetables: Buying unprocessed fruits and vegetables can cut the carbon footprint of your diet by half or more. Processed foods require energy not just for the processing, but each additional ingredient also has to use fossil fuel to travel to the production site before the final product even ships to

- your supermarket. Additionally, opting for two or three meat-free meals each week reduces the amount of climate-warming agents (CO2 and methane) released into the atmosphere by livestock and reduces the dangers of water pollution associated with industrial scale meat production. Finally, buying food with minimal packaging, or in bulk, cuts down even more on the energy associated with getting food to your plate.
- Image: ©The Field Museum, ECCo, Izabela Grobelna
- 7. Outdoor lighting fixture with CFL bulb: Compact florescent lamps (CFL) give off the same amount of light as incandescent bulbs, but they use less power and have a longer life. CFL bulbs, like the one in this picture, are an easy and popular way to reduce the carbon footprints of our homes and workplaces. Image: ©The Field Museum, ECCo, Sarah Sommers
- 8. Unplugging charger: Unplugging unused electronic devices and their chargers from TVs to computers to cell phones can save you between 10% and 20% on your monthly electric bill. So called "energy vampires" suck electricity even when they are turned off or fully charged. In this picture, the user could actually switch off the entire power strip at night to save even more energy than by just unplugging the charger alone. Image: ©The Field Museum, ECCo, Lisa See Kim
- 9. Stuffed toy insulation: Do-it-yourself creative solutions can sometimes work quite well and require little effort. The owner of this home reported eliminating draughts from the glass block windows in her basement by tightly packing stuffed toys, no longer wanted by her college bound daughter, into the window frames. Image: ©The Field Museum, ECCo, Sam McAleese
- 10. Residential home with window coverings: The blinds in this picture show an easy step people can take to insulate their homes. The practice of using window coverings—shades, blinds, or curtains—reflects heat back out of the house in summer and cuts down on cold drafts in the winter, reducing the need to use air conditioners and heaters.

Image: ©The Field Museum, ECCo, Hannah Porst

### QUESTIONS:

What can be done to make our buildings more environmentally-friendly?

What do you do to save on heating, cooling, or electrical use in general in your home or business? Think about everything from plastic on the windows in winter to cooking and eating outside in the summer to avoid using more AC.

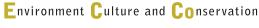
What do you see others doing to save energy?

Anything you think or dream about doing that you see in the pictures but have not done yet?

Why do you think the idea of doing XX appeals to you?

What have been the barriers to getting started?





A Division of Science

# Improved Transportation Options Do these images remind you of anything that you do or have seen others do?



1. Clean air hybrid CTA bus



4. Getting around on water



7. Biking



2. Walking as transit



5. South Chicago Trolley



8. Carpooling



3. Fuel efficient "car sharing" vehicles



6. Commuter train



9. CTA train stop

- Clean air hybrid CTA bus: Riding the bus allows you to read, rest, save money on gas, and not contribute to gridlock. With its new diesel-electric hybrid buses, the Chicago Transit Authority is better for the environment than ever. These hybrid buses have a 20% greater fuel efficiency than standard diesel buses.
   Image: @The Field Museum, ECCo, Mario Longoni
- Walking as transit: There is no better way to get around a neighborhood than walking. It is the oldest form of transport and a healthy form of exercise.
   Walking creates zero air pollution. Except during the coldest part of the year, people all over the city enjoy walking to their local stores, restaurants, and attractions.
   Image: @The Field Museum, ECCo, Hannah Anderson
- 3. Fuel efficient "carsharing" vehicles: Not everyone who drives has to own their own car. For some people it is enough to have a car just for a few purposes. More and more people are sharing cars through companies like I-GO and Zipcar. These companies make energy-efficient vehicles easily available across the city, reducing the number of cars on the road and the amount of space needed to park them. Fewer cars means less pollution for everyone.
  Image: @The Field Museum, ECCo, Mario Longoni
- 4. Getting around on water: Marshall Islanders in the Pacific Ocean have used outrigger canoes like this one for thousands of years for transportation to and from each island. It is held together by pliable coconut fibers and stabilized by a flexible boom connected to a float. It is wind powered, paddled, or sometimes propelled by a gas powered motor. In what ways do people or things get around by water in Chicago?
  Image: ®The Field Museum, A111273\_59c, Photographer, John Weinstein
- 5. South Chicago Trolley: Unlimited rides for just 25 cents per day! Originally envisioned as part of South Chicago's Quality of Life Plan, this trolley brings residents to shop in the community's retail district. Riders can catch it at designated stops, or just flag it down. The trolley cuts down on traffic congestion and gasoline use while supporting the area's economy. Image: Courtesy of Keith Rapley

