



# SOUTH CAROLINA FAMILY AND COMMUNITY LEADERS

Affiliated with  
National Volunteer Outreach Network, Country Women's Council, U.S.A., Associated Country Women of the World and in  
partnership with Clemson University Cooperative Extension Service

## LEADER TRAINING GUIDE

### REDUCING YOUR CARBON FOOTPRINT

#### Objectives

1. To define carbon footprint
2. To understand how one's carbon footprint can affect the earth
3. To identify methods to reduce one's carbon footprint

**Handout:** Ways to Reduce Your Carbon Footprint

#### Part 1 - 15 minutes

**Read:** The title of the lesson and the lesson objectives.

**Read:** According to a story from ABC News, "carbon footprint is the measure of the amount of carbon dioxide -- the major man-made global warming greenhouse gas -- that goes into the atmosphere as you go about your daily life. Almost everything you do affects it: turning on a coffee maker, driving a car, buying food, flying in an airplane. Air travel accounts for about 3.5 percent of the human contribution to global warming, according to the Intergovernmental Panel on Climate Change."

The following information is from an article found at the League of Women Voters website. Climate change is developing into perhaps the most important crisis in human history – it will certainly impact every living thing on earth. Efforts to positively alter this life-changing phenomenon must be worldwide, and it would seem that those countries that have caused most of the problem should take initial responsibility for solving it. This is where you and I come in.

Since Americans generate from 25 to 28 percent of the world's greenhouse gas emissions, but we comprise less than 5 percent of the world's population, the most effective thing we can do is to lobby our elected officials to establish the laws that are essential to reduce these emissions. These laws must require improved efficiency and conservation in the use of energy and a reduced dependence on fossil fuels (coal, oil and natural gas). Every elected official and/or candidate supported by us at every level of government must have a realistic plan to slow and, ultimately, stop climate change. We, as voting citizens, **MUST** demand no less!

Secondly, we can do whatever we can to reduce carbon emission. What can we do as individuals to reduce emissions in our daily lives? You'll be surprised how simple it is to reduce your carbon footprint. There are a number of carbon reducing actions available to you. The good news is you can offset -- if not eliminate -- your carbon footprint by making choices that can even save you money. Here are a few:

#### Outdoor Projects

Composting both yard and kitchen waste is an efficient way to reduce trash and recycling while creating a great water-conserving mulch and a natural fertilizer from worm castings. If you have neither the space nor inclination for composting, then consider grass cycling with a mulching, electric lawn mower (less air and noise pollution).

Do not use toxic chemicals on the lawn or garden—no herbicides or pesticides. In addition to being toxic to air and water, such chemicals require energy to produce. Some water conservation has been achieved with soaker hoses in the garden and flowerbeds.

Examples of energy saving methods: Build a water collection system of six 50-gallon pickle barrels that catch the water runoff from your storage shed. This extra water is most useful during driest summer months. We can also chip pruned tree limbs and storm debris to use as mulch around trees, shrubs and flowerbeds.

## **Smart Shopping**

Part of the “Reduce, Reuse, Recycle” mantra includes being a smart shopper. Think of how irritated you become when you buy a tiny item and have difficulty removing it from a large, mostly plastic wrapper. These are products to avoid whenever possible. It takes oil to produce plastic, more energy to manufacture the package and excessive landfill space when discarded. Look for a similar item wrapped in an efficient package, defined as just big enough to hold the product. If consumers avoid the poorly packaged items, the reduced sales may communicate to the producer that this product is unacceptable.

Another aspect of smart shopping is to buy locally grown or produced products. Transportation is a huge contributor to climate change. If you purchase or grow fruits and vegetables locally in season, you reduce the need for the long hauls by polluting trucks and airplanes. Gardens provide fresh vegetables. In addition, you can freeze some for use through the winter months.

Consider hybrid autos. They provide excellent gas mileage. Many hybrids are being developed with big engines now, but they defeat the goal of fuel efficiency. Tax credits may be available for hybrid cars.

