

Practice compassion: Reduce your *ecological footprint*

We present 100 wonderful ways to engage in the Practice of Compassion – and save our world.

First, rejoice that there are so many different ways to choose from, as well as the opportunity to maybe one day do them all.

Now start learning how you can be part of the solution instead of part of the problem.

Then, take the required action, followed by a dedication to all sentient beings whose suffering has been reduced by the action.

Note: The following information was mainly compiled by FPMT members in the UK and lists many UK-specific examples and websites. The recommendations listed can be easily applied beyond the UK, especially among developed nations which constitute both a disproportionately-large ecological threat to the world as well as enormous capacity and resources for change. A list of several international websites, as well as U.S., Canada, Australia, and New Zealand-specific sites can be found at the end of the article.

WHAT YOU CAN DO



1. Switch from traditional incandescent light-bulbs to compact fluorescent lamps (C.F.L.). If every household in the U.K. replaced three regular bulbs with C.F.Ls, the electricity saved could power the U.K.'s street lighting for a year. A 30-watt C.F.L. produces about as much light as an ordinary 100-watt bulb. Although the initial price is higher, C.F.Ls can last twelve times as long. C.F.Ls are available at most hardware shops and can be ordered over the Internet. According to the Energy Saving Trust www.est.org.uk, just one C.R.L can reduce your electricity bill by up to £7 a year.



2. Waste Online estimates that the average U.K. citizen uses about 290 plastic bags a year, which means more than 17 billion bags are being used annually. Made from polyethylene, plastic bags are not biodegradable and are making their way into our oceans and waterways. According to recent studies, the oceans are full of tiny fragments of plastic that are beginning to work their way up the food chain. Invest in stronger, reusable bags, and avoid plastic bags whenever possible. For more information, visit www.wasteonline.org.uk



3. According to Consumer Reports, pre-rinsing dishes does not necessarily improve a dishwasher's ability to clean them. By skipping the wash before the wash, you can save up to 76 liters of water per dishload. At one load a day, that's 27,740 liters over the course of the year. Not to mention that you're saving time, dishwashing soap, and the energy used to heat the additional water. Better still – do you really need a dishwasher? We all managed happily without them until a few years ago – and many people still do!



4. Ignore cookbooks! It is usually unnecessary to pre-heat your oven before cooking, except when baking bread or pastries. Just turn on the oven at the same time you put the dish in. During cooking, rather than opening the oven door to check on your food, just look at it through the oven window. Why? Opening the oven door results in a significant loss of energy.



5. Recycle glass (think beer bottles, jars, juice containers) either through curb-side programs or at community drop-off centers. Sixhundred-thousand tons of glass bottles are thrown out by pubs, clubs, hotels, restaurants, and cafes annually, up to 75% of which is sent to landfills. Glass takes more than one million years to decompose. Glass produced from recycled glass reduces related air pollution by 20% and related water pollution by 50%.



6. It sounds like common sense, but if you **fill your kettle with enough water for only the number of cups you are pouring**, you will save energy, water, and time. One cup of water can take one minute or so to boil in a 3,000 watt kettle; four cups of water take about five minutes. Since the average Brit drinks about three cups a day, you could watch your life drifting away while waiting for your tea! Additionally, improve the efficiency of your kettle by boiling an equal mixture of water and white vinegar (it breaks down limescale left behind from hard water) in your kettle; let it stand a few hours and then rinse out the kettle. This will also get rid of those unpleasant white specks found floating in your tea.



7. Buy A-rated (or Energy Star-rated) appliances. The European Union energy label rates products on a scale of A (the most efficient/least energy used up to A++ for refrigeration) to G (the least efficient/most energy used). By law, this labeling must appear on all refrigeration and laundry appliances, dishwashers, electric ovens, and light-bulb packaging. If you're comparing fridge-freezers, the label tells you the energy consumption by kilowatt-hours (kWh) per year, and for washing machines and dishwashers, kilowatt hours per cycle. Also look for products with the E.U. eco-label. Products must comply with strict environmental criteria to be awarded this distinction. In the U.S., the Environmental Protection Agency and the Department of Energy administrate an Energy Star rating on products, services, and practices that meet energy-efficiency guidelines: www.energystar.gov. Consumer rebates are offered by the U.S. Federal and some State governments for purchasing Energy Star products.



8. Buy an A-rated (or Energy Star-rated) refrigerator. To maximize the efficiency of your fridge and freezer, set the temperature of the fridge to 4° Celsius and the freezer to minus 18° Celsius. Do not put a refrigerator near a heat source such as an oven or dishwasher, as it will require more energy to run. Regularly dust the coils of your refrigerator. (Dusty coils can make it less energy efficient.) *Another tip:* if you have an empty fridge, place several bottles of water inside. Refrigerators don't have to work as hard to stay cool when the cold is effectively stored in the water.



9. Before embarking on any home remodeling, **make sure your architect has green credentials**. Ask where he or she sources materials, and request that energy-saving devices, such as solar panels, sun pipes, or a wind turbine, be installed. (Government grants or subsidies may be available for some of these CO² reducing devices.) Visit www.greenbuilding.co.uk or www.aecb.net for more green building information.



10. Unlike refrigerators, **freezers function best when they are tightly packed** and don't have to work harder to freeze air space. Also, it's best to match the size of your freezer with your needs. If you stockpile frozen foods, buy a chest freezer instead of an upright one, as a chest freezer releases less cold air when opened.



11. **Abandon your clothes dryer** – and buy some drying racks if you don't have a clothesline. Generally, clothes dry overnight.



12. Buy an A-rated (or Energy Star-rated) washing machine. Most older machines use up to 100 liters of water per wash, but an A-rated machine will typically use 9 to 10 liters per kilogram of laundry (about 50 liters per load). Whenever possible, wash your clothes in cold water using cold-water detergents (designed to remove soils at low temperatures). And do your laundry only when you have a full load. If you must do a small load, adjust water level accordingly.



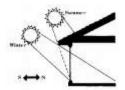
13. If you live in a cold climate, **paint your house a darker color** to absorb the heat from the sun; if you live in a warm climate, a lighter color will help reflect the sun's rays and keep your house cooler. Employ the same principle when choosing a car.



