Earth is our home
We have nowhere else to go
Everyday remember to cherish
Clean water to cleanse
Clean air to oxygenate
Clean land to nourish
Keep it safe
Keep is beautiful
Our future is now

(Napoli)
LEARNING TARGETS

- Importance of clean water, air and land
- Sustainable energy
- Essentials for supporting quality life
- Global warming
- Reducing your carbon footprint
- Creating a healthy environment for ourselves and children
- Personal solutions for sustainable living in home, work and community

As you move along in your day, you eat, wash, drink, and breathe. Most likely you take these simple activities for granted. All too often, our over indulgence in today’s world has made these basic essentials for healthy living a rare commodity. We are polluting our food, water, and air, all of which contributes to our demise with the increase in preventable illnesses such as cancer, autoimmune deficiency, respiratory illness, and heart disease. Approximately 40% of deaths worldwide are caused by water, air, and soil pollution. The causes are environmental degradation and growth in world population, which contribute to an increase in human disease. The field of environmental medicine is becoming widespread as more people suffer from illnesses due to airborne chemicals in the workplace, community, and home.

All living things are interdependent upon each other. Plants need carbon dioxide that humans produce, humans need oxygen that plants produce, and animals, birds, fish, and insects provide a balance in our ecology of air, water, and land. To keep yourself alive and well you might look at what your body is made up of: 65% oxygen, 18% carbon, 10% hydrogen, 3% nitrogen, 1.5% calcium, 1% phosphorous, and 1.5% remaining minerals. All of these elements are available in nature and dwindling due to man’s greed and reckless violence toward our planet. Ecologists say that it is not too late, yet many people seem oblivious to the problems we are creating that can be prevented if we paid attention to our behavior and began taking action in our own lives.

AIR

There’s so much pollution in the air now that if it weren’t for our lungs there’d be no place to put it all.

~Robert Orben
The leading causes of air pollution are motor vehicle emissions, chemical plants, coal-fired power plants, oil refineries, petrochemical plants, nuclear waste disposal activity, incinerators, and large livestock farms. We can prevent the increase in premature deaths, asthma, and mercury contamination by demanding cleaner power plant regulations. With so many chemicals being introduced, the incidence of multiple chemical sensitivity (MCS) is increasing. Children are at risk as their tissues grow rapidly and their detoxification systems are immature. You cannot control the quality of air in your neighborhoods yet you do have some control in your home. For example, plants provide oxygen, and installing wood or stone floors instead of carpets, changing air filters, and controlling dust in air ducts, fans, draperies and shades and mites in beds can all contribute to cleaner air in your home. Your body is increasingly affected by multiple chemicals in daily living, yet you are often most likely unaware of their detrimental effects.

As an adult you may be aware of the changes in your daily functioning, yet frequently ignore them due to time constraints placing your attention on your routines and the activities that take precedence. For example, you may have a general feeling of un-wellness and visit your physician, yet your doctor cannot find anything wrong. Illness related to chemicals is rapidly becoming a problem, yet we are often at a loss as how to identify and treat diseases related to it. Recently pollution-related illnesses are being studied in the field of environmental medicine. They are beginning to identify what pollution does at the cellular level, the level of biochemistry where energy is produced. Some problems resulting from environmental pollution are:

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain fog</td>
<td>Poor concentration</td>
</tr>
<tr>
<td>Autoimmunity</td>
<td>Frequent infections (yeast and fungal)</td>
</tr>
<tr>
<td>Asthma</td>
<td>Respiratory distress</td>
</tr>
<tr>
<td>Emotional instability</td>
<td>Mood swings: anger, frustration</td>
</tr>
<tr>
<td>Recurrent muscle strains</td>
<td>Tendons, ligaments</td>
</tr>
<tr>
<td>Sleep disorders</td>
<td>Waking between 1–3 AM</td>
</tr>
</tbody>
</table>