- 6. Commuter train: Chicago has more than one rail system. Metra provides an easy commute for thousands of people who travel daily to and from Chicago's outlying suburbs. It is another great way to reduce traffic congestion and gas consumption, save money, and help improve our region's air quality. Image: @The Field Museum. ECCo, Cyrus Hester
- 7. Biking: Chicago is one of the most bicycle friendly large cities in the country. Every day Chicagoans ride their bikes to get to work, run errands, go to school, exercise, or just have fun. The city has created hundreds of designated lanes and paths to make biking safer for all in an effort to significantly reduce auto emissions and congestion on Chicago's roads. Image: ©The Field Museum, ECCo, Lisa See Kim
- 8. Carpooling: Driving is often the quickest way to get around in Chicago, and for some people it is the only way. Yet when we drive, we do not have to drive alone. Often we can coordinate our driving with a family member, neighbor, coworker, or friend. Sharing rides is a great way to share the expense of driving and reduce both traffic congestion and air pollution. Image: @The Field Museum, ECCo, Mario Longoni
- Riding CTA trains: The 'L' (short for elevated) train is one of Chicago's most unique features. This rapid transit rail system extends across the city, offering millions of people a convenient, environmentally sound way to get around while getting out of traffic. Image: ©The Field Museum, ECCo, Sarah Sommers

### QUESTIONS:

What other transportation options do you use or do you see others using?

How do kids get around in your neighborhood?

How can the use of these different transportation options reduce your carbon footprint?

Anything you think or dream about doing that you see in the pictures but have not done yet?

Why do you think the idea of doing XX appeals to you?







1. House with solar panels and wind turbine vents







4. Solar powered lawn lights



5. Solar trash compactor



6. Folding fan and paper lantern



7. Do-it-yourself solar energy

- House with solar panels and wind turbine vents: On a home that is otherwise designed to be energy efficient, modern solar panels can provide most of a household's electric energy needs. In this Southside Chicago example, the architect paid attention to the relation of the house to the sun and provided features like wind driven exhast fans to take heat out of the top of the house in summer. This approach has high upfront costs, but saves the homeowner dramatically on utility bills over the long-run, and helps our city become less dependent on fossil fuels.
   Image: @The Field Museum. ECCo. Sarah Sommers
- Rooftop wind turbines: This Chicago building shows how modern windmills are not limited to being giant fans on a stick. Low profile turbines on rooftops can still catch the wind to generate electricity without looming over the urban landscape around them. Image: ©The Field Museum, ECCo, Lisa See Kim
- 3. Solar oven: The power of the sun can be easily harnessed at home with low-tech solar ovens, which are still used in many places around the globe (like this one from India). Making meals in solar cookers conserves gas or electricity, and has the added benefit of not heating up your house during summer months.
  - Image: ©The Field Museum, ECCo, Sarah Sommers
- 4. Solar powered lawn lights: No need to string cable, bury it, or worry about getting a short in the line when a solar cell on each light can provide the power to illuminate a walkway or entryway. Another simple way to use renewable energy instead of finite and polluting fossil fuels.
  Image: @The Field Museum, ECCo, Mario Longoni
- 5. Solar trash compactor: The city can even use the sun's energy to reduce the frequency of trash pickup, as shown by these public garbage cans that use solar power to compact their contents. Less frequent pick-up reduces fuel use and air pollution. Image: @The Field Museum, ECCo, Johanna Wawro
- 6. Folding fan and paper lantern: Borrow low-energy (and low-cost) energy solutions from different cultural traditions! This South Asian hand-held fan and candlelit paper lantern are stylish alternatives to electric fans and incandescent ambient lighting. They can contribute to keeping down energy bills and have the added benefit of being easily portable. Image: Courtesy of the City of Chicago, Photographer Patrick Pyszkz

7. Do-it-yourself solar energy: To save money on his gas bill, an electrician/carpenter built this solar hot water heater for his family's Jefferson Park home, duplicating what he had done years earlier at their country home in Poland. He acquired the technical drawings for the unit off of the Internet.