14. Most paint is made from petrochemicals, and its manufacturing process can create 10 times its own weight in toxic waste. It also releases volatile organic compounds (VOCs) that threaten public health. (VOCs are solvents that rapidly evaporate, allowing paint to dry quickly.) They cause photochemical reactions in the atmosphere, contributing to ground-level smog that can cause eye and skin irritation, lung and breathing problems, headaches, nausea, and nervous-system and kidney damage. **The best alternative is natural paints.** Manufactured using plant oils, natural paints pose far fewer health risks, are breathable, and in some cases are 100 percent biodegradable. *Remember:* Never throw your paint away. Donate your paint to your community's repaint scheme, which redistributes collected paint to community projects and schools. Go to www.communityrepaint.org.uk to find re-use programs in your community.



15. Have your home audited for energy efficiency, especially before you begin home renovations or construction. If you call the Efficiency Advice Centre (0800 512 012), an adviser will go through a home energy checklist with you. After you provide details about your house (the year it was built, its type of heating system), the adviser will be able to tell you how to improve your heating and cooling systems as well as suggest which appliances should be replaced for energy savings. Energy advisers can give you information about your eligibility for grants and rebates too. The service is free.



16. If you hire an architect to design a new home or office space, make sure the person is aware of **the benefits of passive solar design**. Design your home or office to take maximum advantage of the sun's heat and use materials which best retain it. It's as easy as placing the living spaces in the sunny, south-facing areas and putting large windows in those rooms.



17. Install sun pipes in your roof to harness solar energy. These devices can literally pipe sunlight to places window light cannot reach. Sun pipes are tubes which have an internal reflective finish that intensifies natural light (even on cloudy days) to a room or an area below. Not only will these pipes help to lower electricity bills, but you will have the benefit of getting more outdoor light.



18. Parabens are preservatives found in many makeup products, skin creams, and deodorants. Recent studies have suggested that **parabens may be linked to breast cancer.** Additionally, parabens are endocrine disrupters that may interfere with or block some hormones. You can check the ingredients in your beauty products at www.ewg.org



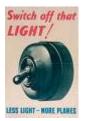
19. Taking a shower instead of a bath saves time as well as energy and water. It's estimated that the average shower lasts about five minutes and uses about 35 liters of water, while a bath uses about 100 liters. This change could save a four-person household up to 100,000 liters of water a year.



20. A four-person household typically uses more than 600 liters of water each day (toilets consume about a third of this total). **Unnecessary water usage comes in the form of leaks.** Fixing leaky taps and toilets is a quick and easy way to conserve. A steady tap drip can waste 75 liters of water a day. Leaky toilets are even worse, wasting upwards of 400 liters a day. Since toilet leaks are generally silent, check them regularly by removing the tank cover and adding food coloring. If the toilet is leaking (and 20% of them usually are), color will appear in the bowl within 30 minutes.



21. Gray-water is water that has been used in the bathroom sink, bathtub, shower, or washing machine. A gray-water system typically treats and redirects this used water to toilets and lawns. A gray-water system can cost as little as two washing machines and can reduce total water consumption by up to 40% each year. Gray-water is particularly valuable during droughts.



22. Lighting accounts for 30 to 50% of a building's energy use. Simply turning off unneeded lights can reduce this amount of energy up to 45%. Extinguish lights if you are the last one to leave the room. Turning on lights doesn't consume any more energy than when they are already lit. This applies to both regular and energy-saving light-bulbs. Also, consider installing occupancy sensors — devices that trigger lights on and off when a person is entering or leaving a room.



23. Double-glazing, two layers of glass with an air space between, can almost halve heat loss through windows, keeping your house warmer and your energy bills lower. Triple glazing is another alternative. Both have the additional benefit of reducing sound. For extra energy efficiency, try low-emissivity glass. It has a microscopic coating that reflects longer-wavelength heat from heating systems back into the building. This transparent film is barely visible. Lastly, make sure your replacement glazing comes with a certificate describing its insulation value. The British Fenestration Rating Council has created a rating system. Ratings range from A to G. (A is the best and G is the worst.)



24. Installing insulation is one of the best ways to reduce your heating bills and carbon-dioxide emissions. Insulating your attic or roof space to a depth of 270 millimeters can cut your heating costs by a third. Next, fill your cavity walls with insulation. (If you live in a house built in the last 70 years, it's likely to have cavity walls.) This is a straightforward and inexpensive process that may be partially covered by grants and other special offers. Cavity-wall insulation can reduce your heating bill by 20%, which equals a substantial C02 reduction. Most homes in the U.K. now qualify for subsidized insulation. For more information, visit www.est.org.uk



25. Hot water will stay hot longer if you properly insulate your boiler tank and pipes. Fitting your boiler with a jacket 75 millimetres thick can cut heat loss by up to 75%. This alone will cut your C0² emissions by some 450 kilograms per year. Pre-cut blankets for electric or gas boilers are readily available for as low as £10. Your utility company may even offer a lower price or provide free installation. The cost of installation will pay for itself within the year with savings from your utility bills. The next step is to insulate your pipes. This will cost about £10 and will also pay for itself in reduced energy costs within two years. By leaving the water running while you brush your teeth, you can waste more than 500 liters of water per month – that's 6,000 liters a year! Turning the water off while you brush could save 20 liters of water. Also pay attention to this water-

saving principle while shaving and washing your face.



26. Cut your heating bill by **making sure your house is draught-proof.** All exterior windows and doors should have weather stripping to keep out cold air in the winter. If you have an attached garage, see that the inner doors to the house are weather-stripped. Pet doors and letter boxes are obvious sources of cold air. Fit seals around your pet door and attach a draught-proof box to your letter box. In internal areas you can use a draught excluder to keep out cold air under doors.



