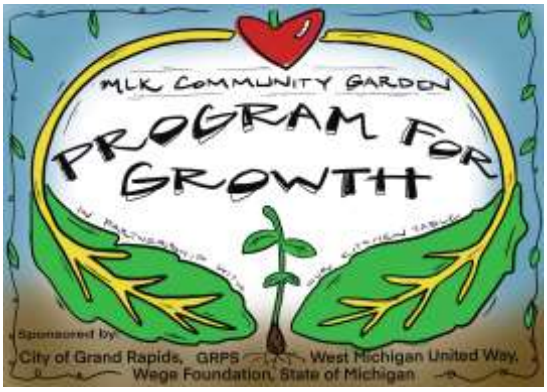


Growing: Community, Justice and Food




GROWING:
Community, Justice and Food

Our Kitchen Table (OKT) designed this section to help Grand Rapids residents strengthen garden projects for City of Grand Rapids Neighborhood Match Fund (NMF) consideration. The NMF provides financial contracts up to $2,500 to Grand Rapids residents to organize and implement projects and initiatives that advance the following NMF objectives:

- Identify, develop and network Grand Rapids residents.
- Build stronger connections among residents and in their neighborhoods.
- Address and promote social justice.
- Benefit the public.

CITY OF GRAND RAPIDS

Get Your Garden Started!

Soil

Whether you grow in the ground, raised beds or containers, healthy, living soil is essential to a productive food garden. If you are going to plant in the ground, have your soil tested—for nutrients, pH and toxins (e.g., lead, arsenic and aluminum).

Soil in Grand Rapids southeast neighborhoods often has high amounts of lead and arsenic, remnants from orchards that once grew there (these chemicals were once used as pesticides). If your soil is contaminated, you can grow in containers or raised beds. Be sure to keep kids away from lead-contaminated soil! If you need to purchase soil, know that commercial soil and compost is not regulated. No matter what it says on the label, you may be buying composted industrial waste or other toxic brews.

Check for recommendations before you purchase. Better yet, make your own soil by composting food and yard waste. Grass clippings (if chemical free) and weeds combined with food scraps— everything except meat and milk products—turns into great soil. Add a few worms and it will be healthier yet!

Plants and seeds

OKT recommends you use organic, heirloom plants and seeds in your food garden. One, your produce will be tastier and more nutrient-rich. Two, you can save some seeds after harvest and start your next year's plants for free. Avoid big-box nurseries that sell genetically modified (GMO) plants.

Some of these plants include bee-killing pesticide as part of their genetic make-up—and we need honeybees to pollinate the plants that provide our food.

Starting seeds

Before you plant, map out your garden. Think about where the sun shines in your space throughout the day. Plant tall crops in the north and smaller crops and root crops to the south.

Look into companion plants that help each other grow, e.g. tomatoes love growing alongside basil. When planting seeds, prepare the soil by turning it over with a spade or cultivating tool and leveling with a garden rake.

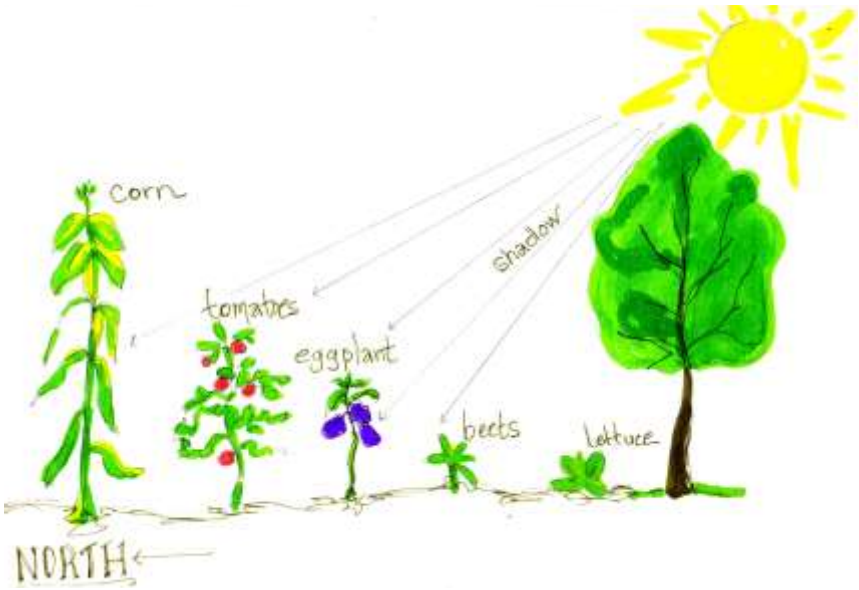
Use your finger to make holes in the soil. Usually you can place one seed per hole. With some greens, herbs and vegetables like cucumbers, you plant multiple seeds together.

Different plant varieties have different space requirements. For example, plant radishes and beets one inch apart. Plant zucchini 8 to 16 inches apart. Most seed packets will give you planting information.

Planting plants

Make sure soil is loose, scoop out enough soil so the root of the plant is lower than the garden surface. For some plants, like broccoli, you can plant deeper, up to the first germination leaves. Push soil around the base of the plant. Push firmly around the plant, so that it stands erect.

Evening is the best time to plant plants in the ground. Then they have all night to adjust to the shock away from direct sun right away. After you have secured the plants in the ground, water them generously.



Sunshine
Always remember to think about sunshine! Watch where the sunlight falls from dawn to dusk. Plant tall crops in the north and smaller crops and root crops to the south.

Shade Tolerant Plants

Kale	Chard	Beets
Turnips	Mustard	Carrots
Spinach	greens	Garlic
Lettuce	Bok Choy	Potatoes
Arugula	Scallions	Cilantro

Watering
Water is another essential ingredient! Water your plants thoroughly at the ground. During hot spells, water every day, running the water at the plants' base, count to five. During cooler weather, you may not need to water every day.