When you are exposed to volatile organic compounds (VOCs) such as petro chemicals and other forms of commercial solvent type chemicals, these chemicals are rapidly sponged out of the bloodstream and stored in the fatty tissues of your body. Your brain, like the liver and heart, has a rich blood supply and high fat content; thus, the brain is a primary target for chemicals to hide. By the time these environmental pollutants are recognized it is too late to treat. The following illnesses can be prevented without chemical pollution.
Now that we have looked at some of the problems, let’s take a look at some solutions that can improve your physical, mental and aesthetic home environment. Your immune system is able to fight off viruses and bacteria yet is not able to help eliminate or recognize toxic metals in your body. Using an infrared sauna is a simple way to eliminate chemicals from your body. Because the infrared saunas heat penetrates (up to 1¾ inches compared to the traditional sauna, which only penetrates approximately ⅛ of an inch), your body can get a good detoxifying sweat going at about 120 degrees as compared to 180 degrees required from a traditional sauna.

**BENEFITS OF AN INFRARED SAUNA**

- Causes weight loss (without having to lift a finger)
- Helps treat cellulitis
- Improves your immune system
- Improves your strength and vitality
- Helps cure several skin diseases like eczema, psoriasis, and acne
- Strengthens the cardio-vascular system
- Helps control your blood pressure
- Detoxifies your body
- Gives you more energy and relieves stress
- Helps treat burns and scars
- Relieves pain (joint pain, sore muscles, arthritis)
- Helps control your cholesterol level
- Helps treat bronchitis

![Image of a diagram showing the relationship between chronic illnesses and chemicals such as DDT, E, D, DDE, Dieldrin, and their effects on health conditions like cerebral hemorrhage, portal cirrhosis, hypertension, all carcinomas, primary liver malignancy, metastatic liver disease.](http://www.infrared-sauna-reference.com)
When your body is given the opportunity to do its job, it has the innate capacity to discharge toxins and store nutrients. Your lungs, liver, kidneys, and skin are the key to your waste elimination. If you give these organs a chance to do their jobs, you are on the road to being pollution free.

**KEEP YOUR BODY POLLUTION FREE**

How does fiber work to help your body eliminate pollution? If fiber is deficient then waste will be reabsorbed back into your portal vein and lymphatic chain (think immune system). Additionally, if there is an overgrowth of bad bacteria, then they can facilitate re-absorption of cellular waste, pollution, and excess hormones back into your body.9

There is hope, and you can make a difference in your personal life, home, work, and community. When you are mindful of what you eat, how you use energy, and protect yourself by using chemical free products, you begin to create the healthy life you deserve.

**YOUR HOME**

“Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing, and hobby products.”10 A study of household dust found that 10 chemicals known or thought to harm humans are found in 90% of household dust such as furniture and toys. Although dust may seem like a harmless pollutant it can make you more vulnerable to respiratory problems and cancer.11 Walk around your house and notice your surroundings. You may initially take in the decorations, furniture, and artifacts that you have accumulated over the years.
Now take another walk around your house; this time take a closer look in your cabinet drawers, closets, refrigerator, ceiling fans, pictures, and underneath your sink. You might be surprised at what you find. You might say to yourself, “This place needs a good cleaning.” Ok, if this is the case, go to your cleaning supply cabinet and bath and cosmetic products and examine the ingredients that are contained in them. My guess is that most of the ingredients include chemicals that you cannot even pronounce or recognize. If you are cleaning your countertops and table where you eat and prepare food, you are probably ingesting those chemicals. If you are cleaning your floors, you are taking them in through your skin if you walk barefoot. Interesting thoughts?

Have you ever thought about where the shoes and clothes you wear come from and what materials they are made from? The buzz for sustainable apparel is up and coming and the big names are joining the coalition. Beginning with Walmart and Patagonia and now having more than 60 members, the development of the Sustainable Apparel Coalition’s goal is to “join together to develop an index to measure the environmental impact of their products.” These companies account for more than a third of the global apparel and footwear industry. Measuring the energy use, greenhouse gas emissions, water consumption, chemical use, and waste of their factories around the world are some of the initiatives taking place. The “Clean by Design” organization is a revolutionary company with a mission to engage clothing retailers and suppliers to improve efficiency, decrease environmental impact and reduce waste, water use and energy consumption as well as save money and provide longer lasting clothing. Their 10-step best practice initiative includes everything from the manufacturing process to how people care for their garments. Clean by Design’s efforts at more than 50 textile mills in China have resulted in a 400 ton reduction in chemicals, as well as decreases of 36% in water usage and 22% in energy usage per mill. Linda Greer, a senior scientist with the Natural Resources Defense Council said, “the purity of the concept is what makes it such a modern approach to improving the planet.”

