**General Resource List:**

Resource for great “Green” information:

<http://earth911.org/>

<http://lighterfootstep.com/>

<http://www.treehugger.com/>

<http://noimpactman.typepad.com/blog/>

Newsletters with tips:

<http://www.idealbite.com/> - daily on weekdays

<http://www.thedailygreen.com/> - daily

<http://www.thegreenguide.com/> - weekly

Carbon footprint calculators:

<http://www.carbonfootprint.com/> - in depth

<http://www.epa.gov/climatechange/emissions/ind_calculator.html> - simple

<http://www.ecofoot.org/> or <http://sustainability.publicradio.org/consumerconsequences/> - calculates the number of earth’s needed if everyone lived like you

**Definitions:**

Carbon footprint – a measure of the impact our activities have on the environment, and in particular climate change. It relates to the amount of greenhouse gases produced in our day-to-day lives through burning fossil fuels for electricity, heating and transportation etc.

**Energy Information**

A kilowatt hour allows you to:

* Dry your hair 15 times
* Listen to 15 CDs
* Use a small refrigerator for 24 hours
* 4 evenings of light with 60 W incandescent lamps or 20 evening of light with 11 W compact fluorescent light

Statistics:

* For each kWh produced with fossil fuel, about 1.5 pound of CO2 (0.68 kilograms) are released in the atmosphere
* The average American uses around 600-800 kWhs of energy every month.
* The average American home has about 45 bulbs
* Bulb comparison:

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Incandescent** | **CFL** | **LED** |
| Life Span (hours) | 1,500 | 10,000 | 60,000 |
| Watts | 60 | 14 | 6 |
| Cost | $1.345 | $2.98 | $54.95 |
| kWh over 60k hrs | 3,600 | 840 | 360 |
| Electricity cost (@.13) | $468.00 | $109.20 | $46.80 |
| Bulbs needed for 60k hrs | 40 | 6 | 1 |
| Equivalent 60k hr bulb expense | $53.80 | $17.88 | $54.95 |
| **Total 60k hr spend** | **$521.80** | **$127.08** | **$101.75** |

Energy savings tips:

* Replace incandescent light bulbs with compact fluorescent lights or LED’s
* Reduce phantom power by using power strips and turning them off when not in use, this can save hundreds of kWh of energy a year. Examples of phantom power:
	+ TV/VCR uses 5 W
	+ Microwave uses 1-2 W
	+ Laptop power supply uses 7 W
* Purchase green energy through your utility – Consumer’s Energy offers this, BPW’s do not
* Purchase energy efficient appliances, [www.energystar.gov](http://www.energystar.gov)
* Change your furnace filter monthly
* Insulate your hot water pipes
* Change to a programmable thermostat
* Use hand powered tools like lawn mowers, mixers
* Insulate your attic
* Seal windows and doors
* Shade your air conditioner and keep it tuned up
* Open windows when showering on hot days to vent out hot air and humidity
* Keep curtains closed on hot or cold days to better regulate the indoor temperature

Practical Application:

* Hay box cooking – reduce your energy-intensive cooking time for slow cooking foods like soups, stews, chicken, etc
	+ Get a cooler or other well insulated box.
	+ Begin cooking on the stove in a pot as usual.
	+ Let boil 10 minutes, put the lid on, and transfer to the hay box (if using a cooler, put something on the bottom to keep from melting the box).
	+ Add extra blankets or towels to box and shut the lid. Your pot should stay piping hot for up to 12 hours or more, depending on how well it’s insulated.
	+ Eat!

<http://www.greenbatteries.com> – battery FAQ’s

**Cleaning**

Tips:

* Car washing – washing at home uses more water than going to a carwash and the water goes right into the storm drain, plus they have the systems in place to treat and recycle the water
* Dryer sheets contain many toxic chemicals – if you must use your dryer, instead of sheets use dryer balls or a natural recipe (included below), or take clothes out just before they are dry and line dry them

*Natural cleaning recipes – mix it yourself and save money!*

Liquid laundry soap

Recipe #1

* 3 Pints Water
* 1/3 Bar Fels Naptha Soap (or other bar soap), Grated
* 1/2 Cup Washing Soda
* 1/2 Cup Borax
* Mix Fels Naptha soap in a saucepan with 3 pints of water, and heat on low until dissolved. Stir in Washing Soda and Borax. Stir until thickened, and remove from heat. Add 1 Quart Hot Water to 2 Gallon Bucket. Add soap mixture, and mix well. Fill bucket with cold water, and mix well. Set aside for 24 hours, or until mixture thickens. Use 1/2 cup of mixture per load.

