SUSTAINABLE SAVINGS-

How going green can save your SOUL and your MONEY!

A Revised Edition
by The Civic Knowledge Project
at the University of Chicago

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Introduction: Bart Schultz,
Director of the Civic Knowledge Project

This little green booklet aims to preach, but not to the choir. Our hope is to reach new audiences, especially audiences that might be pretty skeptical about the possibility of going green without spending more, and even about the whole idea of going green. We think that we can show that adopting a greener and more sustainable lifestyle is one of the most practical, most ethical, and most beautiful things that you can do—a way to enrich your own life, the lives of your children, and the life of your community on many different levels, from the financial to the artistic to the philosophical. You really can start connecting with people, young and old, in lots of new and amazingly enjoyable ways if you just take a little time to learn about the opportunities that we present here. And if you get on board with these, the Civic Knowledge Project at the University of Chicago will help you stay on board, offering you lots of follow-up opportunities to get additional help with going green in this way. The CKP also stands for Community, Knowledge, and Power, and our Partnering for a Sustainable Chicago network tries to build all three. But with that great poet of Chicago's South Side, Gwendolyn Brooks, we also think of "this world as a garden of varying flowers," and seek to work with our neighbors to build sustainable future communities attuned to both diversity and biodiversity, the spiritual and the scientific, the local and the global. Please come grow with us!

Chapter 1: Food

1a. Grow your own!

You can save money on your grocery bill AND eat fresher and healthier food by growing it yourself. Even if your "yard" is only a balcony or a windowsill, here are some money saving ideas to help you get started.

Our typical Chicago food item comes to us after having traveled 1500 miles. According to the Bureau of Labor Statistics, between spring of 2007 and spring 2008, the price of all goods that we purchase went up 3.9 percent. This number has steadily increased as fuel prices climbed, and although our gas costs at the time I am writing this have come down immensely, the costs of the goods that we buy (which includes groceries) have not seemed to share that decrease in price. Not only is price a concern when food travels so far to get to our grocery

stores, but the quality of our produce decreases rapidly after the time it is plucked from the plant it grew from. The closer food is eaten to the time it is actually harvested, the more nutritional value that food will contain. And how much closer can you get than your own windowsill, patio container or backyard?

As far as dollars saved, I was able to come up with a few calculations showing what you can save in one growing season with just a very small garden. A well-planned and cared for 30 x 30 foot garden will yield enough produce for a family of four. If you also plan to can, freeze, or dehydrate your vegetables, you'll need a garden *twice* this size.

SAVING CALCULATIONS:
* **If you plant 4 tomato plants you can save about $90.00** if you were to buy the same amount of tomatoes that the plants will produce (about 60 pounds). This is even after you have purchased the four plants, which will cost you about $15.00.
* **If you plant 6 bell peppers you can save about $272.00** if you were to buy the same amount of peppers (about 120 pounds) at the grocery store. This is even after you have purchased the 6 plants for $12.00
***A single mature peach tree** can bear 150lbs of peaches per year **worth about $240 at market prices.**
***A single blueberry bush can yield 10lbs worth about $40.**

Even if you don't have enough of your own land to grow food, you should consider becoming involved in a local community garden or starting your own. Check out: **http://www.greennetchicago.org/** to locate a community garden near you. If you would like some garden plan ideas, check out: http://www.bhg.com/gardening/

You can even grow your own vegetables on your balcony!

Even if you have no yard space, but enjoy a balcony or terrace, consider growing your own fruits and vegetables in containers: figs, blueberries, strawberries, dwarf fruit trees, dwarf citrus trees; many compact types of tomatoes, cucumbers, squash, beans, edible flowers, herbs and greens can easily be grown in pots, window boxes, hanging bags, or baskets on your deck.

Things you need to keep in mind about container growing:

1. That your container has adequate drainage - be creative! Consider stacked tires, buckets, milk cartons shipping crates or build your own from untreated scrap lumber.
2. That your soil composition is right for container growing.
3. That you provide the additional nutrient requirement of container grown plants.
4. That you choose specific plants types that are suited for container growing.
5. That you still keep in mind the sun and wind factors of your balcony.

1b. Edible Plant Choices for Containers

FULL DAY SUN EXPOSURE CHOICES:

Fruit Trees: A mature dwarf fruit tree can bear as much as 50 to 100 pounds of fruit per year. Choose dwarf or columnar fruit tree varieties of apples, pears, and cherry, Peach, Nectarine or Plum.
Citrus Fruit: Dwarf Meyer Lemon or Dwarf Mandarin Orange. Note that these need to be moved indoors in the winter.
Berries: Try patio verities of Blueberries, such as Top Hat. Strawberries and raspberries all grow well in sunny containers
Vegetables: Cherry Tomatoes, Pepper plants, Bush or compact varieties of beans, peas, cucumbers and squash.
Greens: Swiss chard and New Zealand Spinach.
Herbs: Chives, Basil, Marjoram, Parsley, Sage, Tarragon, Thyme, Oregano, Savory, Dill, Bay and Rosemary.
Edible flowers: Mexican Marigold, Nasturtium, Lavender.

PARTIALLY SHADED CONTAINER CHOICES:

Berries: Currants, gooseberries, lingonberries, huckleberries, wintergreen and cranberries.
Vegetables: bush peas, bush beans, beets, turnips, carrots and potatoes.
Greens: Chard, beet greens, turnip greens, spinach, lettuce, kale and cabbage.
Herbs: Mints, chives, basil.
Edible flowers: violas.

You can even grow certain vegetables and herbs inside, on your windowsill!

You can grow wonderful micro greens and herbs for salads and sandwiches in containers located in a sunny winter window (south or west usually works the best). Pinetree Garden Seeds www.superseeds.com has wonderful seed mixes for your windowsill salad garden listed as “Micro Greens.” Many ornamental hot pepper plants also grow well indoors and provide you with VERY hot fresh peppers throughout the winter months. Consider starting your own from seed or purchasing the following types: Black Pearl, Prairie Fire, and Sangria.

For herbs to add to your salads and meals, the following will do well indoors in a sunny window:
Basil, Bay, Cilantro, Thyme, Savory, Sage, Rosemary, Parsley, Marjoram, Chives and Ginger.

Consider using any container that will sit securely on your windowsill and remember to make sure your container has drainage holes and a tray underneath to catch excess water. Cottage cheese and sour cream containers (washed and dried) make great windowsill size planters. Fill with potting soil, water thoroughly, cover with plastic wrap and place in a warm place (I put a cookie sheet on my radiators and put the containers on top of them). Check daily that the soil remains evenly moist and remove the plastic wrap from the top once germination has begun and you see small sprouts. Again, keep evenly moist and place in a sunny window until ready to harvest.

EDIBLE HOUSEPLANTS

Besides the ornamental peppers I mentioned above, certain varieties of citrus trees actually grow well indoors with proper care. Certain strawberries, blueberries and bananas can also be grown indoors. Citrus fruits can be lumped into two main categories - sweet and acid. For indoor growing, the acid types perform the best. To grow well, the sweet varieties need far more heat than most of our homes produce (or we would want to pay for!) Although the list below I would recommend for indoor growing are not sweet enough to enjoy eating fresh from

your tree, they do make wonderful jams and jellies as well as juices when sweeteners are added.

Your best citrus choices are:
Calamondin, Kaffir Lime, Limequat, Mandarin Orange, Meiwa Kumquat, Meyer Lemon, Pomegranates, and Blanco grapefruit.

Citrus plants are available from a variety of online seed catalogs, including Burgess Seed in Bloomington, IL (www.eburgess.com). The plants they sell will be small and require several years of patience before realizing any fruits. Purchasing plants mature enough to produce fruit can cost anywhere from $30.00 to $125.00 occasionally, nursery departments in local home improvement stores (Home Depot and Menards) will carry these plants.

1c. How to Grow Sprouts & Shoots

TO GROW SPROUTS

You will need:
* A glass jar (clean spaghetti sauce jars work great)
* A bowl, cup or container that will hold the jar when it is upside down.
* A piece of screen, netting, cheesecloth, clean kitchen washcloth (the porous type) or cut up nylon stockings
* A rubber band
* Fresh water
* Seeds - **DO NOT USE SEEDS MEANT FOR GROWING IN THE GARDEN OR FARM**

Repeat: Do Not Use Seeds Meant for Growing in the Garden or Farm !!!!!!!!
MANY HAVE BEEN TREATED with fungicides and other nasty stuff. Seeds that have been grown and handled for farm planted seed crops could be contaminated with salmonella or E-Coli, which lead to food poisoning. Reputable sprouting seed suppliers test seed lots for contamination - if in doubt, ASK! Most Health Food Stores and many Grocery stores carry bulk seeds for sprouting. To buy on line, I like;
www.superseeds.com
www.Johnnyseeds.com
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What to do:
SOAK: Put 1-4 TBS of seeds in your jar. Cover the jar with the screen, cloth or nylon; secure it to the jar with a rubber band. Add water, swish it around drain that water, then add 1 cup of cool water and soak for 4-8 hours. Drain and rinse

RINSE: Twice a day you will need to pour water into the jar, swish it around and pour it out. Turn the jar upside down on the cup, bowl or container that will hold it upside down securely.