SOLUTIONS TO PROTECT YOUR HOME

- Make cleaning products from aromatherapy
- Clean more often
- Check labels
- Ask more questions
- Utilize cleaning strategies such as avoiding the use of hot water, diluting each detergent as much as possible, and applying soft no acidic or non-abrasive detergents for a few minutes to reduce exposure to detergents
- Use cosmetics and creams without chemicals
- Choose carpets with natural fibers
- Choose clothing with natural fibers
- Invest in an air purifier
- Buy energy efficient appliances
- Switch to energy efficient light bulbs
- Turn down your hot water thermostat to 60 degrees
- Arrange furniture with feng shui and purchase ecologically friendly materials
- Bring in more air from outdoors
- Safely clean your home
The importance of providing your body with clean water cannot be overestimated. Your body can no longer be regenerated by drinking water from the tap or local rivers. Our rivers today are full of chemicals such as lead, aluminum, sodium fluoride, bacteria and viruses, chlorine, chloroform, MTBE—rocket fuel, pesticides, treated and filtered waste water, antibiotics, and antidepressants, to name a few. These pollutants cause fatigue, diminished cellular performance and stunted cellular growth. Illnesses related to polluted drinking water are extensive, such as malaria, hepatitis and other viruses. People die every day from drinking polluted water. The number of people lacking clean water is astounding. It is estimated that 1.2 billion people lack clean water and water born infections account for 80% of all infectious diseases. A shocking Associated Press investigation found various pharmaceuticals in the drinking supplies of at least 41 million Americans. Even extremely diluted concentrations of pharmaceutical residues harm fish, frogs and other aquatic species in the wild, and human cells fail to grow normally when exposed to trace concentrations of certain drugs.

The fact remains that we need to conserve the clean water we have and find ways to prevent polluting this essential commodity that we need to survive.

Take a moment and think about water more consciously.

- Drink bottled water
- Conserve water when taking a shower or brushing your teeth
- Conserve water by using plants indigenous to your environment
- Drink two quarts of water daily to nourish and flush toxins from your body. Drink water from glass, or stainless container (no plastic), and install reverse osmosis if possible

**WATER**

CHECK OUT THESE SIMPLE RECIPES AND TAKE ANOTHER STEP TOWARD GOING GREEN

- **All Purpose Surface Cleaner** Mix together equal parts white vinegar and salt. Scrub surfaces with a natural cleaning cloth.
- **Cookware Cleaner** Coarse salt does wonders for scouring copper pans and ceramic baking dishes.
- **Disinfectant** Mix ½ cup of borax powder with 1 gallon of hot water. Add a few drops of fragrant essential oil such as thyme, rosemary, or lavender. Store the mixture in a labeled spray bottle.
- **Floor Scrubber** To scrub out tough messes and stains, use washing soda and rinse well. For lighter washing, dilute 1 cup washing soda in 1 gallon of warm or hot water. Add a few tablespoons of vinegar or lemon juice for extra shine. Instead of using moisturizing lotions with chemicals try this recipe to soften your skin.
The foods you eat today often contain chemicals either from the soil they were grown on or preservatives to sustain shelf life. One rule to follow when you are shopping for food is to avoid products that have chemical names that you do not know how to pronounce as well as products with sugar and corn sweeteners. It is astounding how many products have these additives. Shopping the outer perimeters of the store where fresh foods are usually displayed instead of the middle isles where canned and boxed foods are shelved may help you make better choices. When you think about food only a century ago, you might visualize foods that were grown by the families who harvested them instead of buying food from a supermarket. It likely that those foods were not full of pesticides and those foods supplied vitamins and minerals to help grow healthy cells in the body. The Environmental Protection Agency has approved 350 ingredients for food uses—200 of which account for 98% of the pesticides currently applied to agricultural products many of them polluting water and killing plants and wildlife. “Farm workers who mix, load or apply certain pesticides have contracted serious illnesses and in some cases died from direct exposure, according to health officials.”