Take the bus or use other mass transit options. When possible, carpool or vanpool. Walking or cycling serves well for short trips and light loads.

## **Inside the Home**

°Replace the bulbs in your frequently used light fixtures with compact florescent bulbs.

°Add double-paned windows throughout the house.

°As appliances wear out, replace with the most energy efficient/Energy Star type available.

°If your home was built in the 1970s and before, make sure that all heating ducts, hot water pipes and hot water heater are wrapped with insulation. The newer, energy efficient models are well insulated and do not require wrapping.

°Although the energy efficient appliances are more expensive initially, your energy bill is lower and it is not uncommon to receive rebates for many of these purchases. For instance, a rebate may be offered for front-loading washers. Water conservation and a lower water bill are other benefits of the front-loading washers.

°Hang laundry outdoors during the summer months. This not only saves energy but also adds the wonderful outdoor aroma to the freshly washed clothing.

°Fluorescent light bulbs are more expensive, but replacing just one incandescent light bulb will save 150 pounds of carbon dioxide and, because it lasts eight to 15 times longer than an incandescent bulb, save approximately \$30 over the course of its lifetime. CFLs contain small amounts of mercury and as such must be handled as hazardous waste when discarding. Some cities have hazardous waste pick up programs and companies such as Home Depot accept inactive CFLs bulbs for safe disposal. LED lights are highly efficient and are able to reproduce the soft light of incandescents. They also contain no mercury and last six times longer than CFLs.

°You can replace a wood-burning fireplace with a gas fireplace. Then, purchase the most energy efficient one with an automatic thermostat so that lowering your night setting is done automatically. Turn the temperature down when away for several hours or on a trip. Consider a setting between 67 to 68 degrees.

°Added foam backing to your electrical outlets on outside walls. Your power company (electric and gas) and numerous other energy companies across the nation provide rebates for many energy saving measures within the home. You can save from \$50 to \$500 depending on the appliance that you are purchasing. You may want to have an energy audit by a contractor and plan to institute their recommendations.

Carbon neutrality is achieved through reducing energy used, plus offsetting the carbon emissions that we still generate with projects such as planting trees, constructing “green” buildings, and increasing sources and supplies of alternative, clean energy.

For those of you who are just getting started, your timing is excellent because manufacturers are creating more efficient appliances and the choices available to you are increasing exponentially. If you are in the market for a new home, this is the perfect time. Look into the Energy Star/Green Homes that are gaining popularity. For the rest of you, check out the Web site for the many ways to reduce your energy use; or, if you don't have access to a computer, contact your energy company to request a similar list or go to your local library. Other ideas for saving energy and money can be found in the “Consumer Guide to Home Energy Savings,” available from local bookstores, amazon.com or other online stores. Best wishes to you and your family in your efforts to reduce your carbon footprint!

**Say:** You can calculate your carbon impact by using the carbon calculator found at:

<http://www.nature.org/initiatives/climatechange/calculator/>

## Part II

**Do:** Distribute the handout and allow various people to read the items listed. Ask participants if they use any of the tips listed or if they have any additions to the list.

**Lesson Prepared by: Dr. Della Baker, extension Program Leader for Evaluation, Accountabilit, and Staff Development**

## References

Ewing, D. DO A LITTLE. CHANGE A LOT: A BIOGRAPHICAL SKETCH ON ENERGY. [On-line]. Available: <http://www.lwv.org/AM/Template.cfm?Section=Home&template=/CM/HTMLDisplay.cfm&ContentID=12171>

SANDELL, C. (2006). Reducing Your Carbon Footprint. [On-line]. Available: <http://abcnews.go.com/Technology/Story?id=2049304&page=1>