EAT: In 3-6 days, when your sprouts are 1-2 inches long, they are ready to eat. To “green” them up, put them in a

sunny window for a few hours on the last day. Keep the finished sprouts in a covered container in the refrigerator and treat them like you would any other greens

TO  **GROW SHOOTS**

You will need:
* Containers
* Potting soil,
* Seeds (buckwheat, pea, sunflower, wheat, barley grass or Cress)

Again, check your local health food store or go online and order the seeds from: www.Johnnyseeds.com or www.superseeds.com

What to do:
FILL your container (make sure they have drainage holes and trays) with soil.
SOAK your seeds for seeds in water overnight, then spread them onto the soil surface, water well and cover (loosely) with plastic wrap.
MIST OR SPRINKLE DAILY (with the cover off). Remove the cover permanently after three days.
PLACE the container in a sunny window for 5-8 days, until the plants are 5-6” tall. Continue misting the container daily.
CUT what you need. Wheat grass and Cress will grow back for additional harvests, the others you will need to replant.

1d. Recipes

Adzuki Bean Nut Mix

I use this mix to sprinkle on top of salads or steamed vegetables. It also makes a good snack food.

2 cups toasted adzuki bean sprouts*
1 cup toasted sunflower sprouts*
½ cup coarsely chopped peanuts
1 clove garlic, minced or ½ teaspoon garlic powder

½ teaspoon celery salt
½ teaspoon dried basil
½ teaspoon dried oregano
1/3 cup freshly grated parmesan or Romano cheese
dash cayenne pepper

*To toast spouts:
Preheat oven to 350°F. Spread sprouts on a large cookie sheet and bake for approximately 15 minutes (five to eight minutes for wheat sprouts). The sprouts should be slightly crunchy but not dried out. Sprouts good for toasting include: adzuki beans, mung beans, sunflower seeds, wheat berries, and chickpeas. ***Sprinkle cumin or paprika on top of humus and serve with pita spread.***

Sprouted Humus Spread

Humus is good for spreading on pita bread, crackers, or raw vegetables.

1½ cups chick pea sprouts, blanched 2 medium cloves garlic
½ cup parsley
2 tablespoons olive oil
2 tablespoons tahini (sesame paste)
¼ cup lemon juice
½ teaspoon tamari
1 teaspoon honey or sugar
¼ teaspoon cayenne pepper dash of paprika

Fill a saucepan with water and bring to a boil. Pour in chickpea sprouts and turn off stove. Let sit for five minutes; drain. In a food processor or blender, purée chickpeas, garlic, and parsley. Add rest of ingredients and blend. Serve sprinkled with paprika. This will keep, if refrigerated in a plastic container, for about four days.

Quesadillas

2 large whole-wheat flour tortillas
½ teaspoon oil
¾ cup grated cheese (I use low-fat cheddar)
*½ roasted poblano or red pepper, sliced thin**
¼ cup wheat berry sprouts
1 green onion, diced
1 tomato, chopped chopped cilantro (optional)

Place a non-stick 10-to-12 inch skillet containing a little oil over medium high heat. Fry each tortilla a few seconds on one side and remove. Place one tortilla back in the pan, uncooked side down, and sprinkle cheese on cooked top. Cover with other tortilla, uncooked side up. Fry 30 seconds or so, flip over, and fry again. Remove top tortilla and add peppers, sprouts, and green onion filling. Place second tortilla on top again and slice quesadilla in quarters (like a pie). Serve topped with tomatoes and cilantro, if you have them.

Roasted peppers

Cut peppers into quarters lengthwise and remove seeds and stems. Arrange and flatten on a piece of foil, with inside of pepper face down. Place in oven or under broiler until blackened. Remove and fold foil over to make a tight package; leave for at least 10 minutes. Peel off blackened skin. Refrigerate in plastic container until needed (will keep in refrigerator up to three days).

Crunchy Rice Salad

You might try using different varieties of rice. I use 1½ cups cooked brown rice and ½ cup wild rice.

2 cups cooked brown rice (works best if rice is cooked at least one day before and refrigerated)
1½ cups bean sprouts, or use a combination, such as adzuki, mung, and lentil
½ cup water chestnuts, chopped or daikon radish
1 medium red or green pepper, chopped
1½ cups broccoli, chopped
1 cup green onion, finely chopped
1 large stalk celery, finely chopped
1 cup chopped parsley

Dressing:
¼ cup sesame seeds
2 medium cloves garlic, minced
2 teaspoon ginger root, peeled and minced, or ½ teaspoon ground ginger 1/3 cup frozen orange juice concentrate, thawed
1 tablespoon canola

1 tablespoon sesame or walnut oil
2 tablespoons tamari (or soy sauce)
1 tablespoon rice vinegar
½ teaspoon cayenne pepper
½ teaspoon sugar

Toast sesame seeds in heated non-stick skillet for a minute on medium-high heat. Stir frequently (don't let burn). Whisk other ingredients together or place in blender to mix. Toss together salad ingredients, dressing, and sesame seeds. Chill and serve.

Vegetable Stir-Fry

If you want to make this a meat dish, add one cup cooked chicken breast after you sauté garlic.

2 tablespoons peanut or walnut oil
3 garlic cloves, minced
3 cups brown rice, cooked the day before
1 tablespoon ginger root, peeled and minced
2 tablespoons tamari (soy sauce)
3 to 4 drops chili oil or ½ teaspoon chili sauce**
2 cups broccoli or celery (steamed for five minutes), chopped into small pieces
l½ cups mung bean or adzuki bean sprouts (or a combination of both)
3 green onions, chopped

In non-stick skillet, sauté garlic in oil over medium-high heat. Stir in ginger; sauté for one minute. Add rice, tamari, and chili oil. Cook for a few minutes. Add broccoli and sprouts; cook two minutes, stirring often. Broccoli should still be a bit crunchy and bright green. Stir in green onions and cook for a few more seconds.

*This is a very hot oil/sauce to be used sparingly. It can be purchased in the oriental section of the grocery.

1e. Meat Alternative Recipes

Lentil Chili

8 oz red lentils
1 pepper (pimento) - any color red and yellow are best
1-2 chilies (depending on type, experiment!)
1 medium onion
1 x 450g tin peeled plum tomatoes
1 x 450g tin red kidney beans drained

Put lentils in a pan with twice their volume boiling water and the kidney beans. Turn heat to medium hot whilst you whiz the remaining ingredients in a food processor (or chop them up if you don't have a food processor). Add whizzed ingredients and either keep heat high and keep stirring until the lentils are cooked (fastest) or turn heat as low as possible and put a lid on them for 40 minutes or so (best). Best made slightly milder than you normally take chili and served with lashings of Tabasco.

Sloppy Joes

1 cup of brown/bargain-bag lentils
1 can of Hunts Manwich sauce (or your own BBQ sauce)
2 cups of water
8 slices whole wheat bread or 4 buns

Rinse, pick through, and drain the lentils.
Pour water and lentils into a medium-sized pot, and bring to a boil. After rolling boil is reached, cover the lentils, lower heat, and simmer for about 50 minutes (5 minutes give or take in difference).

After lentils are cooked through transfer to a medium saucepan, add the Manwich sauce, mix them together, and heat the mixture through at medium heat. After the mixture is cooked through (this won't take long) get out the bread and serve four equal portions of the mixture over two slices each person of bread.

Meatless Meatloaf

2 cups of cooked lentils
1/3 cup minced onion slivers and minced garlic
1/2 cup chopped cilantro
1/3 cup chopped celery leaves
1 red or green pepper diced
1 cup chopped nuts of your choice
1/4 cup marinara sauce
1 cup bread crumbs
1 cup shredded mozzarella cheese

Mix all the ingredients, place in a meat loaf pan, and bake at 375 for 45 minutes or until a knife placed in the center comes out clean, serve with brown gravy.

Lentil Tacos

1 cup finely chopped onion
1 garlic clove, minced
1 teaspoon canola oil
1 cup dried lentils, rinsed
1 tablespoon chili powder
2 teaspoons ground cumin
1 teaspoon dried oregano

2 1/2 cups chicken broth
1 cup salsa
12 taco shells
1 1/2 cups shredded lettuce
1 cup chopped fresh tomato
1 1/2 cups shredded reduced-fat Cheddar cheese
6 tablespoons fat free sour cream

In a large nonstick skillet, sauté the onion and garlic in oil until tender. Add the lentils, chili powder, cumin and oregano; cook and stir for 1 minute. Add broth; bring to a boil. Reduce heat; cover and simmer for 25-30 minutes or until the lentils are tender. Uncover; cook for 6-8 minutes or until mixture is thickened. Mash lentils slightly. Stir in salsa. Spoon about 1/4 cup lentil mixture into each taco shell. Top with lettuce, tomato, cheese and sour cream.

Chickpea and Vegetables Veggie Burger

2 cups mashed garbanzo beans (chickpeas)
1 stalk celery, diced
1 carrot, grated
1/2 onion, minced
1/2 tsp garlic powder
1/4 cup flour
Salt and pepper to taste
Oil for frying

Mash together all ingredients, except oil, thoroughly. Form into patties and lightly fry on each side in oil until golden brown. You can also barbecue these veggie burgers on a hot grill.