The best times to water are 6 to 10 a.m. or 6 to 9 p.m. Avoid watering during the heat of the day. Your plants will tell you when they need water but it's best not to wait until they are droopy or dried out. Feel for moisture in the soil near their stalks. Containers, especially smaller ones, will need more frequent watering. Mulching your plants can help conserve water.

Water left standing in garden hoses can get hot! Let water run until it's cool so you don't scorch your plants. Also, standing hose water can pick up harmful chemicals like phthalates, BPA and lead, none of which were detected in water directly sampled from the tap. (Learn more at ecocenter.org.)

Weeding
In a way, weeding is how you become intimately involved with your garden. Some claim it can be a meditative experience! Whether you hate it or feel spiritually transformed, it's got to be done. This important chore can become a nightmare if you don't keep up on it. The key is to do some every day — and find a way to be comfortable while you do it. A small camp stool, kneeling mat, or sit-upon can help. If you don't like dirt under your nails, pick up some inexpensive garden gloves.

Weeding removes non-food plants competing for nutrients in your growing space. It also cultivates soil around plants. Packed soil keeps air and water away from roots. Use the pulled weeds as mulch to add nutrients back to soil and slow soil drying. You can also mulch with straw, cut grass or leaves, except oak leaves and pine needles.

You can spend a fortune on weeding tools, but when it comes right down to it, you have to get down and pull the weeds out. Learn to identify your weeds. Common ones like dandelion, purslane and lambs quarters are highly nutritious edibles!

Pest control
Pests happen. Find non-chemical, earth friendly solutions to get rid of them. Not only for the earth, but to help yourself and your family avoid ingesting more dangerous chemicals into your bodies. Sometimes, the easiest ways to get rid of pests like tomato worms is to pull them off by hand. For those too small to catch, boil garlic in water and use the garlic water to spray your plants.

Also, you can use diatomaceous earth at the base of plants to prevent damage from slugs, snails and other pests that attack stalks. For more pest control options, check with OKT or other organic food gardening resources.

Harvesting
Pick your vegetables and fruits when they are ripe and come off the vine more easily. You can determine if they're ripe by size, how it feels and how it tastes. Don't let produce over grow. It can become bitter and tough. The only time you want produce to over-mature is when you want to save some seeds for the next planting season.

If you aren't going to eat your harvest within a few days (or a week at the most), consider canning, drying or freezing it. Don't put tomatoes in the refrigerator! They'll lose flavor.

Your Food Garden Can Help Prevent Lead Poisoning

	Number of Children	Percent	State Ranking - # of Poisoned Children
FLINT *	111	3.3%	
49507	186	14.0%	1st
49503	97	12.2%	8th
49504	95	12.2%	9th

In 2017, reports stated that two out of every three lead poisoned-children in Kent County lived in zip codes 49507, 49504 or 49503. Some fresh produce you grow in your garden can help your child's body to absorb and get rid of lead in their systems. Specifically, vegetables containing iron, calcium and vitamin C.

Vegetables high in Iron:

- Dark leafy greens like kale, collards, mustard greens, and spinach.
- Legumes like black-eyed peas, chick peas, lentils, and kidney, white, navy, and lima beans.

Lean meats, fish and breads enriched with iron are other good sources.

Vegetables high in calcium:

- Broccoli, cabbage, and bok choi.
- Greens like kale, collards, and spinach
- White beans (legume)

Milk products, milk alternatives and sardines are other good sources.

Produce high in Vitamin C:

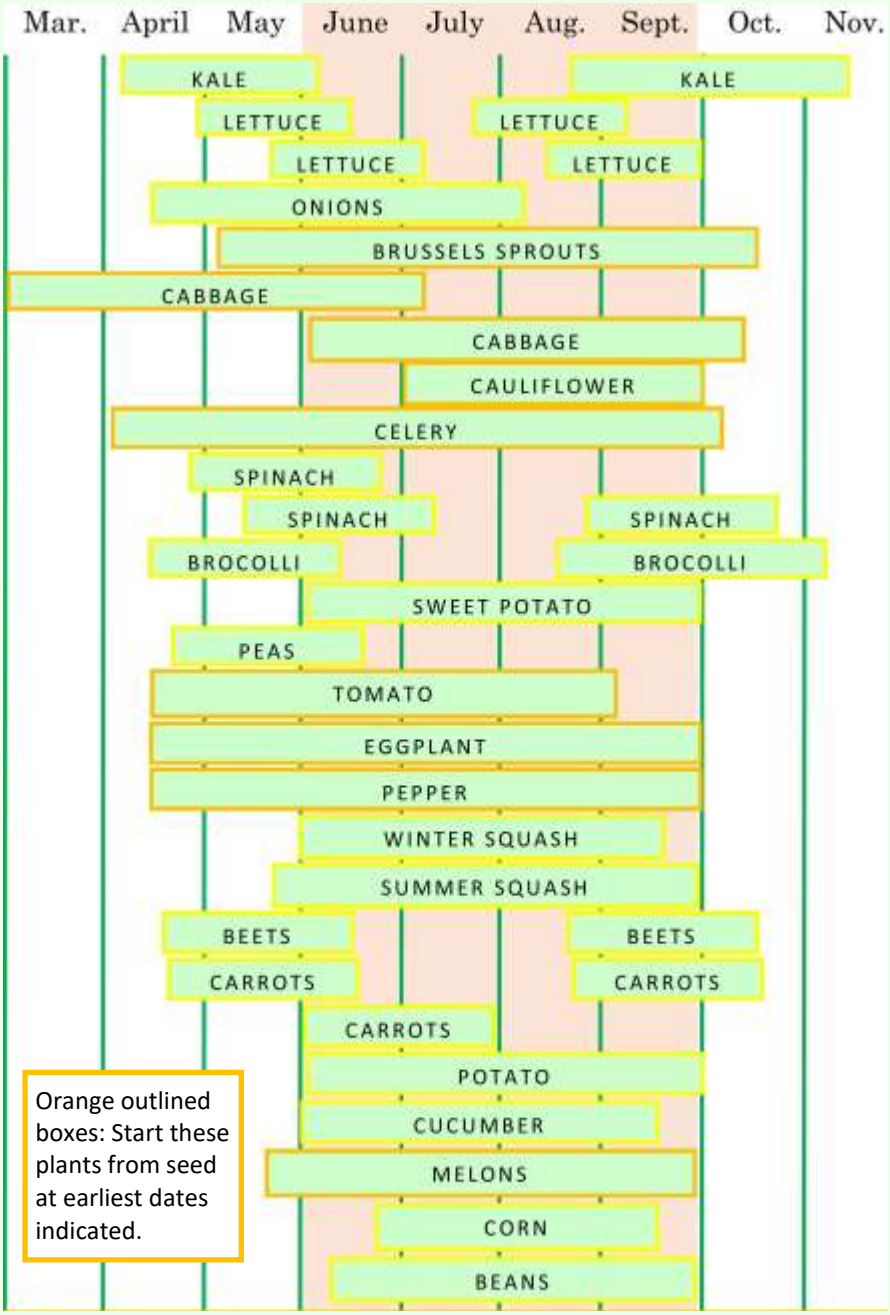
- Watermelon, honeydew and other melons.
- Berries, e.g., strawberries,
- Tomatoes
- Peppers, e.g. bell peppers and chili peppers.
- Cauliflower, kale, cabbage, Brussels sprouts and broccoli.
- Greens, e.g., kale, collards, mustard and spinach.
- Squash.
- Potatoes (if skins are eaten).
- Citrus fruits.