Image: ©The Field Museum, ECCo, Johanna Wawro

### QUESTIONS:

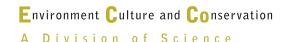
In what ways do you use renewable energy in your house? Classroom? Or workplace?

Where have you seen other uses of renewable energy, e.g. water wheels, windmills to pump water, human power to do what we would consider machine work?

Anything you think or dream about doing that you see in the pictures but have not done yet?

Why do you think the idea of doing XX appeals to you?





## Waste Reduction



1. Swap meet/flea market



Creative reuse



8. Reusable containers



2. Recycling bin



7 Edible bowls



9. Recycling used motor oil



3. Compost bin



4. Reusable water bottle



5. Battery recycling



10. Youth door-to-door recycling program

- Swap meet/flea market: Reduce your demand for natural resources, save money, reduce waste, support local business, and find lost treasures - these are all benefits of refurbishing and redistributing used goods. You can also visit local thrift stores, garage sales, or just exchange with family and friends. Image: ©The Field Museum, ECCo, Rosa Cabrera
- Recycling bin: Recycling can be made even easier when your community offers a recycling option in addition to regular trash collection. Taking advantage of recycling typically results in fewer truck trips to landfills and less energy devoted to the manufacture of new products.
   Image: @The Field Museum. ECCo. Sarah Sommers
- 3. Compost bin: By composting in your backyard you can reduce the amount of waste you send to the landfill and feed your garden with organic fertilizer. In one year you will save the amount of global warming gases equal to the carbon dioxide produced by your washing machine in three months. Black bins heat up to increase the compost rate, but don't hesitate to decorate your bin. You'll still get compost.
  Image: @The Field Museum, ECCo, Mario Longoni
- 4. Reusable water bottle: Chicago's city water is among the best tasting and cleanest municipal water in the country. Using a refillable water bottle eliminates the waste and energy usage that goes into making, filling, shipping, and disposing of disposable plastic bottles. Image: @The Field Museum, ECCo, Lisa See Kim
- Battery recycling: Battery recycling stations, like this
  one in the Chicago Public Library, are now all over
  the city, including inside retailers like Radio Shack and
  Walgreens. Reduce your throw away rate even more
  by using rechargeable NiMH batteries.
   Image: @The Field Museum, ECCo, Mario Longoni
- 6. Creative reuse: South Chicago families created this tapestry using pieces of mirror, plastic bottles, other found objects and toy skeletons all coming together to symbolize the presence of the dead among us. These sorts of representations are often part of Mexican "Day of the Dead" celebrations. Have you, or someone you know, ever made a piece of art from materials and objects that originally had other purposes? How about just using something made for one purpose for another?
  Image: @The Field Museum, ECCo, Hannah Anderson

- 7. Edible bowls: This vendor has replaced Styrofoam bowls with crunchy bowls you can eat. They even hold up for 2-3 more servings if you are really craving ice cream. Pledge to eat 'no-trash' meals by giving up disposable paper and plastic products at home and when eating out! Replacing one-use cups, bowls plates, utensils, napkins, and bags with reusable products has a significant carbon reducing effect by cutting down on energy used in manufacturing and shipping.
  - Image: ©The Field Museum, ECCo, Rosa Cabrera
- 8. Reusable containers: Whether you are storing food that you grow yourself, or putting away leftovers, using a durable reusable container like glass that can be used over and over again is a good way to cut down on your household's waste production.

  Image: ©The Field Museum, ECCo, Johanna Wawro
- 9. Recycling used motor oil: Advertisements and mechanics advise us to change our oil every 3,000 miles. But, what should we change it into? How about more oil! Taking your old oil to a local recycler (usually shops that offer oil change services) allows it to be cleaned and re-used, reducing waste and keeping it out of our water and soil.
  Image: Courtesy of Stephen Dowie
- 10. Youth door-to-door recycling program: By picking up recyclable materials from homes and curbs, these youth stewards are working to beautify their neighborhood, reduce waste, and save natural resources. They are also making valuable connections to older residents with whom they might otherwise have little contact. Image: Courtesy of Hubert Newkirk

### QUESTIONS:

What do you reuse in your home, always for the same purpose? What do you reuse for purposes other than what it was made for?

How can you encourage others at home or in your community to recycle?

Anything you think or dream about doing that you see in the pictures but have not done yet?

Why do you think the idea of doing XX appeals to you?