1f. Cooking from scratch

Although convenience food has become a way of life for most of our generation, try and remember how wonderful that home cooked meal smelled and tasted when you were growing up. YES!! It takes a little more time to chop, peel and sauté, but make it a family project. it can actually be FUN!!! The nutritional value and cost savings make it worth trying…maybe certain nights of the week are set aside for “family cooking night.”

BUY SEASONALLY AND/OR ORGANICALLY TO SAVE WHERE IT COUNTS

1. Consider purchasing Debbie Meyer Green Bags for about $10.00
- Researchers at the University of Arizona found that a family of four throws out over $500.00 worth of produce each year. These bags control humidity and absorb the ethylene gases that cause aging and rotting.

2. Buy what is in season.
- You can save up to 78% on your produce bill by doing so, according to the researchers at the University of Arizona.

SEASONAL FOOD GUIDE FOR THE MIDWEST

With so much produce available year round in our supermarkets, it's hard to remember our own seasonal produce. This chart was found at www.ChicagoCooks.org and will help you buy local produce at its peak. A quick tip: vegetables that grow together also taste good together! An example is strawberry rhubarb pies/tarts.

Month	May	June	July	August	Sept	October	November	December
Radishes	■	■			■	■	■	■
Spinach	■	■			■	■		■
Lettuces	■	■			■	■	■	
Arugula	■	■				■	■	
Asparagus	■	■						
Kale		■	■	■	■	■	■	
Chard		■	■		■	■	■	
Fennel	■	■			■	■	■	
Strawberries		■						
Rhubarb		■						
Beets		■	■	■	■	■	■	
Peas		■	■					
Mushrooms	■	■				■		
Broccoli		■				■	■	
Cucumbers			■	■	■			
Carrots			■	■	■	■	■	■
Herbs		■	■	■	■	■		
Cabbage		■	■			■		
Cauliflower		■			■	■		

Month	May	June	July	August	Sept	October	November	December
Onions	■	■	■	■				
Potatoes				■	■			
Peppers			■	■	■	■	■	
Eggplant			■	■	■	■		
Melon			■	■	■			
Turnips			■	■	■	■	■	
Shell Beans					■	■	■	■
Sweet Corn			■	■				
Zucchini		■	■	■	■			
Squash		■	■	■	■			
Tomatoes			■	■	■	■		
Pumpkin						■		
Brussel Sprouts					■	■	■	■
Peaches				■	■			
Plums				■	■			
Nectarines				■	■			
Apples					■	■		
Raspberries			■	■	■			
Blueberries			■	■				
Grapes				■	■			
Cherries			■	■	■			
Pears					■	■		
Winter Squash						■	■	

Try and buy organic produce whenever possible. When you cannot afford to buy higher-priced organic produce, spray with a mixture of 1-part vinegar to 3-parts water, then rinse. The vinegar will eliminate 98% of pesticide residue. Rinsing alone will remove only 25%.

Highest in Pesticides (buy these organic!):
Peaches, Apples, Sweet Bell Peppers, Celery, Nectarines, Strawberries, Cherries, Lettuce, Grapes (Imported), Pears, Spinach, Potatoes.

Lowest in Pesticides:
Onions, Avocado, Sweet Corn (Frozen), Pineapples, Mango, Sweet Peas (Frozen), Asparagus, Kiwi, Bananas, Cabbage, Broccoli, Eggplant

Why Should You Care About Pesticides?

There is growing consensus in the scientific community that small doses of pesticides and other chemicals can adversely affect people, especially during vulnerable periods of fetal development and childhood when exposures can have long lasting effects. Because the toxic effects of pesticides are worrisome, not well understood, and in some cases completely unstudied, shoppers are wise to minimize exposure to pesticides whenever possible.

What's the Difference?

An EWG simulation of thousands of consumers eating high and low pesticide diets shows that people can lower their pesticide exposure by almost 90 percent by avoiding the top twelve most contaminated fruits and vegetables and eating the least contaminated instead. Eating the 12 most contaminated fruits and vegetables will expose a person to about 14 pesticides per day, on average. Eating the 12 least contaminated will expose a person to less than 2 pesticides per day. Less dramatic comparisons will produce less dramatic reductions, but without doubt using the guide provides people with a way to make choices that lower pesticide exposure in the diet.

Will Washing and Peeling Help?

Nearly all of the data used to create these lists already considers how people typically wash and prepare produce (for example, apples are washed before testing, bananas are peeled). While washing and rinsing fresh produce may reduce levels of some pesticides, it does not eliminate them. Peeling also reduces exposures, but valuable nutrients often go down the drain with the peel. The best option is to eat a varied diet, wash all produce, and choose organic when possible to reduce exposure to potentially harmful chemicals.

GET YOUR OWN GUIDE AT http://www.foodnews.org

TIME & MONEY SAVING BY COOKING FROM SCRATCH

If you keep these things stocked in your kitchen, you can cook just about anything when you add fresh ingredients:

Fridge Stuff: Butter, Cheese, Eggs, Mayonnaise, Milk, Yoghurt, Ketchup, Mustard, celery, lemons or lemon juice

Freezer Stuff: Frozen juice concentrates, extra bread, frozen yogurt

Canned Stuff: Beans (black, kidney, garbanzo, pinto, baked, refried), Tomato paste/sauce, Peanut Butter, olives

Bulk Stuff: Flour (whole wheat and Pastry flour for bread machines), Sugar (Cane & Brown), Rice, Lentil Beans, Garbanzos, Pasta, Baking soda, Baking powder, Oats

Oils: Canola, olive & peanut

Vinegar: White, Apple cider, Balsamic, Raspberry

Dried Goods: Raisins and any other dried fruits

Root Stuff: Onions, Garlic & potatoes

Nuts/Seeds: Walnuts, peanuts, almonds, sunflower seeds, trail mix

Spices: Salt, Pepper, Oregano, Chili Powder, Curry Powder, Rosemary, Basil, Vanilla Extract, Cinnamon, Thyme, Allspice, Nutmeg, Garam Marsala, Cumin, Dried Mustard, Cream of Tartar

Also, save the “cut off” portions of your fresh produce for making vegetable broth. I keep adding to a bag of these I keep in the freezer, when I have enough I add them to a pot of water and simmer to make vegetable broth for soups, gravy base, to cook rice and pasta in, etc.

1g. If you have a baby in the house…

Nursing (vs. bottle feeding) is not only THE best choice nutritionally for your baby, but it can also save you $40 a week compared to buying formula.

For “make your own baby food recipes look at: http://www.wholesomebabyfood.com/

Smoothies are suitable for babies 9 months+. As always, please be sure to consult your pediatrician when in doubt and keep any allergies or past food reactions in mind!

Banana Baby Smoothie Recipe

2 C. Pineapple Juice
2 ripe med. bananas, peeled & sliced
2 (8 oz.) cartons vanilla yogurt
1 C. fresh or frozen strawberries
2 T wheat germ (optional)
1 T vanilla extract

Combine all ingredients in blender. Whir until smooth. For small blender, do one at a time. Makes 4 drinks.

Teething Biscuits

IMPORTANT CAUTION: When feeding your infant Teething Biscuits, Baby Finger Foods or any other food that may pose a choking hazard, it is VERY important to watch the child closely. Always ensure the child is in a totally upright sitting position. Some parents will tell you one brand or recipe is great while others will tell you the very same brand/recipe was horrible and their child choked due to crumbling or breaking. There is no brand or recipe for teething biscuits that is guaranteed not to crumble or break off into pieces!

1 c quick oats
1 c ground oats (grind oats and make a coarse oat flour)
1/4 t salt
1/4 t cinnamon or ginger or cardamom (we'd try it with all 4 spices!)
1/4 t nutmeg
1 t baking powder
1 c (~2) overripe bananas, mashed
1 t vanilla extract
3 T oil of choice

Mix dry, mix wet, add wet to dry. Drop by the spoonful onto parchment paper or greased baking sheet. Bake 12-15 min at 350.

Michelle Obama's *Let's Move* Campaign

If these words haven't provided enough incentive to make your life healthier and more sustainable with small changes in eating habits, maybe First Lady Michelle Obama will! She has announced an ambitious national goal of solving the challenge of childhood obesity within a generation so that children born today will reach adulthood at a healthy weight and unveiled a nationwide campaign – ***Let's Move*** – to help achieve it. The First Lady's national goals include empowering consumers by including new front-of-package nutritional labeling, new public information campaigning, initiatives to serve healthier food in schools, increasing farmer's markets and bringing grocery stores to underserved areas.

"The physical and emotional health of an entire generation and the economic health and security of our nation is at stake," states Mrs. Obama. "This isn't the kind of problem that can be solved overnight, but with everyone working together, it can be solved. So, *let's move."*

Chapter 2: Clothing

2a. Resale shops

Check the internet and phone book for additional stores around the city. My favorite is Unique Thrift Store (Mondays and Thursday mornings are ½ price days, but their sale days change occasionally so check first.) Here are their South Side locations:

3542 S. Archer	773-247-2599
9341 S. Ashland	773-239-3127
3000 S. Halsted	312-842-0942
5040 E. Kedzie	773-434-4886

2b. If you have a baby, consider cloth diapers

Cloth diapering is relatively simple and financially rewarding, saving from a minimum of $2,300 to upwards of $5,000. Single-use diapers range in price from $0.22 to $0.45 each. Cloth diapers pay for themselves within a six-month period. After six months, you'll be diapering for almost free.