27. Make sure your wood comes from a sustainable source; look for labels from the Forest Stewardship Council. The F.S.C. labels all forest products, from wood right down to paper and shampoo, allowing consumers to support the growth of responsible forest management. Forests act as carbon sinks, ancient forests support precious biodiversity. Wood from commercial, sustainable forests is replaced as it is cut. For more information, visit www.fsc-uk.org and www.woodforgood.com



28. Buy local food as much as possible; up to **30% of our carbon pollution** can come from 'food miles' – the distance food has been transported, often air-freighted, before it reaches us. Food is traveling farther than ever these days. According to a July 2005 report from the Department for Environment, Food, and Rural Affairs (DEFRA), the annual amount of food transported has increased 23% since 1978, and the average distance for each trip has increased by more than 50%. More than half of the fruits and vegetables we buy in the U.K. is imported. In 2002, food transport produced 10 million tons of CO², amounting to 1.8% of the U.K.'s total annual CO² emissions. People once ate seasonally – artichokes in late autumn and cherries in June – but now you can buy fresh produce year round. To help reduce CO² emissions (released from trucks, aeroplanes, and cargo ships), it's best to buy food that's in season, organic, and grown locally. Go to www.farmersmarkets.net to find the farmers' market nearest you.



29. More than 5 billion plastic bottles are thrown away every year in the UK. Instead of tossing, **invest in a reverse-osmosis water filter**, which can be attached to your kitchen sink. Reverse Osmosis forces tap-water through a very thin membrane to remove impurities. This system produces water purer than many bottled waters and eliminates the need for all those plastic bottles. If you can't live without bottled water, save on water-miles by always buying the most local water possible.



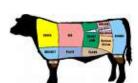
30. Buy fair-trade goods where possible – human rights and the ending of poverty are also environmental issues: If people can retain their land and get a fair price for their products, they won't need to clear virgin forest in order to survive. Avoid buying products from large companies using land that has been taken from peasant farmers, who had been using it to grow their own food.



31. Shade-grown coffee. According to www.coffeeresearch.org, about 150 species of birds live on shade-grown coffee farms, while only 20 to 50 inhabit full-sun farms. With increased demand for cheap coffee, many Latin American growers have moved toward full-sun plantations, clearing the habitat of numerous native birds and increasing the use of pesticides and fertilizers. By drinking shade-grown coffee, you can help bird habitats and reduce the need for farming chemicals. Shade-grown coffee beans can be purchased at many grocery stores. Starbucks offers shade-grown coffee as well.



32. According to figures from the U.N.'s Food and Agriculture Organization, 52% of commercial fish species are being fished at the limit of their reproductive capacity, while 25% are overexploited, depleted, or recovering from depletion. Some stocks of cod and tuna are among those in danger of being fished out of commercial existence. Unfortunately, this threat to the world's fish population clashes with medical advice that recommends eating certain kinds of fish regularly to prevent heart disease. If you are worried about getting enough omega-3 fatty acids in your diet, try eating walnuts and flaxseed oil. If you do choose to eat fish, pick the varieties of tilapia, carp, and trout that are generally sustainable. Keep in mind that mercury levels in some fish, especially some types of tuna and swordfish, may be extremely high, causing developmental risks to unborn babies and young children. Go to www.americanheart.org/presenter.jhtml?identifier=4632 for a chart comparing mercury levels and omega-3 fatty-acid levels of common fish.



33. To produce one pound of beef requires about 9,500 liters of water — that's 40 times more water than is used to produce a pound of potatoes. **Before buying beef, think about the immense cost of energy used to raise cattle and to transport meat to your supermarket shelf.** Besides all this, cows consume enormous amounts of antibiotics and are a prodigious source of methane, which is the number two greenhouse gas; livestock are responsible for almost 20% of the methane in the atmosphere. If you can't be vegetarian, try it one or two days a week, or reduce the amount you eat at each meal. Also, try to buy products not from Factory Farms, but from those labelled 'free range,' 'compassion in world farming,' etc. Millions of animals are slaughtered to provide meat for pet food — maybe consider having a vegetarian pet, such as a tortoise or rabbit.



34. About 4.5 trillion cigarette butts are littered worldwide each year, making them the most littered item. **The myth that cigarette filters are biodegradable is just that – a myth.** Although the filters do eventually decompose, they release harmful chemicals that enter the earth's soil and water during the decaying process. There is nothing earth-friendly about the breakdown. If you must smoke, carry a 35mm film canister in which to store your used butts until you can properly discard them.



35. Having heating system controls can save you money. Controls ensure that your heating system is working at the bare minimum to keep your house at the right temperature. Set the thermostat so that heating is activated only while you are at home. Make sure the thermostat is placed on an inner wall in a living area. This will give your system a more accurate temperature reading. If you have hot water radiators, consider getting thermostatic radiator controls. These can keep each room at its ideal temperature by switching individual radiators on or off based on how hot they are. If you are installing a new type of system, consider having different heating zones; these use separate pipe networks, which will give you the ability to set separate temperatures for your living area and bedrooms.



36. There are more than 150 million newspapers printed each week in the U.K. Every week the average household there throws away two kilograms of newspapers and magazines. According to www.wasteonline.org.uk/, each ton of newspaper recycled rather than binned saves enough energy to power an average three-bedroom house for a year.



37. If you turn your thermostat down by one degree, your heating costs will decrease by about 3%. Turn it down five more degrees for four hours a day and reduce your heating bills by almost 6%. If you're going to be away for the weekend or out in the evening, turn your thermostat down. It's not true that reducing the temperature means it will take more heat to bring it back up to a warm level (unless you have a heat pump in your home). Also, turn the heat down if you are throwing a party – every guest will be the equivalent of a 100-watt heater.



38. If you have radiators along an exterior wall, a significant percentage of the heat being generated can get lost in the walls. Radiator reflector foil can prevent this loss. You can make this product yourself by covering a piece of cardboard the size of your radiator, or slightly larger, with aluminum foil, shiny side out. Place the reflector between the radiator and the wall with the foil facing the room.