Source: Lifestyles Nutrition Services

Multi-season Planting

Plan your garden so you have foods to harvest throughout the spring, summer and fall. Early lettuces and peas, mid-summer tomatoes and summer squashes, fall season winter squashes, cabbage and potatoes. If you plant radishes in the spring, you could then plant peppers (or another warm weather crop) in the same space in the summer. Radishes, beets and greens can also be planted directly from seed in late August for harvest in October. Kale and collards can keep producing into December.

Cool Weather Crops 4—6 hrs. sunlight	Warm Weather Crops 6—8 hrs. sunlight
Radish, Beets	Tomato
Kale, Spinach	Pepper
Snow peas	Okra
Carrots, Chard	Basil
Collards	Onion
Turnip greens	Green Beans
Mustard greens	Watermelon
Cauliflower	Cucumber
Broccoli, Cabbage	Squash



Plant	Good Companions	Bad Companions
Tomatoes	Basil, marigolds, asparagus, carrots, celery, onion, lettuce, parsley and spinach	Cabbage, beets, peas, fennel, dill, rosemary, corn
Peppers	Basil, spinach, onion, tomatoes	Beans
Beans	Marigolds, nasturtiums, rosemary, and summer savory broccoli, Brussels sprouts, cabbage family, cucumbers, peas, potatoes, and radishes.	Onions
Cucumbers	Marigolds, nasturtiums, cucumbers, beans, celery, corn, lettuce, dill, peas, radishes	Aromatic herbs such as sage
Onions	Carrots, beets, cabbage, lettuce, parsnips, tomatoes, marjoram, savory, rosemary.	Asparagus, beans, peas
Lettuce	Mint, chives, garlic , beans, beets, broccoli, carrots, corn, peas, radishes, marigolds	Parsley
Zucchini & Summer Squash	Corn, beans, peas, radishes, dill, marigolds.	Potatoes
Carrots	Cucumbers, onions, beets, cabbage, kale, lettuce, spinach, squash	Hyssop
Sweet Corn	Green beans, cucumbers, peas, pumpkins, melons, zucchini	tomatoes

Beans and Collards

- 2 bunches collards, stalks removed and chopped.
- 1 C. dry beans (adzuki, black, or pinto etc.) or 2 cans beans.
- 2 cloves garlic, minced
- One red pepper, diced
- 1 bay leaf
- 1 T. salt

Soak dry beans per directions and cook until tender. Drain. Mix greens and beans. Add garlic, bay leaf, pepper and salt. Simmer in a large sauce pan or crock pot until greens are tender. Serve with cornbread. *Adding legumes (beans) to your greens recipe adds protein and transforms a side dish into a nutrient-rich main dish!*

Tips for Your Community Food Garden

- **Organize a meeting for interested people.** Invite neighbors, tenants, community organizations, landlords, city officials, churches and schools. Invite those who show up to join the planning committee.
- **Identify all your resources.** What skills and resources already exist in the community that can aid in the garden's creation? Contact the City about vacant lots or growing in parkways. Look within your community for people who already grow food.
- **Choose a site.** Consider daily sunshine, availability of water, and soil testing for nutrients and possible pollutants. Find out who owns the land. Can the gardeners get a lease agreement for at least three years? Will public liability insurance be necessary?
- **Prepare the site.** Organize volunteer work crews to clean it, gather materials, design garden layout, build raised beds, till and/or spread new soil. Find a space for storing tools, composting and gathering. Include a weather-resistant bulletin board where you can post rules, gathering times and other information.
- **Organize the garden.** Have the group decide whether they want individual or shared beds. (Sharing beds can be more efficient and build community!) Talk about making food available to neighbors who don't help with the garden. We suggest using your garden to increase healthy food access to all – not only those who do the work.
- **Grow the garden via Facebook or Nextdoor social media applications.** If everyone doesn't have computer access, start a telephone tree, as well.
- **Plan events.** Sponsor garden community weeding times with a potluck and music. Organize a tour of other local community and individual food gardens. Plan freezing or canning events to preserve abundant harvests. Share the harvest with community dinners that also teach how to use the produce in real meals. Keep the group motivated all year by hosting a film screening or arranging transportation to garden education events.