Home laundry may take less than 10 minutes of your time per load, while using disposables entails repeated trips to the store. When running low on diapers and the weather was foul outside, I was so thankful that I just had to dump the diapers into the washer (less than $0.78) turn it on and within two hours (while I did something else), clean, fresh, soft cloth diapers were available. I would not have relished bundling up the baby, warming up the car and trekking to the store to spend $30.94

2c. Save on laundry day

- Make your own laundry soap: Mix 1 cup Ivory soap flakes with ½ cup Borax & ½ cup Washing Soda. Use 2 Tbs for full load (more on this coming up).

- Hang clothes to dry outside in summer inside for winter humidity.

- Keep bright colored clothes looking good longer by adding 1 cup of salt along with your laundry detergent and wash with cold water.

- Add 1 cup of lemon juice to whites instead of bleach to get clothes whiter and make them last longer than using bleach.

- Make your own stain/pre-wash by mixing 3 TBS vinegar, 2 TBS of laundry soap and 1 qt. Of warm water in a spray bottle. Shake contents to dissolve thoroughly, spray on garment and let sit for 5 min. then wash as usual.

Chapter 3: Home & Garden

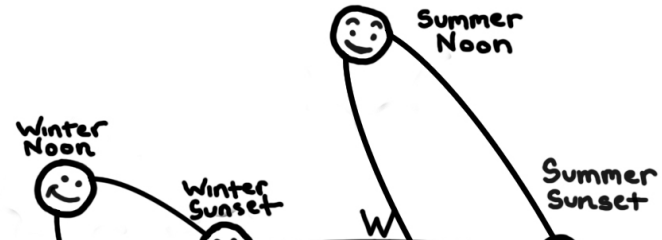
3a. Landscape to save energy

When you think about being inside of your home at various times of the year, you are sure to have noticed how some rooms in the house are warmer than others during the summer and some rooms are colder than others in the winter. What you might not realize however is that heating and cooling these particular areas of your home, may be unnecessarily increasing your heating and cooling costs. Let's examine how and why.

We have two major environmental forces that affect the temperatures of the outside, therefore, the inside of our homes; **sun and wind.** Think about your comfort levels, if you are like most people here in Chicago, you are usually trying to find a cool, shady area with a nice breeze, both indoors and outside during the summer months. During the winter months, you probably find yourself migrating to sunny, warm spots with protection from winter winds outside or steering clear of indoor drafts in and around your home.

By keeping these principals in mind when you are deciding where to locate plants in your yard, you will not only make your indoor and outdoor living spaces more comfortable, but also help lower your monthly utility bills.

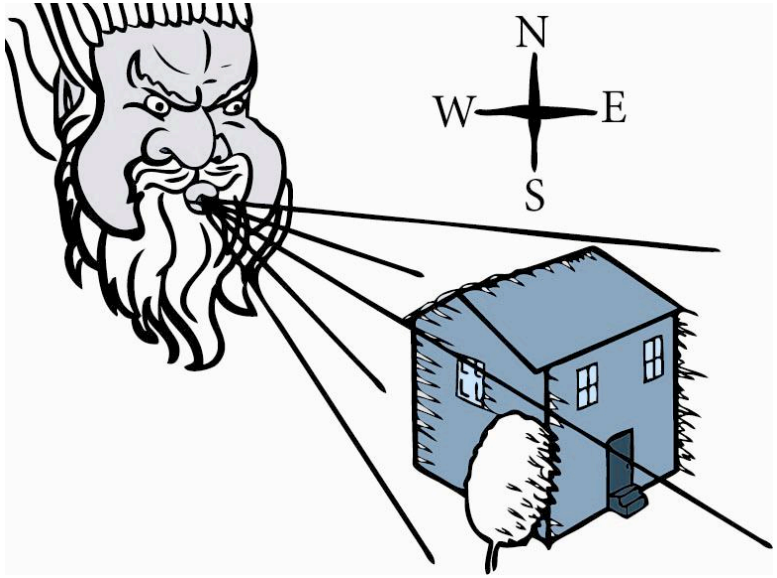
The area of your home that is warmed by the sun's rays changes with the seasons. This is due to the sun's changing position in the sky. The sun is higher in the sky during the summer, creating more solar heat in the late morning and early afternoon on the east and west side of your home. During the winter months, the sun is lower on the horizon and toward the south, creating more solar heat on the south and west sides of your home.



So what does this all mean to you and your home?

Well, by planting deciduous trees, (plants that drop their leaves in the winter) shrubs and/or Ivy on the south, east and west side of your home, you will get the benefit of their shade during summer months, while their open branches will allow the sun to shine on your home and through your windows creating additional FREE heat during the winter.

As for working in cooperation with our ***windy*** city, you should understand the following: the prevailing **winter winds** here in Chicago, come mostly from the **northwest**, (each of our lots could have building features that may drastically alter the wind direction, so it would be advantageous to pay attention to the wind patterns around your own home however).



During the summer months, most of our lovely **breezes** come from the **south or southwest**. The closer you are to the lake, however, the more apt you are to enjoy the **cool lake breeze, which comes from the east**.

So with all of this in mind, consider **planting evergreens** along the **north and northwest corner** of your property in order **to block cold, winter winds** from reaching your buildings walls and windows. But remember to refrain from planting thick, tall dense shrubs or trees right up against your windows, along the south/southwest portions of your property, where they could block summer breezes from flowing into your house.

For maximum enjoyment of your outdoor areas, remember to plant trees that will shade your outdoor seating or entertaining areas in the summer. Again, locate shrubs where they will not prevent summer breezes from reaching your yard. Consider planting dense shrubs or evergreens where they could help cut down on the impact of the winter winds as you walk to your garage, alley or street.

3b. Replace your existing lawn

How much money you can save using this tip depends on several factors: the size of your yard, how often you mow, water and fertilize your lawn, as well as how much and often you pay to repair or replace your lawnmower!

But in any event, remember that there are some very tasty and beautiful alternatives to that turf!

But no matter how much or little you put into keeping up your lawn, you are spending time and money that you could use elsewhere. By replacing part or all of your lawn with low or no maintenance grass alternatives, you can kiss that lawn mower goodbye! You will, though, need to invest some initial time and money transforming your lawn. The long-term savings however, will be great with cost savings being realized within the very first year!

Before you say "***That's what I'm talking about!***" and tear up your existing turf, you need to ask yourself a few questions. The answers will help you make the most of your outdoor enjoyment, both financially and recreationally.

1. Do you *rent* or *own* your property?
2. What do you generally use your outdoor spaces for?
    a. Do you cook out and/or enjoy spending time outside with friends and family?
    b. Do you have children or pets that require room to run?
3. Do you know which direction your house faces?
4. Do you pay attention to which sides of your house are predominantly sunny or shady during summer months?
5. Is your soil clay or sand, wet or dry, high or low in fertile matter?
6. Do you enjoy seeing birds, bees and butterflies in your yard?
7. Do you have areas were it seems that no matter what you do, grass just will not grow?

Let's get started! If you rent your property, remember to get permission from your landlord before doing any major landscape changes. Having a nicely drawn plan so show

to your landlord might not only help persuade to let you make these changes, but will also help you with the work ahead.

If either of your answers to question number two were yes, (your family needs outside space to entertain and run around in) then you will need to reserve a certain amount of ground that is covered with material that can handle foot traffic and lots of activity without falling apart. The ground that you will use for major activities can be covered with **hardscape or lawn alternative ground covers.** Hardscape materials include such items as pea gravel, landscape brick, sand, wood chips (free from the city - dial 311) .You may also need to create pathways of brick, stone or wood chips that lead to those areas. You may want to put down landscape fabric (try to avoid plastic) under these materials to keep weeds from popping through. Lawn alternative ground covers include specific plants like white Dutch clover, Mother of Thyme or Irish or Scotch Moss.

Whatever you do, you DO NOT want to pave any areas with cement - this cuts down on the earth's ability to absorb rainwater and puts further strain on our city's storm sewers.

You may also want to consider adding a small pond in your garden, which can act as a catch basin for rain water and provide you with many interesting bird and dragonfly visits.

Specific plants have specific preferences. Some require more sun than others. Some are fussier about the soil they are growing in. Although a lot of plants will hang on to life and thrive in non-optimal conditions, they will be healthiest and happiest when you understand the basic needs of individual plants. You can then match your plant choices to your current growing conditions, or alter or improve what your currently have to work with.

Your soil content is important as well. If you plan on planting directly in the ground, before doing so, we STRONGLY recommend submit a sample to make sure there are no harmful materials (often found in urban soils) that may get into your food supply. Besides possible harmful intruders, you should try and learn a little bit about the organic makeup of your soil. You can purchase inexpensive test kits from most garden centers, but you can also do a pretty good job of figuring out your soil structure and makeup using your own senses. The reason you need to know about your soil, is that this again, will help you choose plants that are most suited to your particular setting.

Here's how to do the FREE soil check to determine the basic ingredients of your soil. Note that this will NOT tell you if you have contaminants in your soil.