39. Although they account for only 2.5% of the world's agricultural land use, cotton crops are responsible for 10% of all pesticide use. A study done in part by the World Health Organization reported that pesticides cause several thousand human fatalities and up to five million illnesses a year. In addition, these chemicals leach into our rivers and oceans. For more information, go to www.sustainablecotton.org Better still, **buy second-hand, or hemp, and avoid cotton altogether – it is so water hungry, it is causing problems in many areas.**



40. Hankies are the way forward. The old fashioned handkerchief is making a big environmental comeback; Hankies should be used for all nose-blowing related activities, as they can be washed and reused. (If you're concerned about getting yours mixed up with other family members', have yours monogrammed.) Also, choose cloth napkins over paper ones. They can be used again and again, do not require trees to be harvested, and look a lot better than paper ones on the table.



41. Envelopes come in huge quantities for free every day. If you are careful when opening letters, you can use the envelopes again by simply putting a label over the original address. This saves money and trees, while reducing waste. **Try to reuse jars and plastic containers** for example, when taking your lunch for work. (Doing so prevents waste, and making your food at home is less expensive than the alternative.) Ask your office manager to buy **reusable mesh coffee filters** instead of bleached paper ones, which may contain dioxins. They are tree-free and should save your company money.



42. Bigger is better. Or at least when purchasing food items, **it is cheaper and more environmentally-friendly to buy in bulk.** Buying food and beverages in large quantities saves on packaging all that paper, plastic, and metal. It's also good for stockpiling food, which can come in handy if you have unexpected guests.



43. Cardboard egg cartons are normally made from recycled paper, which biodegrades relatively quickly, and are also again recyclable. Polystyrene or plastic cartons take much longer to biodegrade and their manufacture produces harmful by-products.



44. The average family goes through **three rolls of paper towels a week. Switch to rags or sponges.** This will save a forest full of trees over a lifetime.



45. While the idea of going on an eco-holiday might conjure up images of patchouli-smelling people sitting around wearing hemp in grass huts whilst eating sprouts, it's a myth that you have to live like a monk to make your holiday more eco-friendly. You just need to follow a few simple steps. **One idea, to save big-time on fuel, is to not go too far away. However, if this doesn't appeal to you, then wherever you go, try to be careful about your impact on the local environment.** Don't litter, turn off the air conditioner when you leave your room, shun cars in favor of public transport, and don't buy banned products like ivory or bush-meat. When travelling in Europe look for campsites and resorts that have the European Eco-label which denotes them as officially among the most environmentally friendly in their area: www.eco-label-tourism.com



46. Avoid air travel as much as possible – not only do planes produce a lot of CO² – by depositing it in the stratosphere, the effect is three times as potent as if it was released at ground level. **Air travel is currently responsible for 3.5% of the global warming gases from all human activity** and is growing fast. The impact of air travel is enormous; a round trip between London and Sydney emits 5.6 tons of CO² per passenger. (To determine CO² emissions for your next flight, go to www.co2.org Try to limit the number of flights you take. If you're traveling within a country, why not take a train? (Air travel releases at least three times more CO² into the atmosphere than rail travel does.) If you're planning a business trip, consider whether a video linkup or a conference call will suffice.



47. Avoid disposable goods – institute a mug policy in your office. It's estimated that British people use some six billion polystyrene cups every year, most of which end up in landfills. Refill your water bottles once or twice, and make your coffee in a ceramic mug. If you bring in cutlery from home, you will also cut down on those pesky plastic forks, knives, and spoons.



48. Surrender your petrol lawnmower. Petrol lawnmowers are among the dirtiest of modern machines. A study funded by the Swedish E.P.A. found that using a four-horsepower lawnmower for an hour causes the same amount of pollution as driving a car 150 kilometers. The trouble with petrol lawnmowers is that they not only emit a disproportionate amount of CO², they are also responsible for releasing carcinogens such as polycyclic aromatic hydrocarbons into the air. Retire the noisy monster and buy an electric or manual model. Better still, mow fewer times per season and let some of your lawn grow wild, which has added benefits for bugs, butterflies, and birds.



49. Each ton of recycled paper can save 17 trees, 1,438 litres of oil, three cubic yards of landfill space, 4,000 kilowatts of energy, and 26,500 litres of water. GLASS: The energy saved by recycling just one bottle could power a computer for 25 minutes. ALUMINUM: It takes 95% less energy to recycle an aluminum can than to make a new one.



50. Help cut down on the consumption of paper and plastic by **reusing ribbons, bows, wrapping paper, and gift bags.** These materials should be good for at least one more wrapping. If you are feeling creative, use old calendars and pages from magazines to wrap gifts. Even a newspaper, especially the Sunday comics, can be decorative, colorful, and entertaining.



51. BUY RECYCLED PRODUCTS. There has to be a market for products made with recycled goods. Support this movement by purchasing them and you will save virgin materials, conserve energy, and reduce landfill waste. Recycled paper products include toilet paper (which is no longer scratchy, like it used to be), paper, paper towels, and tissues. Look for garbage bags and bin liners labelled "recycled plastic," and buy recycled

toner cartridges for your fax machine and printers. **Be intelligent, though** – don't blindly buy products that are made from recycled 'somethings' that shouldn't have been produced in the first place!



52. Buy cellulose tape. It is biodegradable and is generally made from wood pulp, without using elemental chlorine. This is better for the environment than the manufacture of acetate or polyvinyl chloride-based tapes.



53. Green power is available everywhere in the UK, so **get your electricity from renewable energy sources like wind, sun, water, and biomass, all of which generate electricity, with little environmental impact.** Electricity generated from renewable energy sources saves 1,892 kg of CO² annually per British household, the equivalent of planting 631 trees. Most electricity companies offer their own green alternative, but the best British option is eco-tricity, which takes its customers' money and invests it in building new wind turbines and wind farms. For more information, visit <u>www.ecotricity.co.uk</u>



54. Electricity 'leaks' are not OK; Televisions, video and DVD players, cable boxes, and other electronic equipment found in nearly every UK home are wasting huge amounts of energy. When these devices are left on standby, (the equivalent of 'sleep mode' for computers), they use about 40% of their full running power. If everyone in the UK switched these machines off instead of placing them on standby, the electricity saved would be enough to power a city the size of Birmingham for a year. To avoid the drain of these energy vampires, plug them into a power strip and turn it off when they are not in use.