## WAYS TO REDUCE YOUR CARBON FOOTPRINT

1. Wash clothes with cold water. Hang dry your laundry rather than putting it in the dryer when it's warm outside. Clean the lint filter in the dryer every time.
2. Replace incandescent light bulbs with Compact Fluorescent Light Bulbs (CFL) or Light-Emitting Diodes (LEDs).
3. Use the microwave more. Microwaves use a lot less energy than conventional ovens and stoves, especially for heating water.
4. Turn off your lights when they aren't being used, even when you leave a room for a short period of time.
5. Regulate your home temperature: Move your thermostat two degrees cooler in winter and two degrees warmer in the summer.
6. Clean or replace air filters on your AC unit at least once a month.
7. Lower the thermostat on your water heater to 120 degrees and wrap it with an insulated blanket.
8. Set refrigerator temperature at 36-38 degrees and your freezer to 0-5 degrees. Pack your refrigerator tightly to reduce the amount of cooled air. Ensure that the refrigerator is leveled properly to ensure that it operates efficiently. Buy energy efficient appliances.
9. Use dishwashers instead of washing dishes by hand. You actually use more hot water when you wash dishes by hand. Do not use the heated dry mode on your dishwasher.
10. Turn off the faucet while brushing your teeth. You will save 25 gallons of water a month.
11. Reduce water in your toilet tank. Putting a liter bottle filled with water in your toilet tank can save 300 gallons per month.
12. Use a low-flow showerhead and faucet aerators to conserve water.
13. Reverse indoor ceiling fans for summer and winter operations.
14. Use cloth napkins instead of paper ones, although washing cloth napkins uses water too.
15. Unplug your electronics. Most electronics still use some energy even when turned off. This 'standby mode' or 'phantom load' drains up to 10 percent of electricity used in most homes.
16. Use surge protectors to make it easier to unplug lots of things at once when you leave a room.
17. Plant trees to shade your home and air conditioning units.
18. Use low-VOC latex Paint-rather than oil-based to paint your home. Paint with brushes or rollers instead of spray paints.
19. Seal and insulate your home. Sealing air leaks and adding more insulation to your home is a great do-it-yourself project. The biggest leaks are usually found in the attic and basement.
20. Replace old windows with energy efficient windows.
21. Connect your outdoor lights to a timer.
22. Buy reusable goods. The effort to make and transport even small items can add up very quickly.
23. Install a drain water heat recovery pipe in your home to reclaim energy from waste water.
24. Install insulated blinds on windows to decrease energy escape.
25. Water grass early in the morning.
26. Put leaves in a compost heap instead of burning them or throwing them away
27. Install water barrels to collect rain water from eaves troughs. Place a small bucket in your sink to collect water when washing produce. Use this water in the garden.
28. Reduce the need to copy and print. When you need to, copy and print on both sides of the paper
29. Use recycled paper and recycle printer cartridges
30. Use soy based ink which is less toxic
31. Cut out Junk Mail
32. Consider reducing the number of trips you take by habit. Plan out your trips
33. Consider car pooling, for work and personal trips.
34. Consider using your bike, feet, or mass transportation for most transportation needs
35. Consider purchasing a hybrid vehicle, or more efficient car if you must drive a lot.
36. Purchase radial tires and keep them properly inflated
37. Drive during non-peak hours. If you avoid heavy traffic you will not spend a significant amount of gas during stops.
38. Idling hurts car engines, wastes gas, and contributes to global warming and pollution.

**To calculate your carbon impact Go to: <http://www.nature.org/initiatives/climatechange/calculator/>**

## South Carolina Family and Community Leaders

### Lesson Evaluation

**Title** \_\_\_\_\_

**Presenter** \_\_\_\_\_

Please indicate your level of agreement or disagreement with each statement below by circling the appropriate number that represents your response.

	Strongly Disagree				Strongly Agree
The information was easy to understand.	1	2	3	4	5
The information was relevant.	1	2	3	4	5
I gained knowledge as a result of this presentation.	1	2	3	4	5

As a result of this session, I plan to...(Describe how you plan to use what you have learned.)

\_\_\_\_\_

\_\_\_\_\_

Please add any comments, suggestions, or other ideas on the back of this sheet. Return form to Dr. Della Baker, 108C Barre Hall, Clemson, SC 29634

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