√ √ √

"So You Want to Garden" Checklist

1. Answer the question: Why do you want to grow food? What do you want to grow? (Seasons matter.)

2. Diagram your neighborhood food system. List where healthy foods are available in stores, pantries, gardens, CSA programs, bulk buying programs or farmers markets?

3. Take a basic food growing class and/or read a food growing book.

4. Determine your Need/Supplies/Resources/Tools and Budget

5. Vacation Planning: When you're away from your garden, what's the plan?

6. Select a growing approach: Container, raised-bed, direct/in-ground

7. Soil Testing. Are the enough nutrients? Too many toxins?

8. Diagram your food growing space! Considerations: Soil/ composting. Sun: know south facing side, the sun comes up in east, goes down in west. Water source. Seeds and plants (sterile seeds, seed and plant exchanges)

9. What's your plan for harvesting, sharing, and handling excess food or food waste?

10. Consider "In Season" plants to plant your food garden; plant spacing and companion planting; and climate change impact. (Temperatures, more or less rainfall, severe weather.)

11. Watering. How will you water? If you're renting, will your landlord agree? When will you water? The best time to water is 6 to 10 a.m. and/or 6 to 9 p.m. Develop a routine.

12. Considerations: Weeding; fertilizer and pest management (synthetic vs. natural); and other challenges (insects/animals).

13. What will you do with your harvest? Consider meal planning, prep and preserving.

14. Do you want to save money by saving seeds for next year? Learn how!

15. Planning for next year. Will you grow your garden again or remove it? .

16. Other Considerations: Farmers' markets; CSA programs; bulk buying programs.



Heirloom Seeds and Plants Grow Healthier Gardens, Connect Communities and Build Biodiversity

When purchasing seeds for growing your own vegetables and herbs, always ask yourself:
1) What kind of seeds they are ?
2) Where the seeds are coming from?

When we say, what kind of seeds, we want to ask are the seeds hybrid and non-self producing (terminator seeds) or are they heirloom seeds? The difference is significant.

Human interaction with seeds over the centuries has always led to some form of hybridization, since humans have been cross-pollinating plants for thousands of years. However, there is a significant difference between original seeds or heirloom seeds and the kind of seeds that have been commercially developed by large corporations in recent decades.

Heirloom seeds are self-reproducing, in that the seeds that each plant produces seed that can be saved and used to grow more plants. Saving your own seeds can save you money and it promotes the maintenance of a rich diversity of seed stock.

Saving seeds is also a food justice issue. Saving seeds promotes greater food sovereignty for communities and it challenges the agribusiness-created policy of the World Trade Organization (WTO), which makes it illegal for farmers/communities to save their own seeds. (www.ifg.org/pdf/int'l_tradeshiva_WTO.pdf_1.pdf)

These kinds of global policies have also been promoted in the US with Senate Bill S510, the Food Safety Modernization Act, which would also make seed saving a criminal act. (www.naturalnews.com/030418_Food_Safety_Modernization_Act_seeds.html)

In addition, heirloom plants are also more resilient and don't rely on chemical and fossil fuel based additives that hybrid and terminator seeds do. Heirloom seeds yield produce that is more nutritious, tastes better and is less uniformed, meaning it does not ripen all at the same time.

Where the seeds are from is also important in promoting food justice. Most seeds are controlled by a handful of corporations, such as Monsanto, DuPont and Syngenta. These corporations helped craft the WTO policies that outlaw seed saving. The seeds that these corporations sell are not self-reproducing, which means you have to continue to buy new seeds every year.

Lastly, when you use heirloom seeds, you can save more seeds than you need for your household or community garden. Having extra seeds allows you to participate in seed sharing and seed swapping, which allows people to experiment with seed diversity and build community through seed sharing.

If enough people save seeds, neighborhoods and communities could even start a seed bank so even more people can benefit from heirloom seeds, eat healthier and promote greater food sovereignty. Our Kitchen Table is committed to using heirloom seeds, saving seeds and sharing seed with the community.

Additional Resources on Seed Saving, Seed Sovereignty & Heirloom Seeds:

Navdanya
www.navdanya.org/

Seed Savers
www.seedsavers.org/

Food First
www.foodfirst.org/

Grow Your Own Health with Herbs!

Are you struggling to avoid fast food, convenience foods and junk food simply because you love the tempting taste? These foods are industrially engineered with harmful chemicals and non-food fillers like cellulose—sawdust—to trick your taste buds into craving crap.

You can retrain your taste buds! A good way to help them along is to use fresh culinary herbs when you cook. Fresh herbs flavor your food without adding extra salt, calories, sugar or fat.