55. Most mobile phone chargers continue to draw electricity even when the phone isn't plugged into it. If your charger is averaging 5 W per hour, that means a total of 40 kWh every year, or 42 kg of CO². The same problem applies to all your other electronic equipment – your laptop, I-pod, digital camera, and blackberry. Unplug all your chargers when they are not in use.



56. Although the number of electrical gadgets that use disposable batteries is on the wane, the average UK household still consumes 21 batteries per year. **30,000 tons of batteries are thrown away in the U.K. each year, and only around 1,000 tons of those batteries are recycled.** Batteries have a high concentration of metals, which, if not disposed of properly, can seep into the ground when the casing erodes. Avoid disposable batteries by using your outlets whenever possible. If you can't do without batteries, use rechargeable and recycled ones. You should also have your batteries collected and recycled. Go to www.rebat.com for a list of companies that participate in battery reclamation.



57. If your office doesn't recycle, find out why. If you work in a small office, call your local authority to discover what recycling equipment and services are available. These may include storage containers and compactors as well as collection. If you work in a larger office, ask your building services coordinator why there are no recycling facilities and whom you would need to speak to about starting a recycling program for paper, glass, metal, and plastic.



58. The next time you buy a camera make sure it's digital. Film processing involves the use of toxic chemicals, creating chemical and heavy metal waste. Digital cameras enable you to preview pictures and print only those you want, which minimizes pollution and waste.



59. Flat panel, liquid crystal display (L.C.D.) computer screens and televisions can cut energy consumption by one third. LCDs typically use 30% less power than their bulky cathode-ray tube predecessors. They benefit our health, as better image contrast and reduced screen flicker mean less eye strain. They produce lower levels of electronic emissions and also contribute to a more comfortable office because they give off much less heat than cathode ray tubes.



60. Save a tree today: Sign up for services that remove you from junk mail databases. In the U.K., you can enroll with Mailing Preference Service (M.P.S.) and have them stop unwanted direct mail. If only 100,000 people stopped their junk mail delivery, 150,000 trees would be saved every year. Register on-line at www.mpsonline.org.uk/mpsr or go to www.mpsonline.org.uk/mpsr or go to www.atg.wa.gov/consumer/unwanted.shtml and you should see a gradual drop in the amount of junk mail you receive. Of course, you can recycle any junk mail you do get. Finally, put a NO JUNK MAIL sign on your mailbox to ensure you don't receive unwanted leaflets, etc.



61. Install a water butt to save rainwater. A water butt is simply a big barrel attached to your drainpipe that will collect rain from your roof's eaves. Your plants will thank you: rainwater is better for your garden, as the **chlorine in tap water can inhibit plant growth.** You can also save almost 23 liters of water a minute simply by attaching a trigger nozzle to your hose so that you use water only when it's needed. Also, if you grow your grass a little longer, it will be greener and will require less water than a closely mowed lawn.



62. Turn off your computer at night. While computers do require a power surge when you first turn them on, they don't need enormous amounts of electricity to function for lengthy periods. Also, you can set your computer on "sleep" mode, which uses about three watts per hour, if you are going to be away from your desk for more than 15 minutes.



63. The average office worker prints an astonishing 50 pages on size A4 paper a day. For a quick and easy way to halve this, **set your printer's default option to print double-sided (duplex printing).** This has the added advantage of reducing the paper pile on your desk. To further cut your paper wastage, make sure you always use "print preview" mode to check that there are no overhanging lines and that you print only the pages you need. Other ways to cut down on paper before you get to the printing stage include using single or 1.5 spacing instead of double spacing and reducing your page margins.



64. According to the Carbon Trust, a government funded organization that helps businesses and the public sector cut carbon emissions, most companies could save 10% of their energy costs without any capital investment. Energy efficiency tips are largely common sense. For example, ensuring that **all employees switch off their equipment at the end of the workday or making sure heating systems are activated only during the hours an office is occupied.** Additionally, radiator placement is important. Radiators should not be obstructed by office furniture, and they should be placed only in areas of the office that need to be heated. (There is little sense in heating the stationery cupboard.) Carbon Trust offers free surveys to businesses with energy bills greater than £50,000 per year, and loans are available for small to medium size businesses that want to adopt energy saving measures. For more information, please visit www.thecarbontrust.co.uk



65. If you have a say in your company's procurement, start examining the savings you can make by choosing environmentally-friendly options. Perhaps your offices could **replace incandescent light-bulbs with energy efficient bulbs.** Or install sensor systems in unoccupied spaces like restrooms and kitchens so the lights are on only when the area is in use. Do you currently use a water company to deliver filtered water? An on-site filtration system will save money, in addition to cutting out the use of plastic containers and the fuel emissions involved in delivery. Does your organization buy recycled copying paper, stationery, and envelopes? If your company has a transport program, speak to the Energy Saving Trust or the Department of Transport to find out the fuel savings that can be made by fuel management. For more information, visit www.freightbestpractice.org.uk/ or www.est.org.uk/fleet



66. Miniature wind turbines are now available to the residential market. These turbines can be attached to your house's roof or walls and should provide all your non-heating electricity needs. Domestic models were designed for urban areas and generate electricity even at low wind speeds. They are approximately 1.5 to 2 meters in diameter, completely silent, and provide about 3,000 kWh a year, a carbon savings of 1.3 tons. If you live in a rural area, you may want to consider a larger, mastmounted turbine, which is capable of generating much more significant amounts of electricity.



67. Use the earth's natural heat to warm your home. (Elton John and Queen Elizabeth do it.) A geothermal system extracts the heat through a buried pipe network (installed via either a trench or borehole). Even a few yards below our feet, the earth keeps a constant temperature of about 11° Celsius all year. In winter, fluid circulating through the system's pipe network absorbs the earth's heat and carries it indoors to a heat pump. Here, the heat is compressed (raising its temperature) and used to warm the air inside the air-handling system that is, in turn, distributed throughout your house either through a radiator or under-floor heating system. Some heat pump units can even be reversed to provide cooling in the summer. Heat pumps can cost as little as £4,000, can cut utility bills by 30%, and can also reduce maintenance costs. (All equipment is protected indoors and underground.)