In order for your bodies to be healthy, you need to have a greater percentage of alkalinity versus acidity. Remember reading earlier in the chapter what your body is made up of: 65% oxygen, 18% carbon, 10% hydrogen, 3% nitrogen, 1.5% calcium, 1% phosphorous, and 1.5% remaining minerals. Note that oxygen is most important; therefore supplying our bodies with air and foods that give versus deplete oxygen is what we need to focus on. When our bodies are acidic, we are more susceptible to illness as the balance is disrupted. Your body becomes acidic when it is exposed to non-foods such as chemicals, excess fats, and stress. Organic foods are a great way to support alkalinity in your bloodstream and within your cells. Organic foods have a higher nutrient density than conventional foods, a higher antioxidant potential, higher enzyme capacity, and higher energy potential and are typically farmed in humane and sustainable ways without environmental pollution and bacterial infections. When you maintain a happy and emotionally balanced life, you support your body’s alkalinity. Consuming large amounts of foods and eating foods with preservatives and chemicals contribute to the growing obesity epidemic in children and adults.

Obesity is rapidly becoming one of the most deadly environmental illnesses. Unlike years ago where famine killed thousands of people, today human beings live in the age of obesity, too much food and food that does not nourish the body and often contaminates it. A survey of 360 articles published between January 1989 and April 2009, and 12 major newspapers in the United States, Canada and United Kingdom reported that obesity is a lifestyle problem, yet individuals, governments and industry need to share a role in addressing the modern environments. Your body has amazing innate intelligence. It knows exactly where to send nutrients, through food, vitamins, and minerals ingested by eating and breathing.

A simple daily activity can save your life—hand washing. Why is hand washing so important? Your hands are the main avenue for germ transmission and properly washing your hands can prevent germ transmission. Here are some suggestions when and how to wash your hands.
WHEN SHOULD YOU WASH YOUR HANDS?

- Before, during, and after preparing food
- Before eating food
- Before and after caring for someone who is sick
- Before and after treating a cut or wound
- After using the toilet
- After changing diapers or cleaning up a child who has used the toilet
- After blowing your nose, coughing, or sneezing
- After touching an animal, animal feed, or animal waste
- After handling pet food or pet treats
- After touching garbage

HOW SHOULD YOU WASH YOUR HANDS?

- Wet your hands with clean, running water (warm or cold).
- Turn off the tap and apply soap.
- Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
- Scrub your hands for at least 20 seconds. Need a timer? Hum the “Happy Birthday” song from beginning to end twice.
- Rinse your hands well under clean, running water.
- Dry your hands using a clean towel or air dry them.

SAVE OUR CHILDREN

Life has changed dramatically for children today. The days seem long lost when children found complete joy in the fresh air playing outdoors without a thought of video games, smart phones, or television. The more children play indoors, the more their connection to nature dwindles. The media does not help with advertising and parents who are overworked often depend upon the technology of electronics to keep children busy. In addition, the increase in crimes against children may contribute to parents wanting their children to be safe, sacrificing play in nature. “In a typical week, only 6% of children ages nine to thirteen were found to play outside on their own; 31% of bike riding is down since 1995; 90% of
inner-city children do not know how to swim, and 34% have never been to a beach. Schools have canceled field trips, have buildings with no windows and many have eliminated outdoor or all physical education programs.\textsuperscript{19}