OKT gardeners are growing the following herbs. Discover what they provide in addition to great flavor:

· **Arugula**, as an herb or spicy greens, supports brain and bone development.
Þ Nutrients: Zinc, copper, calcium, iron, magnesium, phosphorus, potassium, manganese, vitamins A, C, K, thiamin, riboflavin, B6, folate, pantothenic acid. A*, T*

· **Basil** has been shown to provide protection against unwanted bacterial growth and inflammatory conditions like arthritis and also aids digestion.
Þ Nutrients: Vitamin A, B6, K and iron. A*, T*

· **Cilantro** has traditionally been referred to as an "anti-diabetic" plant.
Þ Nutrients: Thiamin, zinc, calcium, iron, magnesium, phosphorus, potassium, copper and manganese, vitamins A, C, E, K, riboflavin, niacin, B6, folate, pantothenic acid. A*, T*

· **Chives** and garlic may help you maintain good cholesterol levels.
Þ Nutrients: vitamin C. P*, T*

· **Dill**, an anti-oxidant and anti-inflammatory, also can help neutralize benzopyrenes, carcinogens found in smoke from cigarettes, charcoal grills and trash incinerators.
Þ Nutrients: calcium, manganese and iron. A*, T*

· **Fennel**, an anti-oxidant and anti-inflammatory, has many healthful phytonutrients including *anethole, which* helps prevent cancer.
Þ Nutrients: Vitamin C, folate, fiber and potassium. P*, T*

· **Lavender**, brewed as tea, a traditional home remedy for insomnia. Its scent also relieves stress and it is good for the skin. P*, W*

· **Lemon Balm**, used since the Middle Ages to reduce stress and anxiety, promote sleep, improve appetite, and ease indigestion. P*, W*

· **Mint** calms indigestion and helps relieve cold symptoms.
Þ Nutrients: Calcium, choline, iron, magnesium, manganese, zinc, phosphorus, potassium, selenium, vitamins B1, B2, B3 and E. P*, W*

· **Oregano**, an anti-oxidant, was found more effective against *Giardia* than the commonly used prescription drug.
Þ Nutrients: Manganese, iron, calcium, vitamins K and E. P*, W*

· **Parsley** is a "chemoprotective" food that can help neutralize particular types of carcinogens and helps lungs, liver and bladder.
Þ Nutrients: Calcium, iron, magnesium, manganese, selenium, zinc, phosphorus, potassium, vitamins A, B1, folate 2, 3, 5, C and E. A*, T*

· **Rosemary** supports liver and blood health and contains anti-inflammatory compounds that may make it useful for reducing the severity of asthma attacks. A*, W*
Þ Nutrients: Calcium, iron, zinc, vitamins B1,2, 3, and C.

· **Sage** is an outstanding memory enhancer. Its smudged smoke is used to cleanse and clear rooms of negative energy.
Þ Nutrients: Vitamin K, P*, W*

· **Stevia**, a natural sweetener that is not toxic like Splenda, Nutrasweet and other artificial sweeteners. A*, T*

· **Thyme**, long used for chest and respiratory problems, can also help maintain healthy cholesterol.
Þ Nutrients: Calcium, iron, magnesium, manganese, phosphorus, potassium, selenium, zinc, vitamins B1, B2,

KEY

*A - Annual . Needs to be planted every year.
*P - Perennial . Grows back on its own every year.
*T – Tender stem *W - Woody stem
Plant like stemmed plants together,
tender with tender and woody with woody.

Diagram Your Food System

Often when we talk about the food system, we speak about global corporations, how they impact the many countries of the world, and the large scale impacts they have on national economies and populations' health. What about you and your family? How is the food system treating you right where you live? You can answer these questions by diagramming your food system. First, list the places where you can get food in your neighborhood: supermarkets, big box stores, liquor stores, fast food restaurants, farmers markets, gas stations, your garden, food pantries and so forth.

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_____

_____

Next, list where you actually get your food.

_____

_____

_____

Then ask yourself these questions: Does my neighborhood give me easy access to healthy foods?

_____

_____

_____

Is it easier to buy junk food, fast food and packaged convenience foods that have very little nutritional value?

_____

_____

_____

If you eat a lot of these unhealthy foods, is it because you don't have access to better foods or have advertisers persuaded you into wanting them?

_____

_____

_____

Last, what changes can you make to improve the quality of food that you and your family eat with your food budget?

_____

_____

_____

Growing food might be one way you can supplement your diet. Teaching your kids about how advertising convinces them to eat junk foods is another. Or, you might advocate for healthier foods at the schools in your neighborhood.

When certain neighborhoods only have access to junk food and fast food, it is not an accident. It's food apartheid. Food apartheid is the intentional, systemic marketing and distribution of profitable, nutrient-poor, disease-causing foods to income-challenged neighborhoods, mainly, communities of color (i.e. communities receiving the most food assistance dollars). Demand better from the food system!

What Is Food Justice?

Food Justice is an idea, a set of principles and something we should all strive to practice. More importantly, Food Justice is a movement and, like most social justice movements, it was born out of the lived experience of people experiencing oppression. Food Justice grew out of the Environmental Justice movement, where communities of color and poor working class people began to realize that their lack of access to healthy and affordable food was not the result of their own behavior, but of a food system that was motivated by profit.

People often classify some neighborhoods as "food deserts." What they generally mean is that residents don't live close to a grocery store. Using the term "food desert" is problematic. A desert is a vibrant eco-system and not a barren wasteland, as is often associated with the term. And, identifying neighborhoods as food deserts ignores history and fails to acknowledge that most of these neighborhoods had small grocery stores, farmers markets, fruit and vegetable stands and lots of backyard gardens.

However, economic and political decisions driven by the current industrial food system resulted in local neighborhood food systems being abandoned and undermined, resulting in food insecurity.

It's more accurate to say that, like the Apartheid imposed on Black South Africans, Food Apartheid is the intentional, systemic marketing and distribution of profitable, nutrient-poor, disease-causing foods to income-challenged neighborhoods, mainly, communities of color (i.e. communities receiving the most food assistance dollars).

The movement for Food Justice is changing Food Apartheid. Armed with the notion that everyone has the right to eat healthy, food justice advocates engage in locally grown food projects, sharing skills on how to grow, prepare and preserve food, while exposing the current food system's unjust nature.