68. Up to a third of water can evaporate away in the daytime heat; watering your lawn in the early morning or in the evening ensures that a minimal amount is lost. Also, throw away sprinklers and shun using water to clean your driveway and pavement – a broom is just as effective.



69. If you cannot obtain any recycled bricks or paving stones when resurfacing walkways or driveways, **use environmentally-friendly products such as wood chippings, gravel, or recycled wooden decking.** In addition to a unique spin on your landscaping, these products will allow rain to soak into your lawn and gardens.



70. When replacing garden fences, instead of building a wooden fence, **opt for a living fence. A living fence is a hedge or row of trees** which can be groomed to maintain appearance. Not only is a living fence less expensive than a traditional fence, it never needs to be painted. This saves money and time and keeps harmful chemicals out of the environment. Try to use native flora and avoid hedges comprised of only one species.



71. A green roof is more than simply a roof with plants growing on it. It functions like a "breathing wall," consuming CO² from the atmosphere and emitting oxygen. **Green roofs generally use low maintenance drought-resistant plants**. Vegetation is planted into a thin layer of soil. One of the biggest benefits is that they can absorb more than 50% of rain water, so reducing run-off, a major source of pollution in our waterways. Green roofs can last twice as long as conventional rooftops and they look better too.

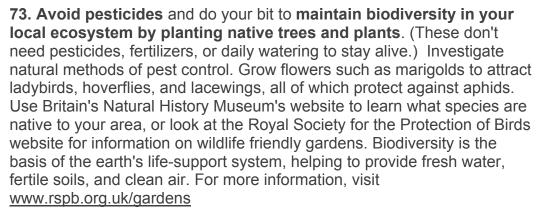


72. Build a compost heap. All food scraps and gardening waste can be converted into one of nature's best mulches. On average, garden trimmings and food scraps account for one-third of the space in landfills. By composting waste we reduce landfill and save the fuel used to transport our organic matter to rubbish dumps. For more information, visit

www.compostguide.com









74. There are two ways to exploit the sun's heat and energy. The first is solar thermal water heating. In the U.S., solar heating reduces the need for conventional water heating by two-thirds when operating in conjunction with a conventional boiler. Most solar thermal systems work by heating liquid via either flat plate or evacuated tube collectors on your roof. The heated fluid is then transferred to your boiler. This kind of heating can save about 400 kilograms of CO² per year.



75. Make sure you recycle your electronic equipment. It will soon become illegal – under a 2006 E.U. directive – to dump your unwanted televisions or computers, among other things, in landfills. Toxic substances such as the lead found in cathode-ray tubes (see No. 59) can leach into the ground and contaminate our drinking water. Currently, consumer electronics are responsible for 40% of the lead found in landfills. Other toxic metals that can seep from discarded electronics include cadmium and methylated mercury, which can cause brain damage. Charities like Oxfam www.oxfam.org will take your unwanted mobile phones and computers (in bulk, from businesses switching out their systems) and convert them into cash for their causes. If your items don't meet a charity's specifications, contact a waste removal company to dispose of your equipment responsibly.



76. Birds are suffering from the decline in their natural nest sites. **Help birds by adding a nest box to your garden.** During the mating season birds seek nesting sites, which you could provide with a nest box. Whether you make or buy your box, remember its purpose, as ornamental nest boxes designed purely for appearance may be totally unsuitable for raising birds. The box should be placed outside in late winter or early spring, at least six feet above the ground and protected against direct sunlight and wind. It can be placed on a household wall, a tree, in a quiet area of your garden, or, to further deter predators, it can be mounted on a metal pole. Resist the temptation to peek into the box too often; this may cause the birds to abandon their young. All the birds should leave the box in August. Make sure you clean out the box in December to ready it for the next nesting season. For more information, visit www.bto.org



77. In 1826, J. C. Loudon wrote in *An Encyclopaedia of Gardening*, "For all things produced in a garden, whether salads or fruits, a poor man that has one of his own will eat better than a rich man that has none." To start a vegetable garden costs nothing but a few packs of seeds and rudimentary garden implements, and it saves enormous amounts of money, to say nothing of the food miles and the packaging that go into supplying you with fresh fruits and vegetables. Of course, a vegetable garden is productive only for part of the year, but it is amazing how long that growing season lasts and how much you can produce from one small patch.



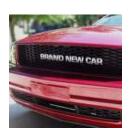
78. Plant a tree. It's the simplest thing in the world to gather acorns, chestnuts, sweet chestnuts, and sycamore seeds in the autumn, plant them immediately, and forget them until the following spring. The success rate for acorns is not as high as for the other three, but in a good year about 40% germinate into oak trees. There's little that will stop the others from growing into healthy trees within the first year. Start saplings in foam coffee cups, which can be split with a knife so that the roots aren't disturbed when you move them outdoors. Keep the saplings for four or five years, then transplant them to your garden, offer them to friends, or return them to nature. It may seem like a very small contribution, but every seedling germinated will become an extra tree absorbing carbon from the atmosphere.



79. Always consider alternatives to driving, especially for journeys under two miles. **It's better for the environment to walk, cycle, or even take the bus** than to hop in your car. Currently, only 2.6 million people, just 10% of employed adults, walk to work in the U.K. Walking adds to life expectancy, is safe, helps with mental and physical health, and, best of all, is completely free. Cycling is another way to get around and has recently become more popular, what with more bike paths and cool new gadgets like I.E.D. lights for riding in the dark. New kinds of folding bikes have been specially developed for the commuter. Surprisingly, recent studies have shown that bicyclists in cities are less exposed to air pollution than people in cars and taxis.



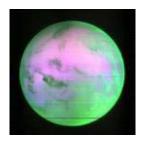
80. HARNESSING THE SUN. Solar PV (photovoltaic) uses the sun's radiation to generate electricity. PV requires only daylight, as opposed to direct sunlight, to run and can provide enough electricity to power your lighting and appliances. Small-scale PV systems are available as roof tiles or flat panels attached to your roof. Solar PV systems save approximately 325 kilograms of CO² a year.