The effects of outdoor pollution (OAP) on children’s health cannot be underestimated. Children 6–12 years old who are exposed to air pollution related to traffic-dense areas had a higher incidence of respiratory symptoms and asthma. Children who attend school have been at risk for asthma, poor attendance due to adverse health effects, and high levels of CO\textsubscript{2} due to poor air quality and ventilation. The National Poison Data System reported that in children under five years old, the top 10 leading cause of poisonous deaths were analgesics, batteries, hydrocarbons, plants, cold and cough preparations, fumes/gases/vapors, and pesticides, antidepressants, chemicals, and household cleaning substances.\textsuperscript{20} Though technology has benefited the cognitive development of children, the problems of living in an industrialized modern society often outweigh the benefits. For example, the need for vitamin D, the sunshine vitamin, is “vital for the formation and maintenance of healthy bones in children, adults and infants.”\textsuperscript{21}

As we have been discussing the issues of pollution, you might take a moment to reflect upon children’s rights. Parents, policy makers, and corporations in the food and fuel industry all have a responsibility to provide an environment where children can thrive into healthy adults.

“For many children, dinner is served from a bag rushing between organized activities or sitting in front of a television. The meal itself composed of two pieces of white bread. Saturated and trans fats complete the meal. The meal is washed down with a sweetened high fructose corn syrup drink only to return to their activities on the computer or in front of the television to have a snack of chips and soda pop.”\textsuperscript{22}

As we reflect upon the dangers of pollution on children, it becomes clear that children in utero throughout childhood are dependent upon us as adults to protect them and offer them the opportunity to grow into healthy adults. We have been failing them by poisoning the food, water, and air. It’s time to create a life for our children where they can play in nature, drink clean water, eat food free of pesticides and chemicals, and breathe air that supports the growth of oxygenated cells. We must choose life!

### WAYS TO BUILD STRONG HEALTHY CHILDREN

- Feed them organic food
- Give them more water and drinks that are naturally flavored
- Offer them more free style play in the outdoors
- Keep the home chemical free
- Eliminate all processed sugar and caffeine
- Make sure they get enough sleep
- Ask questions to assure they are happy
• Spend more time playing and laughing with your children
• Reduce the time spent watching television and using the computer
• Listen to them, take their advice; they have knowledge too!
• Be mindful of their experiences and put yourself in their shoes

_The sun, the moon and the stars would have disappeared long ago...had they happened to be within the reach of predatory human hands._

_Havelock Ellis_23

As you read about the importance of developing behaviors that support good health, you also need to be aware of how our planet is impacted by negligent human practices. Many are concerned about global warming and how it is effecting our communities. Although the earth’s temperature has increased one degree since the late 1800s, the shocking news is that most of that increase has occurred over the past three decades! Rising sea levels, wildfires, heat waves, extreme storms and severe droughts are a few of the devastating effects of global warming. You might ask yourself, Is global warming really that bad? Even a seemingly slight average temperature rise in enough to cause a dramatic transformation of our planet.24 Remember how important oxygen is to our core existence. When we overload our atmosphere with carbon dioxide, trapping heat and raising the planet’s temperature due to fossil fuels and deforestation, we are cutting our oxygen supply day by day. If we want to continue to not only survive on our planet but also do so in good health, there are some solutions you can begin to implement to decrease your carbon footprint. Reducing your carbon emissions by walking, car-pooling, driving fuel-efficient cars, and using mass transit. Live closer to work. Transportation is the second leading source of greenhouse gas emissions in the United States. Did you know that burning a single gallon of gasoline produces 20 pounds of CO₂?25 Breathing in carbon dioxide instead of oxygen will destroy your body one day at a time.

_There is a sufficiency in the world for man’s need but not for man’s greed._

_Mohandas K. Gandhi_26

Simple changes can be made such as buying in bulk to prevent packaging, and using reusable grocery sacks, purchasing energy efficient appliances, and keeping lights off as well as appliances, television, stereos and battery chargers when not in use. Exploring renewable sources like solar, wind, geothermal, and bio-energy not only create clean energy and are being used worldwide but also are cost effective and create jobs for millions of people.27 In support of your health and the environment, do not purchase products that use corn syrup and fructose, which requires barrels of oil for the fertilizer to grow it and diesel fuel to harvest and transport it.28 Many of us are beginning to work at home, yet most of us are still spending most of our workday at the worksite, often 6–8 hours a day. When you take the time to protect your workspace, think green; you add quality to your health.