1) Pick up a handful of dirt from your yard and moisten it enough so that it feels like putty or playdoh. Make a small

ball with it in your hand. If you can form a ball that wants to stay in one piece, you can assume that your soil is mostly composed of clay, if it starts to fall apart right away, it contains more sand than clay, and if you can't even get it to form a ball in the first place, it is mostly sand.

2) Next, check the color and smell the soil.
Is it dark black, with a "forest" type of smell? If so, you are lucky and your soil is high in organic material.
Is it brown with no noticeable smell? You will probably need to build your organic material up either through the use of cover crops or compost.

3) Finally, your pH levels are important when considering specific plants that are fussier about their pH level. Most Illinois yards will have soil test ph somewhere between 4 and 8. Most plants grow best in a pH range of 6.0-6.6, and certain acid loving plants like blueberries grow best with a range of 4.0-5.5. Although most of our yards fall in the levels mentioned above, a pH test kit (available at most all garden centers) is the only way to determine your exact pH. You can safely assume areas that have been subjected to winter de-icing materials will generally be of high pH. A quick, safe and FREE method of lowering your pH level is to save your coffee grounds, and dig them into your soil.

If you answered YES! to number 6 (you enjoy seeing birds, bees and butterflies in your yard), you should consider planting specific plants or seed mixes especially attractive to these creatures. Below is a list of flowers to attract them. You can also purchase ready mixed seed containers specifically for these types of gardens from most garden centers.

REMOVING YOUR OLD LAWN

We need to discuss exactly HOW to go about removing your current grass lawn. There are many ways, but most importantly, resist the temptation to spray "round up" or other chemical herbicides to kill your lawn. You do not want to end up with the possibility of residual chemicals in your food-growing soil, nor should you expose your family and neighbors to accidental exposure through contact, wind drift or run off. The easiest way is simply to smother the grass. You can do this with cardboard, layered newspaper, old carpet remnants, the list is endless. Just think of a time when you left something on your grass for a period of time and went to move it. Remember how the grass was either brown or white, slowly turning brown? Of course, it probably bounced back once it was uncovered, but if you keep it covered long enough during the growing season, you will starve it from the sunshine that it needs to live.

Once dead, you can work it into the soil for added nutrients. If you use the items mentioned above, it can

take up to two months to totally choke out your grass. If you want to speed up that process, simply cover the area with a large, heavy, clear plastic tarp. Anchor down the edges with rocks or bricks, so it doesn't get blown off, and let the sun do your work for you! In approximately two weeks, the grass and any weed seeds that may be hanging around will have been heated up under that greenhouse that you created with the tarp to temperatures it cannot survive in. Again, you can work the dead plant material into the soil and plant your new yard!!

3c. Edible Landscaping

By keeping in mind the ideas brought forth with our last tip, you can also consider **replacing your current grass lawn with edible plants**. And don't just think about this as simply planting a vegetable garden with a scarecrow in your front yard (although, that is in fact possible!) When we talk about edible landscaping, we are talking about vegetables as well as fruits, nuts and berries. Trees, shrubs and vines are all possibilities. The combinations are endless! You can simply think of a landscape design that you like, and find corresponding food producing plants to use. You can use berry producing shrubs for hedgerows and herbs for groundcover.

3d. How to make compost

First of all…what is compost? What makes healthy, living soil?

Compost is soil that can support healthy plant growth by having the right combination of beneficial microbes, fungi and earthworms. This combination allows soil to absorb CO_2 from the atmosphere, break down leaves and other organic material, which in turn release essential plant nutrients and store water at the right amounts for plants to absorb.

How do we get healthy soil? **NOT** by using chemical fertilizers and pesticides!!!!

These products may appear to provide a "quick fix" to get rid of the problem of insects, plant disease or make our plants lush and green, but the reality is that long term use of these products actually depleted the soil by killing beneficial microbes in the soil. So whatever you do, resist the temptation for the "quick fix". Besides being expensive, they are doing long-term damage to the earth.

How can you get really good soil free? Make your own! By composting your kitchen scraps you will have all the necessary ingredients to provide your plants with all the nutrients that they need to be lush, green, happy and productive.

Composting methods:

There are many types of garden-sized composters for sale in garden centers, on-line and through the city. I even recently came across an electric model to locate in your kitchen! Of course, the $300.00 price tag seemed a bit high!

Here is the best cheapest way to make your own (I have done this for many years and it works very well). **Just remember to layer** – greens (garden scraps listed below, browns (dried leaves, shredded paper, cardboard), and cover with soil.

The "Hole" Method:

Dig a hole, keeping the ground dug up in a pile next to the hole, and add the three layers. As one hole fills up, simply move to the next area, dig another hole and start the process all over. Keep the hole covered with a garbage can lid or plastic tarp held down by bricks or other heavy objects, as the city requires that you use-bins that have a lid, a floor and no holes or gaps larger than ¼ inch for rodent resistance. This is a requirement for composting in the city of Chicago.

Things to put in your compost:

BROWNS include…

- Chopped woody prunings
- Fallen leavens
- Sawdust from untreated wood
- Black & white newspaper

GREENS include…

- Fruit & vegetable trimmings
- Lawn clippings
- Coffee grounds & filters
- Egg shells
- Citrus rinds
- Tea bags
- Barnyard manure

Things NOT to put in your Compost:

- Meat, bones or fish
- Dairy products or grease
- Grains, beans or breads
- Dog, cat or bird feces
- Sawdust from plywood or treated wood
- Diseased plants (in cold piles)

The Build-Your-Own-Above-Ground-Composter Method:

Uses - Basic "add as you go" or "batch composting."
Effectiveness - Produces small to medium amounts of compost
Cost - Time-wise, it is a very quick and easy build. Money-wise, you will pay between $10-$35 for materials.

Materials:

* 1 Plastic or metal garbage can with a tight-fitting lid (min. 32 gallons for best results)
* Power drill with ¼ inch drill bit

Assembly:

1. Drill ¼ inch holes in bottom and sides for drainage and aeration. Put at least 24 holes on the bottom and 40 on the sides.

For winter months, consider having a worm composter. For resources and more information:
www.urbanext.uiuc.edu/homecomposting/worm.html

Flowerfield Enterprises - (269) 327-0108

Visit wormwoman.com for actual worms, books, curricula and supplies.

3e. Cleaning products

You can save an average of $ 61.08 (for about a one month supply of cleaning products) by using the products below. (That's $739.00 a year!!) You only need to buy 5 products to clean your house and clothes better than any products I have tried.
These products are…

1) Borax	4 pounds
2) Washing soda	55 oz.
3) Ivory Snow	24 oz.
4) Vinegar	1 gallon
5) Baking Soda	4 pounds

Laundry Soap/Fabric Softener

Ivory snow
Borax
Washing Soda

Mix with large Wooden Spoon. Keep in airtight container. Use 1 Tbs for small wash loads, 2 Tbs for large loads. NO DRYER SHEETS NECESSARY. To use with a cold-water wash, put 1-2 Tbs of the mixture into a glass jar, add hot water to cover. Screw on lid. Shake until dissolved and add to wash load.

Dish Washing Liquid

Mix the remaining Washing soda and Borax together. Store in an airtight container. Use 2 Tbs in your automatic dishwasher or 2 Tbs to hand wash a sink load of dishes. This amount will do automatic dish loads & replace bottles of dish soap.

Baking Soda Uses:

-Scour surfaces
-Clean oven spills
-Deodorize carpets and furniture
-Clean cookware
-Add to burnt on stains in cookware-boil

1tsp baking soda
2 cups hot water
1tsp lemon juice

Mix together the three ingredients and pour in a spray bottle to use as an air freshener.

Sprinkle on hard to clean surfaces, spray on vinegar, and rub away.

Pour ½ cup baking soda, then ½ cup vinegar in clogged drains

Vinegar Uses:

- 1:1 water and vinegar = to mop floors
- 2 tsp vinegar with 1 liter of water = to clean glass
- Add to dishwater = to help wash greasy dishes

HOW MUCH YOU CAN SAVE BY USING THE BASIC 5

You BUY-

Borax	$4.49
Washing soda	$3.59
Ivory Snow	$5.49
Total cost	$13.57

Now you DON'T have to buy-
(Average Prices shown)

Tide (80 loads)	$20.00
Dryer sheets (80)	
$4.79	
Electrasol 26 pk	$5.79
Jet Dry Rinse Aid	$3.79
Dawn Dish liquid 14 oz	$2.19

Total Cost	$36.56

You Save $22.99

You BUY-

1 gallon of vinegar	$2.99
1 large box of baking soda 4 lbs	$4.59
Total cost	$7.58

Now you DON'T have to buy -

Kitchen cleaner 14 oz	$.99
Pot/pan cleanser 12 oz	$2.29
Oven cleaner14 oz	$3.99
Air freshener 12 oz	$3.49
Floor cleaner 1 gallon	$19.99
Window cleaner 14 oz	$3.79
Tub & Tile cleaner 15 oz	$4.69
Toilet Bowl Cleaner 24 oz	$2.99
Drain Cleaner 32 oz	$3.45
Total Cost	$45.67

You Save $38.09

TOTAL SAVED USING BASIC 5: $61.08
That adds up to about $732.96 of savings in one year!