81. According to the Union of Concerned Scientists **your new car decision will have a greater impact on the environment than any other consumer choice you make.** Investigate each model's CO² emissions per mile. Make sure you compare it with other cars in its class. Be aware that a manual car uses less fuel than an automatic. You can substantially reduce the amount of CO² you produce by buying a smaller car or converting your new car to run on liquefied petroleum gas (L.P.G.) or bio-diesel, a cleaner fuel made from natural, renewable sources such as vegetable oil. Be realistic about what you use your car for and what size you need on a day-to-day basis. Don't base your decision on the one long drive you do annually with all the family in the car. For more information, visit www.vcacarfueldata.org.uk



82. Cars, which run on a combination of a petrol engine and an electric motor, are all the rage these days. **Hybrids emit far less CO² than the 171.4 grams per kilometer produced annually by the average new car in 2004.** They can also save you money, particularly in London. You don't have to pay the congestion charge, and you may park for free at City and Westminster meters and in 26 Central London car parks. You may also pay reduced fees, or in some cases nothing, for a resident's permit.



83. You can substantially reduce CO² emissions by switching to diesel. Diesel-powered cars get between 20% and 40% better fuel economy than petrol models, which means they produce 20% to 40% less CO². Traditionally, diesel has had a reputation as a dirty fuel because diesel vehicles produce more nitrogen oxide and particulate matter (tiny particles of soot), which contribute to ground level smog. Particulates are the single biggest killer in air pollution, contributing to as many as 32,000 premature deaths in the U.K. each year, according to a report by the European Commission. However, substantial gains have been made, thanks to the E.U. The latest raft of E.U. emissions standards, called Euro N, came into effect in 2005 and requires diesel cars to be cleaner, producing less nitrogen oxide and particulate matter.



84. In an ideal world, we would all drive electric cars that were recharged using electricity generated from renewable sources. There are a number of electric options available, but they are most suitable for urban dwellers, as their maximum range is approximately 40 miles. Bear in mind that they use no power when stopped in a traffic jam. They are extremely cheap to run and are 97% cleaner than petrol-powered automobiles. One of the more popular models is the GWiz, which costs around £1.64 per day to run; its manufacturer, GoinGreen, calculates the cost per mile as one pence. Like hybrids, it can offer substantial additional savings, particularly in London. GWiz cars are exempt from the congestion charge; you can also park for free at City and Westminster meters and in some Central London car parks. For more information, visit www.goingreen.co.uk or www.est.org.uk/fleet/funding/lcc



85. Have you heard of bio-fuels? **Bio-diesel and bio-ethanol are** alternative fuels derived from crops such as sugarcane, rape seed, and used cooking oil, which are generally blended with diesel fuel or petrol. Bio-fuels are available in a range of different blends – for example, 30% bio-fuel and 70% petrol or diesel. Bio-diesel is generally appropriate for any diesel vehicle designed to run on low sulphur diesel. Bio-diesel blends are becoming more widely available in the UK. Check www.biodieselfillingstations.co.uk/ to find out about local availability.



86. Your personal style of driving can have a large impact on the environment. Anything from combining your errands into one trip to avoiding slamming on your brakes often can cut exhaust emissions and save fuel. Be aware that aggressive driving (speeding and rapid acceleration) wastes fuel. Vehicles travelling at 70 m.p.h. use up to 30% more fuel over the same distance as those traveling at 60 m.p.h. Your car's electronic systems, air conditioner, and heater have a significant impact on fuel consumption, too. Air conditioning can add up to 14%; a rear screen heater can add 5%. At low speeds it's fine to keep your windows open, but bear in mind that when a car exceeds 40 m.p.h. wind drag can cause the engine to suck up more petrol than your air conditioner. For more information, visit www.greener-driving.net/



87. Keep your fuel consumption down by removing all excess weight from your vehicle – golf clubs, toolboxes, or other unessential objects. An extra 50 kilograms can increase your fuel consumption 2%. Help your car's aerodynamics by removing roof racks and roof boxes when they're not in use. (They create drag and add unneeded weight.) Have your car serviced regularly. Ensure that the engine is tuned and the air filters are not clogged. Clogged air filters can increase fuel consumption up to 10%. Your tires need to be at optimal pressure; tires that aren't fully inflated create rolling resistance. Keep your windows spotless, since clean windows are less likely to fog up, thus avoiding unnecessary use of your heater or air conditioner.



88. Use 'Greentomatocars' instead of black taxis. The U.K.'s first hybrid private hire car service, Greentomatocars uses only the most viable, environmentally-friendly cars available. At low speeds, the cars use the battery-powered engine. When the car speeds up to go somewhere like Heathrow Airport, it switches to using fuel, while the electric motor recharges itself. Prices are comparable to other London minicab services. What CO² the taxis unavoidably do give off the company offsets by donating to organizations that plant trees around the world. For more information, visit www.greentomatocars.com/



89. If you are considering getting a roadside assistance service, remember that these companies are frequently advocates for the road-building lobby, campaigning for an expanded road network. **Look for a roadside** assistance group that actively campaigns for a more environmentally

sound transport policy in the U.K., including reduced usage and alternative transportation plans. One such group is the Environmental Transport Association, at www.eta.co.uk



90. Bio-ethanol is an alcohol-based fuel. It can be blended, up to 5%, into unleaded petrol in existing vehicles in the UK. You may already be using bio-ethanol blended petrol, as the 5% version is now sold in the UK through unmarked, unleaded petrol pumps. Saab and Ford both have a flex-fuel model available, which can run on an 85% bio-ethanol blend or on straight petrol. This blend is called E85, and the first commercial pumps are due to open in mid-2006. If you drive an older model, you can use biofuel if you have your car converted to flex-fuel.