Recipe #2

* Water
* 1 Bar Fels Naptha Soap (or other bar soap), Grated
* 5 Gallon Bucket
* 1 Cup Washing Soda
* 4 1/2 Gallons Water
* Place grated soap in a small saucepan and cover with water. Heat on low until dissolved. Fill bucket with hot water, and add soap. Stir to combine. Add 1 cup washing soda and mix well. As it cools it will thicken. May be used immediately. Use 1-2 cups per load.

Powdered Laundry Detergent

* 1 Cup Grated Fels Naptha Soap (or other bar soap)
* 1/2 Cup Washing Soda
* 1/2 Cup Borax
* For light load, use 1 Tablespoon. For heavy or heavily soiled load, use 2 Tablespoons.

Fabric softener – add ¼- ½ cup vinegar to rinse cycle

All purpose cleaner - Mix one teaspoon of liquid soap or borax with a gallon of hot water. Lemon juice or vinegar added to the mix will cut grease and leave a fresh scent. Vinegar is a great deodorizer.

Window cleaner - 1/8 cup vinegar diluted in 1 cup warm water

Toilet bowl – add ¼-1 cup Borax to toilet and let stand overnight, scrub in the morning

Pots and pans - Soak or boil a solution of 2 tbsp baking soda per qt of water in each pan. Let stand until particles are loosened, then wash as usual.

Drains - To keep drains clear, flush daily with scalding water. For grease buildup, dissolve 1 lb washing soda in 3 gal boiling water and pour down drain.

Oven Cleaner

* 1 tablespoon liquid soap
* 1/2 cup water
* 1/4 cup salt
* 3/4 cup baking soda.
* Mix soap and water and spray oven surfaces.
* Mix salt and baking soda and sprinkle on wet surface.
* Spray again so that the mixture is damp and pasty.
* Let stand overnight.
* Scrape off with putty knife or wet pumice stone.

What to Avoid (from <http://www.thegreenguide.com/doc/113/ingredients>)

* **Alkylphenol ethoxylates** (APEs) - common in detergents and disinfectants, are suspected hormone disruptors
* **Ammonia** - poisonous when swallowed, extremely irritating to respiratory passages when inhaled and can burn the skin on contact
* **Antibacterial**s, e.g. triclosan - may be contributing to the rise of antibiotic-resistant germs
* **Butyl cellosolve (aka butyl glycol, ethylene glycol monobutyl)** - poisonous when swallowed and a lung-tissue irritant
* **Chlorine bleach (aka sodium hypochlorite)** - can irritate the lungs and eyes and in waterways can become toxic organochlorines
* **Diethanolamine (DEA)** - can combine with nitrosomes (often-undisclosed preservatives) to produce carcinogenic nitrosamines that penetrate skin
* **Fragrance** - frequently contains phthalates, chemicals linked to reproductive abnormalities and liver cancer in lab animals and to asthma in children
* **Phosphates -** soften water for detergents but contribute to algae blooms in our waterways, which can kill off fish populations
* **Sodium hydroxide** - found in drain, metal and oven cleaners, is extremely irritating to eyes, nose and throat and can burn those tissues on contact
* **Sodium lauryl sulfate** - a common sudsing agent, can penetrate the skin and cause contact dermatitis

Resources

* <http://www.thegreenguide.com/products/> - listing of green products
* <http://www.wswmd.org/recipes#apc> or <http://www.checnet.org/HealtheHouse/education/articles-detail.asp?Main_ID=564> or <http://www.thegreenguide.com/doc/120/diy> – recipes for many cleaning products

**Personal Care**

Don’t put things on your skin that you wouldn’t eat and that we won’t put in our products!

Sunscreens – look for zinc oxide and titanium dioxide as the active ingredient – better yet – cover up and eat your carotenoids (found in carrots, spinach, sweet potatoes, kale, tomatoes)

Avoid the “Dirty Dozen” (from <http://www.thegreenguide.com/doc/122/dirtydozen>)