3f. No-Cost Ways to Save Energy & Money

These and more guidelines can be found at http://www2.illinois.gov/keepwarm/Pages/default.aspx

- **Turn down your thermostat to 68 degrees.** For every degree you lower your heat in the 60-degree to 70-degree range, you'll save an average of 3 percent on heating costs. Wear warm clothing like a sweater and set your thermostat to 68 degrees or lower during the day and evening, health permitting. Setting the thermostat back to 55 degrees when leaving home for an extended time can save you 5-20 percent of your heating costs (heat pumps should only be set back two degrees to prevent unneeded use of backup strip heating).
- **Replace or clean furnace filters once a month.** Dirty filters restrict airflow and increase energy use. Now is also the time for a furnace "tune-up." Keeping your furnace clean, lubricated and properly adjusted will reduce energy use, saving up to 5 percent of heating costs.
- **Reduce hot water temperature.** Set your water heater to the "normal" setting or 120º, unless the owner's manual for your dishwasher requires a higher setting. Savings are 7-11 percent of water heating costs. Insulate the first five feet of pipe coming out of the top of your water heater or the whole length until the pipe goes into the wall if that is less than five feet. Pipe insulation is available from your hardware store.
- **Use cold water when washing clothes.** About 16 percent of an average

home energy bill goes just for heating water. Most detergents clean well in cooler temperatures. Keep your clothes dryer free of lint and inspect the dryer vent to be sure it is free of obstructions.

- T**ake a five-minute shower instead of a bath to reduce hot water use.**
- **Don’t waste hot water.** Adjust load size on washer to fit actual load. Set small loads to low water level to save water and energy.
- **Check the yellow energy label on your water heater.** If your water heater is on the low end of the efficiency rating, then it is still possible to reduce fuel cost effectively by adding an insulation blanket. Insulation blankets are available at most home improvement stores and are relatively inexpensive energy efficiency solutions. (However, if the water heater is on the high end of the efficiency range, then additional insulation will probably not be of much benefit.)
- **Let the sun in!** Open drapes and shades on the sunny side of your house to help warm the home during the day. Close drapes and shades at night to cut heat loss.
- **Remove window air conditioning units for the winter.** If you have a window air conditioning unit, remove it for the winter months to prevent heat from escaping through and around the unit. If it cannot be moved, buy a cover to prevent drafts.
- **Close your flue.** Always make sure the fireplace damper seals tightly and remains closed except when a fire is burning or smoldering in the fireplace. Also shut fireplace doors if installed.
- **Use your ceiling fan.** Ceiling fans help keep you comfortable not only in the summer but in the winter as well. Reversing the direction of the blades pushes warm air down into the room. Fans should turn clockwise in the summer and counter-clockwise in the winter. When purchasing new ceiling fans, consider an Energy Star model for optimum fan and motor efficiency.
- **Put your computer to sleep.** Activate "sleep" features on computers and office equipment that power down when the equipment is not in use for a while. Turn off equipment during longer periods of non-use to cut energy costs and improve longevity.
- **Flip the switch.** Turn off all appliances and equipment when not in use: lights, TVs, VCRs or DVDs, computers, other electronics.
- **Keep vent space clean & clear.** Make sure heating registers, vents and cold air returns are not blocked by draperies, furniture or rugs. These should also be cleaned regularly with a vacuum or a broom.**Caulk is cheap.** On windy days, feel around windows, doors, and exterior walls near the floor, electrical outlets or plumbing penetrations. Seal up your windows and doors with caulking and weather stripping to ensure that you're not wasting energy on heat that escapes

through leaks to the outdoors. Caulk works best on small gaps. Your hardware store should have products to close the larger gaps. Use low expansion foam products to seal larger openings.

- **Insulate your pipes.** Add pre-cut pipe insulation to exposed pipes going into your water heater – it is cheap and easy to install. If you're starting with an un-insulated tank, the energy savings should pay for the improvements in just a few months. Seal your duct work.
- **Seal your duct work.** While duct tape works well on lots of things it often fails when used on ductwork! Use duct mastic (a gooey substance applied with a paintbrush) to seal all exposed ductwork joints in areas such as the attic, crawlspace, or basement. Insulate ducts in unconditioned areas to improve your heating system's efficiency and your own comfort. Metal duct tape is another option, but be sure to clean dust from areas to be sealed.
- **Go low flow.** Install low-flow showerheads and sink aerators to reduce hot water use.
- **Repair leaky faucets promptly** and save both water, money, and energy
- **Use plastic window kits to insulate your windows.** In the winter, storm windows can reduce your heat loss by 25% - 50%. As an alternative, you can improve your windows temporarily with plastic sheeting installed on the inside.
- **Install an ENERGY STAR programmable thermostat.** Programmable thermostats automatically set back the temperature when you are asleep or away from home. And, consider ENERGY STAR labeled products when you are replacing old appliances or purchasing new ones. Products in more than 40 categories are eligible for the ENERGY STAR. They use less energy, save money, and help protect the environment. Ask for the ENERGY STAR.
- **Change a Light.** Replace incandescent light bulbs with comparable compact fluorescent lamps.

Chapter 4: Transportation

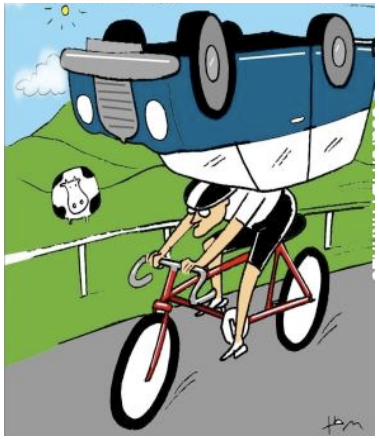
How you drive and maintain your vehicle can either increase or decrease your vehicle's fuel efficiency and your gas costs. Consider these simple tips that can add up to savings worth weeks of groceries or other needs for you and your family. Why pay more at the pump than you have to?

MONEY SAVING GAS TIPS

The tips below are calculated as **annual savings,** driving the national average of 12,500 miles per year in a vehicle with a fuel economy of 20.1 mpg using regular grade gasoline at $3.29 per gallon – the projected 2008 annual average by the Energy Information Administration‘s November *Short Term Energy Outlook.*

- **Curb road rage.** Speeding, rapid acceleration (jackrabbit starts), and rapid braking can lower gas mileage by 33% at highway speeds. Drivers can save up to 90 gallons of gasoline (or up to $300!) by driving sensibly on the highway. If you don't have a "lead foot," your savings may be closer to 10% at highway speeds about $90.
- **Drive sensibly.** Around town, sensible driving can save 5%, which is up to 17 gallons of gasoline and up to $55.
- **Cut Miles.** If you can cut your vehicle miles traveled by just 5% through combining trips, walking, biking, or taking public transportation, you can save up to $100 per year on gasoline costs. Walking and biking are good for your health too!
- **Choose the Right Vehicle.** If you own more than one vehicle, drive the one that gets better gas mileage whenever possible. If you drive 12,500 miles a year, switching 10% of your trips from driving a car that gets 20 mpg to one that gets 30 mpg will save you almost $70 per year.
- **Turn Down the Air.** Operating the air conditioner on "Max" can reduce mpg by 5 – 25% compared to not using it.
- **It‘s a ”drag.”** Avoid carrying items on your vehicle‘s roof. A loaded roof rack or carrier increases weight and aerodynamic drag, which can cut mileage by 5%. Place items inside the trunk whenever possible to improve your fuel economy.

- **Ditch "junk in the trunk."** An extra 100 pounds in the trunk cuts a typical vehicle‘s fuel economy by up to 2%. You can save up to 12 gallons of gasoline per year – about $40 – by removing an extra 100 pounds of unneeded items from the trunk.
- **Decrease Your Speed.** Speeding costs! Gas mileage usually decreases rapidly above 60 mph. Each five miles per hour over 60 mph is like paying an additional 24 cents per gallon for gas.
- **Avoid idling**. Idling gets 0 mpg. Cars with larger engines typically waste even more gas while idling than cars with smaller engines.
- **Combine errands/trips**. If you combine errands into one trip, you drive fewer miles and use less fuel. Several short trips taken from a cold start can use twice as much fuel as a longer, multipurpose trip when the engine is warmed up and efficient.
- **Use Overdrive Gear.** If available, use your vehicle‘s overdrive gear to reduce engine speed, which will enable you to save gas and reduce engine wear.
- **Use Cruise Control**. Cruise control cuts fuel consumption by maintaining a steady speed during highway driving.
- **Consider other transportation options.** Investigate options for getting to work and other places – public transportation, carpooling, biking, walking, or ridesharing when possible. Drivers who switch to other alternatives to get to work might be able to get a



car insurance premium discount because typically rates are assigned based on how far you drive to work. The commuting discount applies at any time, while many other discounts apply only when buying a new car.

- **Carpool.** Using the average U.S. work commute of 12.1 miles, commuters could save about $2365 a year by carpooling twice a week with two other people in a vehicle that gets 20.1 miles per gallon – assuming the three passengers share the cost of gas.
- **Motorcycling.** Motorcycles average 56 mpg—and motor scooters do even better. For one person or even two, motorcycles or scooters clearly use far less energy than a car with one or two people. If four people need to go somewhere, they are better off in a vehicle that gets 30 mpg than on two motorcycles that get 56 mpg.
- **Telecommute or Stagger Work Hours.** If your employer permits, avoid sitting in traffic and wasting gas, especially during peak rush hours. A worker who telecommutes twice a week would save about $400 a year in gasoline costs.