The Food Justice Movement is an international movement that is ultimately fighting for Food Sovereignty, where everyone has say in the kind of food system(s) they want. Food Sovereignty is Food Democracy, where healthy food is a right for everyone, not just for those who can afford it.

OKT promotes and supports these Food Justice principles :

- Food Justice recognizes that the causes of food disparity are the result of multiple systems of oppression. To practice food justice we must do the work through an intersectional lens.
- Food Justice advocates must focus on working with the most marginalized and vulnerable populations: communities of color, communities in poverty, immigrants, children, our elders, women, those with disabilities and people experiencing homelessness.
- Food Justice require us to work towards the elimination of exploitation in our food system, both exploitation of humans and animals.
- Food Justice demands that we grow food in such a way that preserves ecological biodiversity and promotes sustainability in all aspects.
- Food Justice means we provide resources and skill sharing so that people can be collectively more food self-sufficient.

Healthy Food Is Your Right!

Community Resources

Grand Rapids Neighborhood Match Fund grandrapidsmi.gov/nmf
- Funding for community food justice gardens.

Our Kitchen Table, OKTjustice.org
- Food growing and food justice resources.
- **Southeast Area Farmers' Market**, SNAP, DUFB, WIC etc. accepted.

Michigan Farmers' Markets Association (MIFMA) mifma.org

Blandford Nature Center Farm blandfordnaturecenter.org
- CSA shares.

Fresh Beets Urban Farm TheFunkyFreshBeets.com
- Gardening and animal husbandry workshops. Garden installation.
- CSA shares.

New City Farm newcityneighbors.org/farm/
- Farm shares, garden, and bakery.
- Youth programs.
-

Well House, wellhousegr.org
- Community farm
- Plant sale, workshops

Garfield Park Neighborhood Association
- Rent garden plots.

Groundswell Farm groundswellfarm.org
- CSA shares via SNAP.

Urban Roots, urbanroots.com, 1316 Madison SE
- Farm, mobile classroom, supper club.
- Market Wednesdays 12 to 7 p.m.

Baxter Community Ctr. wearebaxter.org, 935 Baxter SE
- Food growing resources.
- Marketplace: Pantry, clothing
- Holistic healthcare and dental clinic
- Childcare and mentoring programs

Gardens for Grand Rapids. On Facebook.
- Free raised garden beds for food insecure families.

Michigan State University Extension
- Soil Testing Kits. Responds with custom fertilization program, http://www.msusoiltest.com
- Master Gardener Hotline: Need quick advice? Call 888-678-3464.

Oakdale Neighbors Community Garden oakdaleneighbors.org

Do you know of other community resources?

SOUTH EAST AREA FARMERS' MARKET

11 a.m.—4 p.m. Saturdays
July through mid-November

MLK Jr. Park (July & Aug.)
Joe Taylor Park (Sept.-Nov.)

For information, visit www.OKTjustice.org/farmersmarket/

Freezing Vegetables

To freeze most fresh vegetables, simply blanche and bag.
1. Wash and slice into pieces as desired.
2. Drop into boiling water. Blanche for two minutes after water returns to boil.
3. Using a colander with a handle, remove vegetable. Drain well or use a salad spinner.
4. Put in freezer bags, burp bags, label and freeze.

Special cases
- Green beans: After blanching, lay on dish towel to dry; pat dry before bagging.
- Eggplant: Slice. Soak for 15 minutes in salt water. Grill both sides on stovetop griddle or grill. Bag and freeze.
- Zucchini/summer squash for breads: Blanche. Process in blender/food processor. Bag and freeze.
- Herbs. For stir fries, sauces and soups, chop and mix with olive oil. Freeze in muffin pan. Remove to freezer bags.
- Winter squash. Cut in half. Bake flesh-down at 350° 1 hr. or until tender. Scoop flesh out. Mash if desired. Bag and freeze.

Oven Roasted Tomatoes

Too many tomatoes or cherry tomatoes? Here's an easy way to preserve them in the freezer. You can use the oven roasted tomatoes on pastas, pizza or as a base for sauces.

Ingredients:
- Tomatoes, washed.
- Fresh herbs (basil, oregano, sage, parsley, cilantro, garlic etc.)
- Olive oil.

1. Slice tomatoes uniformly (cut cherry tomatoes in half). Put in large bowl.
2. Chop herbs of your choice . Add to tomatoes in bowl.
3. Toss with enough olive oil to coat well. Salt to taste.
4. Oil baking sheet with more olive oil. Spread mixture thinly on pan.
5. Bake at 350° for 1 hour or until slightly caramelized—keep an eye on them so they don't over-bake.
6. Use a spatula to remove tomatoes to freezer bags.
7. Burp bags and freeze.

The Air We Breathe

According to the 2018 *Neighborhood Environmental Action Report: Health, Environment and Race in Grand Rapids*, "Kent County has the highest average particulate air pollution in the state of Michigan outside of greater Detroit … the disproportionate impact of poor air quality on low-income residents." Like most US cities, the neighborhoods experiencing the most air pollution her are populated by people of color. That's why air pollution is not just a public health concern but also an environmental justice issue.

Monitoring air quality

The Grand Rapids Air Quality (GRAQ) Initiative, a collaboration among the City of Grand Rapids, Seamless, Start Garden, and Breezometer, is seeking to collect high-resolution air quality data in Grand Rapids' neighborhoods. Thirty wi-fi connected sensors are being located throughout the City. The Environmental Protection Agency has only one site in the City so its reports on air quality do not provide a full picture.