* Antibacterials, e.g. Triclosan – these can prevent your body from naturally fighting bacteria
* Coal-tars – known carcinogen, FD&C Blue 1 and Green 3 are derived from it, also found in dandruff control and anti-itch products
* Diethanolamine (DEA) – hormone disruptor and possible carcinogen
* 1,4-dioxane – possible carcinogen, usually in products with sodium laurel sulfate and ingredients that include the terms "PEG," "-xynol," "ceteareth," "oleth" and most other ethoxylated "eth" ingredients
* Formaldehyde – carcinogen, can be found in baby bath soap, nail polish, eyelash adhesive and hair dyes as a contaminant or can result from the break-down of diazolidinyl urea, imidazolidinyl urea and quaternium compounds
* Fragrance – often these are phthalates which are endocrine disruptors and may cause obesity
* Lead & Mercury – found as hydrated silica and lead acetate, thimerosol in mascaras
* Nanoparticles – science hasn’t proven these are safe
* Parabens – possible estrogenic effects, potential danger in forming breast cancer cell cultures
* Petroleum distillates - "petroleum" or "liquid paraffin” – often in mascara
* P-phenylenediamine – aka 1,4-Benzenediamine; p-Phenyldiamine and 4-Phenylenediamine – can damage nervous system and cause lung irritation, often found in hair dyes
* Hydroquinone - found in skin lighteners and facial moisturizers, neurotoxic and allergenic

Resources:

Environmental Working Group site shows you how products rate in safety <http://www.cosmeticsdatabase.com/index.php?key=28404963&message=Successfully+updated+Supporter+information>

**Water**

* Filter your water for chlorine and fluoride
* Don’t use polycarbonate bottles for drinking - Bisphenol A is used to make PC and is an endocrine disruptor
* Households waste 6.35 gallons of water per day waiting for it to heat up
* Water usage by activity – these are federally mandated, but many older homes have not been upgraded to meet them:
	+ The average person uses 100 gallons of water a day
	+ Toilets are 1.6 gpf (gallons per flush) – older models are 5 gpf
	+ Showerheads are 2.5 gpm (gallons per minute) per head – those with multiple heads may be using many times that
	+ Sink faucets are 2.2 gpm
	+ Washing dishes
		- If your current dishwasher is at least 10 years old, it likely uses between eight and 15 gallons of water per cycle (gpc), while the average new Energy Star-rated dishwasher uses 4. A newer model can save more than 1,000 gallons of water annually.
		- Instead of pre-rinsing dishes, scrape food into the garbage or rinse them in a pan of water in the sink. Adding an additional 20 gallons per load on average, pre-rinsing can negate any water-saving efforts you've achieved with your dishwasher.
		- If you must hand-wash dishes, do so efficiently. Get two basins, one filled with hot, soapy water for washing and another filled with cold water for rinsing. Start with the smaller, less dirty items first and work your way up to larger, dirtier ones.
* Put a brick or other heavy object in your toilet tank to lessen the amount of water required to fill it
* Remember what you learned camping – turn water off unless you’re actively using it
* Rain barrels are a free way to collect water for gardening and ease the runoff from your house – but, don’t collect rain to water your plants if you have an asphalt roof

**Food**

* Eat local, organic, and whole
* Make it yourself
* Say no to plastic bags – bring your own! Check out this link for a new perspective on the damage caused by plastic bags: [http://www.poconorecord.com/apps/pbcs.dll/article?AID=/20080506/MULTIMEDIA02/80505016](http://www.poconorecord.com/apps/pbcs.dll/article?AID=/20080506/MULTIMEDIA02/80505016_)
* Avoid:
	+ High fructose corn syrup
	+ Fast food
	+ The center aisles
	+ Things you can’t prounounce
* Compost and recycle – in total only 5% of plastic is recycled – most is made from petroleum
* Worst offenders for produce, http://www.foodnews.org/
	+ Peaches
	+ Apples
	+ Bell peppers
	+ Celery
	+ Nectarines
	+ Strawberries
	+ Cherries
	+ Lettuce
	+ Grapes - imported
	+ Pears
	+ Spinach
	+ Potatoes
	+ Carrots
	+ Green beans
	+ Hot peppers
* Which fish are okay? <http://www.ewg.org/node/21527> and <http://www.mbayaq.org/cr/cr_seafoodwatch/content/media/MBA_SeafoodWatch_MidwestGuide.pdf>
	+ Columns are rated based on conservation or fishing practices
	+ Green – Very low levels of mercury (3 to 4 servings a week)
	+ Yellow - Low levels of mercury (2 to 3 servings a week)
	+ Orange – High levels of mercury (0 to 1 serving a week)
	+ Red - Very high levels of mercury. Avoid these fish.