On a personal level, get involved. Educate your children, friends and family as well as tracking government officials who are making decisions about your health and future. Voice your concerns via social media or contact elected officials directly. You send a message that you care about the warming world.29
SOLUTIONS TO PROTECT YOUR WORK ENVIRONMENT

- Keep rest room sanitized by cleaning it regularly
- Provide adequate bath tissue, soap and paper towels
- Store cleaning supplies in a separate closet or cabinet from chemicals
- Keep the office kitchen clean from dirt and garbage by having sufficient trash receptacles and have them emptied daily
- Clean out refrigerators weekly
- Discourage staff from eating at their desks
- Look for water leakage and mold
- Keep a friendly attitude without judgment or harassment
- Encourage more people to use public transportation by offering free bus and light rail travel
- Bring a healthy lunch to work
- Eat with a friend
- Enjoy favorable conversations versus complaining
- Healthy Attitudes make work fun
- Take pride in your work

SOLUTIONS TO PROTECT YOUR COMMUNITY

- Choose a fuel-efficient vehicle for yourself
- Encourage public transportation to replace old buses with new ones that run on cleaner fuel
- Keep your engine tuned up and tires inflated
- Drive less and car pool more
- Choose renewable energy from wind, solar, and other clean sources
- Keep piles of papers off the floor to prevent fire
- Create more bicycle trails
- Plant more trees to increase shade and absorb CO2
- Maintain health parks and forests
- Protect parks and forests from developers by getting involved in preservation activities
- Replace old public lighting with energy-efficient compact fluorescent light bulbs reducing carbon dioxide emissions (CO2).

Now that we have discussed the issues and some of the solutions, you can begin to increase the quality of your health by living on a planet that was created to serve you. Our planet earth offers you the opportunity to breathe clean air with vegetation emitting oxygen and clean water to nourish your bodies. Sustain these blessings and live a long and healthy life!
LIFE DESIGN ENVIRONMENT CHECKLIST

Things I need to do to check the air quality in my home:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Things I need to do to check the air quality in my workplace:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

I know that the quality of the water I’m drinking is safe because:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

I have walked through my house and have found:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

These are my Three Strategies for being successful in creating change in my environment.

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

As you mindfully begin your designer activities, remember to use the Four Step MAC Guide as you remain present for all of your experiences.
MINDFULNESS PRACTICE
USING THE MINDFUL MAC GUIDE

1. Mindfully **acknowledge** each experience without internal or external filters
2. Intentionally pay **attention** to your senses, thoughts, emotions, and instincts regarding each experience
3. **Accept** your experience without judgment or expectations
4. **Choose** to respond versus react to your experience

Discuss how well you did with your practice this week, feelings you had, obstacles you faced and how you overcame them.
DESIGNER ACTIVITIES

1. Go through all of you cabinets in your kitchen and pantry and take out everything that has chemicals or preservatives in it and write them all down. Then look up each of those chemicals and preservatives.

2. Take a dry white cotton cloth and maybe a step stool. Swipe along your washer and dryer, stove, countertops, ceiling fans, patio door and window ledges, baseboards and air conditioning ducts. Now crawl on your floors, and if by chance you have a carpet, run your fingers through it and see what comes up.

3. Take two glasses and fill one up with tap water and one with reverse osmosis or bottled water. Switch glasses around and without looking choose one and explore the taste, then taste the other. Notice.

4. Soften your skin. Microwave or oven-warm a small bowl of olive oil. Kick back and soak your hands. Add some granulated sugar and scrub away the extra layer of dry skin that accumulated over the winter.

5. Try an invigorating hand wash. Place a tiny bit of powdery ground mustard in a bowl with some other herbs and essential oils, such as rosemary and thyme or lavender and mint. Add hot water and wait for the tingling sensation of mustard to warm your skin.
LIFE BY PERSONAL DESIGN
REFLECTIVE JOURNAL

In this Reflective Journal, record what you learned from this chapter, your “intentions” for change, any barriers you think might interfere with these desired changes and how you will overcome them, and at least one strategy that will help you realize your dreams and the life you will love.
REFERENCES


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