The Initiative reports, "GRAQ sensors will measure four pollut-ants: ground level ozone (O3), airborne par-ticulate matter (PM2.5 and smaller), nitrogen dioxide (NO2), and sulfur dioxide (SO2). These pollutants have different effects on human health and, in combination, give a useful snapshot of air pollution levels at a given time and location. Especially exciting about this system's design is the ability to take samples every 15 minutes. The City should be able to develop a much more sophisticated under-standing of air quality with this level of data ."

Foods that Soothe Asthma

The American Lung Association states that foods you eat can affect how well you breathe. And, foods high in Vitamins D and E can be helpful in improving breathing and reducing symptoms of asthma, allergies, and COPD.

Vitamin D boosts immune system response and helps reduce airway inflammation. Low levels of vitamin D have been linked to increased risk of asthma attacks in children and adults. Food sources of vitamin D include fortified milks, salmon, orange juice, eggs and mushrooms.

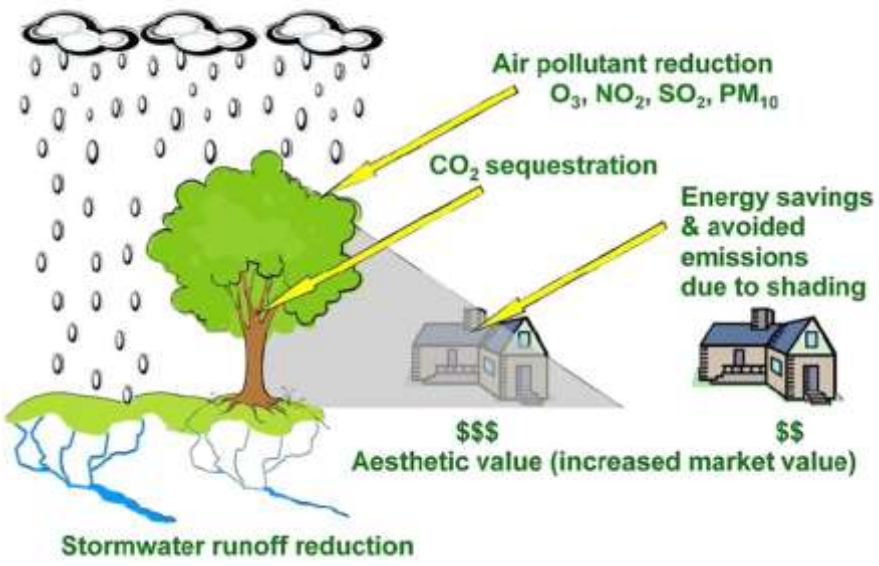
Vitamin E may help decrease coughing or wheezing. Find it in collard greens, Swiss chard, mustard greens, kale, broccoli , almonds, raw seeds and hazelnuts.

Other studies have found these foods to be helpful:

- **Beans** (legumes) like black eyed peas, pinto beans, adzuki beans, garbanzos, kidney beans etc. are prebiotics that help your gut support immune response.
- **Berries** like blueberries, cherries, strawberries, blackberries, and raspberries help fight inflammation.
- **Leafy greens** like collards, turnip greens, Swiss chard, mustard greens, kale and spinach contain folate (a B vitamin). One study found that kids who don't get enough folate and vitamin D are about eight times more likely to have severe asthma attacks than kids who ate enough of both nutrients.
- **Tomatoes**, specifically tomato juice, might help relax airways.
- **Ginger root and turmeric** may also help relax the airways. Add ginger to stir-fry, soup, or brew tea from grated fresh ginger, simmered for 20 minutes. This is why folks buy ginger ale when they are sick. Too bad the soft drinks at the grocery store no longer have any real ginger in them! Turmeric is a great addition when you cook rice or middle eastern dishes—or add it some warm milk or hot cocoa.

The good news is that these foods don't cost a lot and many of them you can grow in your own garden!

Your Daily Dose of Vitamin Tree



Trees clean the air we breathe—they literally store pollution in their wood! Because they take up ozone, nitrogen oxide, and particulate matter from the atmosphere, they make the air we breathe cleaner and help reduce allergies and asthma. Do you have allergies to certain flowering tree pollens? When an area has plenty of trees—hence less carbon dioxide in the air around them—they release less pollen from their flowers.

Friends of Grand Rapids Parks takes improved air quality into account as a benefit for increasing the number of trees planted in any given area. Trees provide a host of environmental, social, and economic benefits in urban areas. Science has proven that trees reduce pollution, improve mental health, and lower energy costs.

FGRP adds that air quality is only one of many benefits that trees create. The sheer presence of green infrastructure has been found to improve both physical and mental health and well-being.

The City of Grand Rapids is planting roughly 5,000 trees annually—and between 750-1,000 in areas that lack in overall tree canopy, especially in the City's southeast and southwest neighborhoods. Because of traffic volume and industries located nearby and within, these neighborhoods have more pollution. Planting trees can directly reduce the negative health impacts that these cause.

Trees as a valuable infrastructure
Did you know that a single street tree returns over $90,000 of direct benefits during its lifetime? Here are some more benefits our trees provide:

- **Living near trees can reduce blood pressure and improve psychological health.**
- Trees reduce storm water run-off and flooding. They absorb the first 30% of most precipitation through their leaf system—this moisture never hits the ground. and another 30% more through their roots.
- **Trees have a calming and healing effect on ADHD adults and teens.**
- Realtors estimated that neighborhoods with street trees see a $15-25,000 increase in home value.
- **Urban street trees create safer walking environments.**
- Trees extend the life of pavement they shade by 40-60%.
- **Trees increase security by creating more pleasant walking environments, increasing care of place and actual ownership and surveillance of homes and blocks.**
- Trees protect you from rain, sun and heat . A healthy tree canopy reduces temperatures on hot summer days by five to fifteen degrees.
- **Trees reduce road rage.**
- Trees can reduce annual energy bills for a household from 15-35%. In winter, evergreens can reduce wind and home heat loss by 10 to 50%.
- **Trees absorb and block noise by up to 40% and reduce glare.**
- Trees provide a canopy, root structure and setting for important insect and bacterial life below the surface and lofty environments for birds and squirrels.
- **One large tree can supply a day's supply of oxygen for four people.**

Sources:
iTree, https://www.itreetools.org/
https://www.bluezones.com/2018/09/22-reasons-trees-in-cities-keep-us-healthy-and-save-us-money/

Grow Soil not Waste! Composting

What is compost? The term "compost" is overused and not clearly defined by those using it. Commercial industries, backyard gardeners and community gardens say that they are composting but that's not always the case. Commercial compost you buy at the garden shop or big box store is not regulated—and can even contain toxic industrial wastes.