|  |  |  |
| --- | --- | --- |
| **Best**  | **Good** | **Avoid** |
| Barramundi (giant perch) (US farmed) | Clams (wild) | Chilean Seabass/Toothfish |
| Catfish (US farmed) | Cod: Pacific (trawled) | Cod: Atlantic |
| Clams (farmed) | Crab: Blue\*, King (US), Snow | Crab: King (imported) |
| Cod: Pacific (Alaska longline) | Crab: Imitation/Surimi | Flounders, Soles (Atlantic) |
| Crab: Dungeness, Stone | Flounders, Soles (Pacific) | Groupers |
| Halibut: Pacific | Lobster: American/Maine | Halibut: Atlantic |
| Herring: Atlantic/Sardines | Mahi mahi/Dolphinfish (US) | Lobster: Spiny (Caribbean imported) |
| Lobster: Spiny (US) | Oysters (wild)\* | Mahi mahi/Dolphinfish (imported) |
| Mussels (farmed) | Scallops: Sea (Northeast and Canada) | Monkfish |
| Oysters (farmed) | Shrimp (US farmed or wild) | Orange Roughy |
| Pollock (Alaska wild) | Squid | Rockfish (Pacific) |
| Salmon (Alaska wild) | Swordfish (US longline) | Salmon (farmed, including Atlantic)\* |
| Scallops: Bay (farmed) | Tuna: Bigeye, Yellowfin (troll/pole) | Scallops: Sea (Mid-Atlantic) |
| Striped Bass (farmed or wild) | Tuna: canned light, canned white/Albacore | Sharks |
| Sturgeon, Caviar (farmed) |  | Shrimp (imported farmed or wild) |
| Tilapia (US farmed) |  | Snapper: Red |
| Trout: Rainbow (farmed) |  | Sturgeon, Caviar (imported wild) |
| Tuna: Albacore (US , British Columbia troll/pole) |  | Swordfish (imported) |
| Tuna: Skipjack (troll/pole) |  | Tuna: Albacore, Bigeye, Yellowfin (longline) |
|  |  | Tuna: Bluefin |

Resources

[www.localharvest.org](http://www.localharvest.org) – great website to find local food producers and sellers

**Transportation**

* Take advantage of the HMI incentives
* Ride your bike and walk
* Fuel efficiency driving tips
	+ 50mph is generally the most fuel-efficient speed – cars use 25% less fuel at 55mph than at 70mph
	+ don’t top off your gas tank - get gas in the morning when it’s cooler and less VOC emitting
	+ properly inflate tires to keep fuel consumption 2% lower
	+ use your pedals consistently and save up to 30% on fuel
	+ roof racks increase consumption by up to 5%
	+ air conditioning can add 10% to fuel consumption
	+ oil changes don’t need to be 3000 miles, on average 5000-10000 is good, change your filter every time
* Consolidate your trips
* Use public transportation
* [www.healthycar.org](http://www.healthycar.org) – rates cars and cars eats based on chemical contaminants

**Lawn and Garden Care**

<http://www.healthylawns.org/how/>

<http://faq.gardenweb.com/faq/lists/organic/2004020829016580.html>

<http://www.westviewfarms.biz/>

<http://www.companionplanting.net/>

[www.organicgardening.com](http://www.organicgardening.com)

[www.vegetable-gardening-basics.com](http://www.vegetable-gardening-basics.com)

Grass:

* Use a reel mower – reduce fossil fuel dependency and get a workout!
* Leave the clippings on your lawn as a natural fertilizer
* Mow high – 3 inches is the ideal length to shade out weeds and maintain healthy grass
* Aerate your lawn to encourage healthy microbes and reduce compaction
* Re-seed annually, spring and fall – thicker grass chokes out weeds
* Use protein-based fertilizers once in the spring and fall – coffee grounds, alfalfa or corn meal, etc – these can be found at most stores that sell lawn care products
* Water infrequently (1x/week) for longer periods (1”) to encourage deep roots – to determine how long your sprinklers take to water 1” set a can by your sprinkler and measure the amount of time it takes to fill up to 1”
* Water in the morning – evening watering can encourage mold growth
* Natural remedies for weed control:
	+ Pickling vinegar or lemon juice and soap – the acetic acid will kill weeds while the soap will help it cling to the plant
	+ Orange oil – a natural pesticide that should be used sparingly since it doesn’t discriminate between pests and beneficial insects
	+ Sugar – it causes so much microbe action that plants overload and die
	+ Corn gluten meal as a pre-emergent since it kills seeds, while feeding grass
	+ Beneficial nematodes – these worms are natural larvae parasites that will kill unwanted insects like grubs

Garden and Landscaping

* Plant native – native plants require less work
* Sheet mulch to clear an area – place cardboard on top of the desired area, wet it down and cover with soil, compost or mulch – the cardboard will prevent weeds from growing and will decompose over time
* Companion planting – many plants are beneficial to others, e.g. the 3 sisters is a common Native American planting of corn (gives beans somewhere to climb), beans (nitrogen fixers), and squash (acts as a ground cover)
* Same watering plan as grass – 1” once a week
* Drip irrigation
* Mulch for hydration and weed control