91. If you think you're already pretty green, **determine your carbon footprint: a measurement of how your lifestyle choices affect carbon emissions.** Your footprint will take into account your habits, the food you eat, your petrol and electricity usage, and your car and air mileage. Your score will be compared to the average figures for your county. These online tests aim to help you estimate your own carbon emissions and calculate how much of the planet's resources are required to sustain your lifestyle. They may motivate you to make changes, helping you set simple goals to reduce your negative impact on the planet. To learn about your carbon footprint, go to www.carbonfootprint.com/calculator.html



92. If you have a charcoal barbecue grill, **make sure your charcoal comes from a sustainable source.** Enormous areas of tropical rainforest are destroyed every year to produce the 40,000 tons of charcoal burned annually in the U.K. Chimney starters are the most environmentally-friendly solution to lighting charcoal. They use only a couple of pieces of newspaper, meaning you can avoid the petrol-flavored meat that accompanies barbecues started with lighter fluid or fire starters. If you are replacing your grill, remember that using a gas, rather than charcoal, grill is the greenest way to barbecue. It avoids forest destruction and doesn't add to local air pollution.



93. Items such as floor and furniture polishes, air fresheners, and drain cleaners contain chemicals and toxins as varied as formaldehyde, sulphuric acid, and petroleum distillates. These and other ingredients in everyday household cleaners have been variously linked to skin and lung cancer, hormone disruption, and birth defects. Aside from the human cost, many cleaners have an environmental cost, the most obvious example being laundry powder that contains phosphates that can stimulate algal blooms, killing plant and fish life. **There are ranges of environmentally-friendly cleaning products; however, the best ways to green clean involve methods your grandmother used.** Do some research – tips on cleansers made from white vinegar, lemon juice, or baking soda abound on the Web.



94. Don't buy new gold. Making one wedding ring can create 20 tons of waste. The process of **separating the gold from the ore uses a large amount of cyanide**, which can seep into groundwater. Better to melt existing gold or buy it at auction. You get better deals that way, too!



95. Green funerals don't just mean a woodland burial. Very few people actually know about the green alternatives to steel or hardwood coffins. Many private funeral homes are more than willing to present green alternatives to traditional coffins, including shrouds and wicker baskets. Currently, 89% of coffins sold are made of chipboard that is manufactured using formaldehyde. When chipboard coffins are cremated, they can release toxic gases. If buried, they disrupt local ecosystems; as the chipboard decays, the formaldehyde and glue may leach into the soil and groundwater. Formaldehyde is also a common embalming fluid, which is why many of those who decide on a green burial bypass embalming. Finally, most people opting for a green goodbye will choose a meadow or woodland burial, with only a memorial tree marking the grave. For more information, visit www.uk-funerals.co.uk/green-funerals.html



96. **Try telecommuting from home.** Telecommuting can help you drastically reduce the number of miles you drive every week. For more information, check out the Telework Coalition at www.telcoa.org/



97. Learn about the environmental threat to species worldwide and what you can do to help. Climate change predictions estimate that more than a million species could be driven to extinction by the year 2050. Mass efforts to halt global warming and its causes are essential, but even small-scale actions can help our endangered species. One idea is to invest in a bat box. You will be making a contribution to your country's temperate biodiversity: bat populations in Britain and around the world are declining, especially in urban areas, where they have few roosting spaces. Ideally, group two or three boxes together, place them as high as possible, and face them so the sun directly heats them for six to seven hours each day. If you are making a bat box yourself, use untreated and unpainted wood. It is essential that bats not be disturbed, so make certain your bat boxes cannot be reached by any local cats. For more information, visit www.bats.org.uk



98. **Educate yourself about animal rights,** testing on animals, artificial breeding to produce so-called desirable characteristics which actually produce defects and weaknesses, and the abhorrent practice of capturing exotic animals from the wild and selling them as pets. www.peta.org



99. Help bring about change locally, nationally and internationally. Your actions to reduce global warming can extend beyond how you personally reduce your own emissions. We all have influence on our schools, workplaces, businesses, and on society through how we make purchases, invest, take action, and vote. For ideas on how to become active go to www.climatecrisis.net/takeaction/becomeactive/



100. Join the virtual march. The Stop Global Warming Virtual March is a non-political effort to bring all Americans concerned about global warming together in one place. Go to www.stopglobalwarming.org/default.asp

Suggested Resource Websites:

Earth911: www.earth911.org

Claiming over seventy awards in recognition of its environmental and community stewardship (including an award from Al Gore), the website Earth911's mission is to make every day 'Earth Day.' Simply enter your U.S. or Canadian postal zip code as directed on the home page and the site will list local environmental services, green businesses, events, government resources, media and outreach contacts, and general environmental information for your community. The website is currently soliciting information for international expansion. You can also call toll-free 1-800-CLEANUP and receive information over the phone on resources in your community.

EnviroLink: www.envirolink.org

"A good entry point for Web newcomers with an interest in all things ecological is the appropriately named EnviroLink. It boasts one of the largest and best-arranged listings of environmental organizations on the Web." –

Time Magazine

Since 1991, the non-profit EnviroLink has been providing a comprehensive directory of environmental organizations and news. It is now one of the world's largest environmental information clearinghouses with participation from 150 countries and providing information on environmental action and resources all around the world. It also provides free internet services to non-profits with environmental and animal rights communities.

The Nature Conservancy: www.nature.org

This non-partisan environmental organization founded in 1951 supports initiatives in thirty-two countries worldwide with more than one million

members and provides educational and resource links throughout their website. Try their **climate change quiz** by clicking on the link for "**Test your global warming knowledge**": www.nature.org/initiatives/climatechange

Energy Info. Administration:

www.eia.doe.gov/emeu/efficiency/energy_savings.htm

This U.S. Department of Energy website lists the official energy statistics from the U.S. government. A broad-based resource for U.S. energy concerns.

U.S. Green Building Council: www.usgbc.org

The U.S. Green Building Council is a leading coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable, and healthy places to live and work. Their website lists various resources for learning more about 'green building.'

Australian Conservation Foundation: www.acfonline.org.au

The ACF's mission since 1966 has been to inspire the achievement of a healthy environment for all Australians. Its comprehensive website is a great resource for learning about Australian environmental issues and finding ways to take action.

New Zealand Ministry for the Environment: www.mfe.govt.nz/withyou/do/

This government website offers a well-organized section for New Zealand residents on "what you can do" to help the environment in your local, regional, and global communities.