- **Request the Right Rental.** Request a vehicle that gets better fuel economy, and remember to fill up the tank before returning the car to the rental company, which charges much higher gas prices – and perhaps even an extra gas surcharge.
- **Buy Smart.** When buying a new or used vehicle, think high gas mileage. Check out the U.S. Department of Energy's Web site or look for a SmartWay© certified vehicle on EPA's Green Vehicle Guide for information on fuel-efficient vehicles.

4b. Car Maintenance Tips

- **Inflate Your Tires.** Keeping your tires properly inflated is simple and improves gas mileage by around 3%, saving up to 20 gallons of gasoline or up to $65.
- **Tune up**. Fixing a car that is noticeably out of tune or has failed an emissions test can improve its gas mileage by an average of 4% – saving up to 25 gallons of gasoline and about $80. Fixing a faulty oxygen sensor can improve mileage by as much as 40% – saving up to 250 gallons of gasoline or up to $815.
- **Check and replace air filters regularly.** Replacing a clogged or dirty air filter keeps impurities from damaging the inside of your engine, though in newer model cars it does not improve fuel efficiency.
- **Select the Right Oil**. Using the manufacturer‘s recommended grade of motor oil, including re-refined motor oil, improves gas mileage by 1 to 2%, resulting in annual savings of up to $40. Motor oil that says ”Energy Conserving” on the API performance symbol contains friction-reducing additives. Change your oil to extend the life of your vehicle. Remember to recycle used oil, which can be re-refined, to save even more money.

4c. Money-$aving Vacation Gas Tips

Whether your vacation plans include a road trip or flying then renting a car, how you drive and maintain a vehicle can either increase or decrease a vehicle's fuel efficiency and your gas costs. You can start saving money on gas even before you are on the road with a little planning and basic maintenance tips.

I. Planning Tips:

- **Choose the right vehicle.** If you own more than one vehicle, drive the one that gets better gas mileage if possible.
- **Request the right rental.** If you are renting a vehicle at your destination, request a vehicle that gets better fuel economy, and remember to fill up the tank before returning the car to the rental company, which charges much higher gas prices – and perhaps even an extra gas surcharge.

- **Are we there yet?** Getting lost while driving in unfamiliar areas could lead to an expensive waste of gas. Resources on the Drive Smarter Challenge website (http://drivesmarterchallenge.org/) can help your family print a customized vacation map that highlights low cost gas along your route.
- **Rise and shine!** When possible drive during off-peak hours to reduce gas costs and stress by avoiding stop and go or bumper-to-bumper traffic conditions.
- **Consider other transportation options.** Investigate options for getting around on your vacation— public transportation, biking, walking, or ridesharing when possible.
- **Motorcycling.** Motorcycles average 56 mph—and motor scooters do even better. For one person or even two, motorcycles or scooters clearly use far less energy than a car with one or two people. If four people need to go somewhere, they are better off in a vehicle that gets 30 mpg than on two motorcycles that get 56 mpg.

II. Before You Leave: Maintenance Tips

- **Inflate your tires.** Keeping your tires properly inflated is simple and improves gas mileage by around 3%.
- **Select the right oil** (The same applies to the section in *Car Maintenance Tips* above)
- **Tune up.** Fixing a car that is noticeably out of tune or has failed an emissions test can improve its gas mileage by an average of 4%.

III. While On The Road: Driving Tips

- **Decrease your speed**. Speeding costs! Gas mileage usually decreases rapidly above 60 mph.
- **Use cruise control on highways**. Cruise control cuts fuel consumption by maintaining a steady speed during highway driving.
- **It's a "drag."** Avoid carrying items on your vehicle's roof. A loaded roof rack or carrier increases weight and aerodynamic drag, which can cut mileage by 5%. Place items inside the trunk whenever possible to improve your fuel economy.
- **Turn down the air.** Operating the air conditioner on "Max" can reduce mpg by 5 – 25% compared to not using it.
- **Avoid idling.** This gets you 0 mpg. Cars with larger engines typically waste even more gas while idling than cars with smaller engines.

CHAPTER 5: Personal Care

This section contains make-your-own recipes & recommended products for personal care.

Skin Care

Try Dr. Bronner's Organic & Fair Trade oil soaps for your hair and body.

Exfoliate your skin by rubbing a paste of baking soda on your face. Rinse thoroughly.

Milk Bath Recipe
½ cup powdered nonfat dry milk
½ cup Kosher salt
1Tbs baking soda
Add ingredients to bath water and relax!

Eye Care

Soak 2 chamomile tea bags in cold water, blot and press on closed eyes for several minutes to reduce puffiness and under-eye circles.

Hair Care

For shiny hair, spray on vinegar or lemon juice after shampooing. Rinse thoroughly.

To condition hair, mash a very ripe avocado into 1 cup mayo. Mix thoroughly and work into shampooed hair. Put

hair under a shower cap and leave on for 20 minutes. Rinse thoroughly. Another conditioning option is to microwave ½ cup of olive oil for 30 seconds, let it cool for a minute, then work into hair. Cover with shower cap and leave it on for 45 minutes. Shampoo as usual.

Check out: www.bluewonder.net for a variety of wonderful micro fiber body cloths, hair turbans (saves time on blow drying) and towels.

Teeth

Sprinkle baking soda on your toothbrush to polish teeth and freshen breath. You can also try squirting a few drops of Dr. Bronner's Magic Peppermint soap on your toothbrush to clean your teeth and freshen your breath.

CHAPTER 6: Natural Pest Control

DANGER!!! Pesticides and rodent poisons are designed to take away life. These poisons however do not always limit their harm to their designated targets! Keep them away from your family, home and work environment!!!

No one wants to share their living space with unwanted creatures. No one wants to poison the space they live in either! So what can we do? Well first of all, make sure you do not leave food scraps or garbage around that would appear to be an invitation to these creatures; put all food away, seal garbage containers tightly, clean up after your pets. Then realize that you can keep them at bay with certain plant material (most of which are herbs that you can grow yourself!).

PANTRY LIST FOR NATURAL PEST CONTROL:

Eucalyptus oil
Peppermint oil
Spearmint oil
Cotton balls
Spray bottles
Dr. Bronner's Peppermint soap
Garlic juice

Lemon peels
Ground Cayenne Pepper

Plants to grow include…

Marigolds
Sweet Basil
Pennyroyal
Sage
Rosemary
Catnip
Southernwood

RECIPES:

Catnip tea
Bring a handful of catnip leaves in 4 cups of water to a boil. Simmer 10 minutes. Let cool. Strain out the leaves. Pour mixture into spray bottle.

Garlic Spray
Mix 1 part garlic to 5 parts water. Store in spray bottle.

Lemon Spray
Bring to a boil peels from one lemon and 4 cups water. Simmer 10 minutes. Let cool. Strain out peel and pour liquid into spray bottle.

Insecticide soap
1 Tbs. Dr. Bronner's Organic Peppermint soap to 1 quart of water (mix can be made stronger for eradication of non-beneficial bugs – use 5 to 1).

Dried Southernwood or Catnip
Hang upside down or lay on screen or cheesecloth until dried. Store in sachets, cheesecloth, or old nylon stockings.

SPECIFIC PEST REMOVAL:

ANTS
Wipe leaves of the herb Pennyroyal where you have an ant infestation. Alternatively, soak cotton balls with peppermint essential oil and place in areas where ants have been seen.

FLIES
Plant sweet basil and/or marigolds near your entryways. When flies persist, crush a leaf from one of these plants in order to release stronger aromas.

MOTHS
Place dried sprigs of southernwood between wool clothes.

ROACHES

Place dried catnip or spray catnip tea in areas where roaches can hide.

MOSQUITOS
Spray yourself with garlic spray. Plant Marigolds near outdoor seating areas. When BBQ'ing place sage and/or rosemary on coals - as they burn, they will release fragrance that will deter mosquitos.

FLEAS
Spray lemon spray on pets.

MICE
Plant catnip near entryways. Use dried catnip year-round.

BUGS ON HOUSEPLANTS
Use lemon spray or soap spray.

GARDEN PESTS
Use soap spray or sprinkle cayenne pepper powder on plants showing signs of chewed leaves. With garden pests, the best way to keep bugs at bay is to keep your soil and plants healthy. Alternatively, consider introducing beneficial insects to your garden. Check out: www.arbgico-organics.com for a full list of helpful earth friendly products (including termite prevention!)

CHAPTER 7: TEACHER PAGES

The push for more sustainable lifestyles is not just limited to home life. As with Michelle Obama's *Let's Move* Campaign, the government is seeking to push healthier and more environmentally-friendly practices in schools as well with the **Chicago Public School's Environmental Action Plan.** The goal of the Environmental Action Plan is to make schools more sustainable. It seeks to accomplish this with the improvement of recycling programs and reduction of energy use in schools. To encourage schools to better their performance in these areas, the EAP provides monetary incentives for schools that exceed their recycling volume goals and reduce their energy use. For more information, visit http://www.cps.edu/About_CPS/Special_initiatives/Pages/CPSEnvironmentalActionPlan.aspx. With this in mind, we have included several lesson plans below for teachers using non-toxic materials mentioned in this guide

Lesson 1: Chemistry

Chemical Reactions - What are they? What happens? This lesson should be given after students have a basic understanding of properties of matter & changes of state.

Materials:
1 cup vinegar
1 tsp. baking soda
1 glass container

Procedure: Ask the questions above. Explain that what they are about to observe is a chemical change, or chemical reaction, which is what we call any change in which one or more substances are converted into different substances. The new substance produced is called the products. Pour the baking soda into the glass container, Add the vinegar. The chemical reaction that can be observed happens between sodium bicarbonate (baking soda) and acetic acid (vinegar). ***These are the reactants***. The result of this combination causes the release of carbon dioxide (bubbles) and the formation of sodium acetate (the final mixture after bubbling stops). ***These are the products.*** Here is the formula:
$2\ CH_3COOH + Na_2CO_3 \Longrightarrow 2CH_3COO^-Na^+ + CO_2 + H_2O$

Lesson 2: Geology

The Mudshake - What is your soil made of?

Materials:
2-liter soda bottle
Funnel
2 cups of dry soil
water
ruler

Procedure: Fill about 2/3 of the bottle with water. Place the funnel in the bottle, and add the two cups of soil. Cap the bottle and shake vigorously for a couple of minutes. Let the bottle stand undisturbed for approximately one week, when the water at the top should be clear, then measure the layers of sand, silt, and clay that have formed underneath. You might compare the soil at one location to the soil from another location to see how they differ in their sand, silt, and clay composition.

Lesson 3: Physics

Newton's Third Law of Motion - What is it?
Before this lesson, children should have a basic understanding of who Newton is and what his laws represent.

Materials:
Plastic water bottle with built in straw and cap for top of straw
½ cup of vinegar
½ cup of water

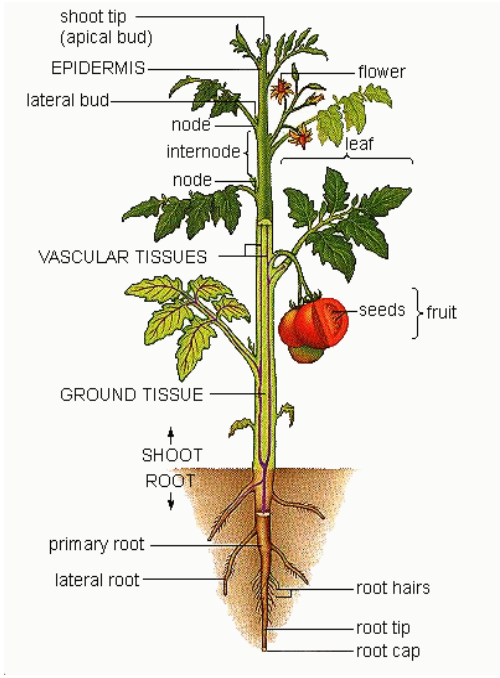
1 Tbs. of baking soda
Tub of water

Procedure: Pour the vinegar and water into the bottle. Add the baking soda and quickly cap the top of the straw. Place bottle into one end of a tub of water, with the straw end placed just slightly under the water. Unplug the straw. What happened? As the baking soda reacts with the vinegar it produces carbon dioxide gas. The carbon dioxide gas shoots out and pushes against the water. The bottle boat moves forward in the direction that is exactly opposite the pushing force. Newton 3rd law of motion states that for every action there is an equal and opposite reaction.

Lesson 4: Biology

Germination - How do plants grow from seeds? What happens when they are placed in light?

By following the directions in Chapter 1 of this booklet, which explains how to sprout seeds, these answers can be discovered.



And Don't Forget the Humanities!
In the bibliography at the end of this booklet, you will find some wonderful resources for thinking about a wide range of classroom activities—including art and literature—that can facilitate environmental education. Check out, for example, the Brooklyn Botanic Garden's *Gardening With Children*, which covers everything from Chlorophyll prints to leaf and bark rubbings to mushroom art! Or consider hosting a CKP Tree-In (see our Tree-In introduction online). Remember, the environment needs friends in many fields!

CHAPTER 8: Just For Kids

Global Warming…what's a kid to do?

No doubt you have heard the words; global warming, carbon footprint, carbon emissions and many other environmental terms. You probably know what solar energy, hybrid cars and recycling are all about.

The whole thing may seem overwhelming at times and as if there is really nothing that you can personally do to help with the environmental efforts. But that simply is not true!

Buying Hybrid cars alone will not fix things. Neither will all the solar panels in the world. These things will certainly help; but is ALL the efforts of ALL of us that WILL make the difference. The daily choices we make will all add up and together, with the larger efforts of scientists, manufacturers and policy makers, THAT is how we can get the job done of saving the earth. So, guess what? We need YOUR help!!!!

Simple things you can do right away:

- Unplug cell phone chargers when not charging
- Turn lights off when leaving a room
- Unplug yourself! Spend more time each day without electronic devices (computers-I pods-tvs). Instead go outside and enjoy the planet! Meet your nature community!
- Eat less meat
- Walk and bike, instead of asking people to drive more
- Think before you act
- Recycle
- Don't litter
- Scrounge and avoid waste and consumerism
- Make the case that going green is very cool!

CHAPTER 9: Additional Resources

Here are some great websites filled with ideas for you to create your own plans and strategies for making daily choices that will help us win! Thank you for your help!!

http://www.gogreenman.com/greenwebsite.htm
http://www.healthy-kids-go-green.com/
http://www.greenbeltmovement.org/
http://www.cnaturenet.org/book/
http://www.fieldmuseum.org/undergroundadventure/kidzone/factors.shtml
http://www.healthyschoolscampaign.org/event/cps/e-mail/attachments/Green-Opps-TaskForce.pdf
http://www.healthyschoolscampaign.org/event/cps/e-mail/attachments/CPS-Green-School-Tips.pdf

Also, we have some terrific University of Chicago faculty anxious to help you! Check out the website for

geophysicist Pamela Martin at http://experts.uchicago.edu/experts.php?id=511

Read about plant biology and sustainability? Read about the Borevitz Lab's work at http://borevitzlab.uchicago.edu/Members/borevitz/2020vision-for-plant-biology/globalsustainability

And check out the work of our Sustainability Council at http://sustainability.uchicago.edu/

MORE INFORMATION ON OUR TOPICS

Food
Container growing
http://www.urbanext.uiuc.edu/containergardening/
Growing veggies, fruits & berries
http://www.urbanext.uiuc.edu/hort/2.html
http://www.greennetchicago.org/
Home Composting
http://web.extension.uiuc.edu/homecompost/
More meatless recipes
www.vegweb.com
www.goveg.com

Clothing
How to host a clothing swap party
http://planetgreen.discovery.com/home-garden/host-a-clothing-swap-party.html

Home
Do it yourself energy audit
www.eere.energy.gov
Insulation
http://www2.illinois.gov/keepwarm/Pages/default.aspx
www.energystar.gov
Furniture
www.craigslist.org
www.freecycle.com
Transportation
Calculate your savings when your car is running right at
www.fueleconomy.gov
The real cost of car ownership
www.bikesatwork.com
www.commutesolutions.com
Join bicycle for a day
www.bicycleforaday.org
Connect with a carpool or start one on your own:
www.erideshare.com
www.carpoolworld.com

BOOKS WITH A WEALTH OF INFORMATION

The Brooklyn Botanic Gardens publish a truly excellent series, which includes such works as ***Gardening with Children, The Tree Care Primer, Community Gardening,*** and ***Healthy Soils for Sustainable Gardens.***

For more a wonderful, life-changing guide to how to garden and grow your own at minimal cost, see Steve Solomon's ***Gardening When It Counts: Growing Food in Hard Times***

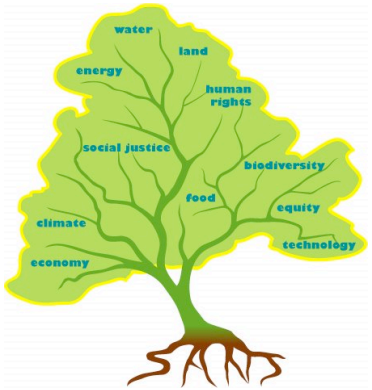
The book that launched the Leave No Child Inside movement is Richard Louv's beautiful work, ***Last Child in the Woods***

A very helpful, no-nonsense guide that extends the message of this booklet is David Bach's ***Go Green, LiveRich: 50 Simple Ways to Save the Earth (and Get Rich Trying)***

For a work that will change the way in which you think about lawn care and give you some beautiful and edible alternatives suggestive of the arts and environment movement, check out Fritz Haeg's ***Edible Estates: Attack on the Front Lawn***

And if anyone doubts the relevance of the humanities to these efforts, please consult Robert Pogue Harrison's ***Gardens: An Essay on the Human Condition*** and/or Donald K. Swearer's edition of ***Ecology and the Environment: Perspectives from the Humanities***

All of these works are available for loan at the Civic Knowledge Project office, University of Chicago, Walker Museum 009, 1115 E. 58th Street. Please call 773-834-3929 in advance to arrange a visit.



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