True composting results in fluffy humus that's rich in carbon. While similar to potting soil in texture and color, it is much healthier for your garden.

Why is compost important? Food apartheid is alive and well in Grand Rapids. Income challenged neighborhoods, most often neighborhoods of color, have limited access to healthy, affordable foods. Growing food is one way these neighbors can introduce more healthy foods into their diets. Because many of these same neighborhoods have toxic levels of lead in the soil, growing food should be done in containers or raised beds with new soil brought it. Healthy, living, chemical-free soil that can support food plants is expensive. Composting soil is an easy and sustainable way to reduce this expense.

The City of Grand Rapids allowed residents to legally compost soil in 2013. However, OKT believes the rules are too strict. Many residents, can not afford the required commercial compost bin, especially those in food insecure neighborhoods where composting and food growing would have the greatest impact. And, while private firms have been allowed to do curbside composting for residents, OKT would like to see these for-profit ventures return composted soil to those neighbors needing it most.

What should go into your compost pile and what shouldn't

YES	No
• Fruits • Vegetables • Ground egg shells • Cereal • Bread and grains • Coffee grounds and filters • Paper • Leaves (except oak) • Grass	• Excess citrus • Meat or fish • Oils or oily scraps • Dairy • Feces • Fats

Composting with worms

Vermicomposting, composting with worms, uses live worms to break down food scraps. The worms eat the scraps and excrete them as worm castings, creating a very nutrient-rich, living soil. Mother Earth has been using vermicomposting for eons!

To build your worm bin, you will need:

- One, 8- to 10-gallon clean plastic bin (not see through)
- Newspapers, 50 pages (no colored print) for bedding
- 2 to 4 cups of potting soil
- 1 lb. red wriggler worms
- Drill and bits, ¼ " and 1/16"
- Fruit and vegetable scraps

Drill 20 to 30 ¼' holes on the bottom of the bin for drainage and migration. Drill 30 to 40, 1/6" holes one-inch apart along the top edge of the bin and another 30, 1/6" holes on the lid for ventilation.

Fill your bin and add the worms!

- Add water to newspaper strips until they feel like a damp sponge.
- Fill ¾ of the bin with wet newspaper strips, making sure bedding is fluffy.
- Sprinkle potting soil in bin.

Lead Poisoning:
Beyond Paint and Individual Behavior

Did you know that high levels of toxic lead and arsenic are prevalent in Grand Rapids' Baxter, SECA/Southtown, Garfield Park and Eastown neighborhoods? Their presence is a legacy issue. These areas once were home to fruit orchards. In those days, farmers sprayed their fruit trees with the pesticide lead arsenate.

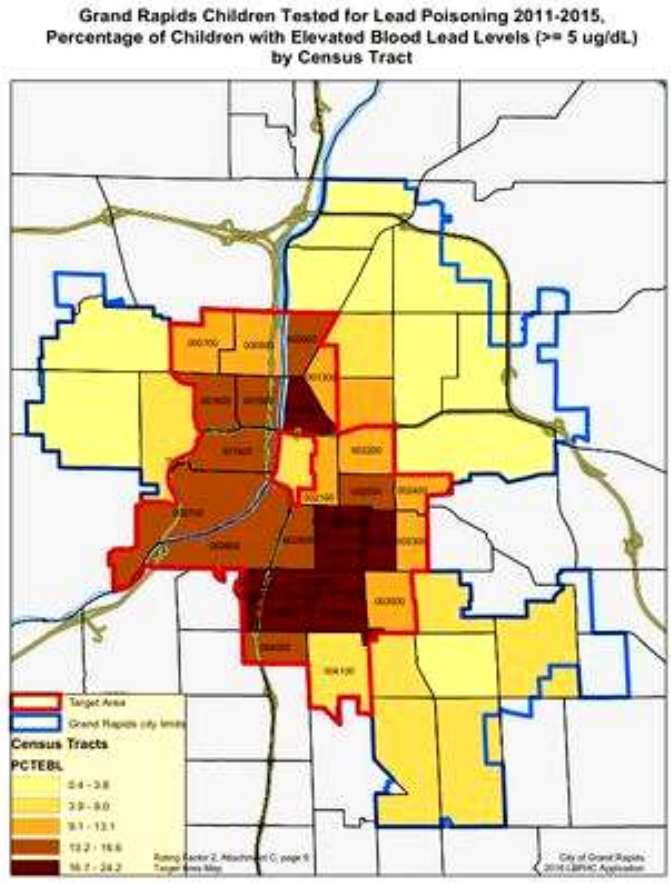
In addition, older housing stock was painted with lead based paints and, prior to the mandate for lead-free gasoline, vehicle emissions settling on the ground compounded the problem.

Because lead paint is most often considered the cause of lead poisoning, when a child screens positive, their parents or caregivers are held accountable and instructed on how to minimize exposure indoors. However, more attention needs to be paid to exposure in the soil.

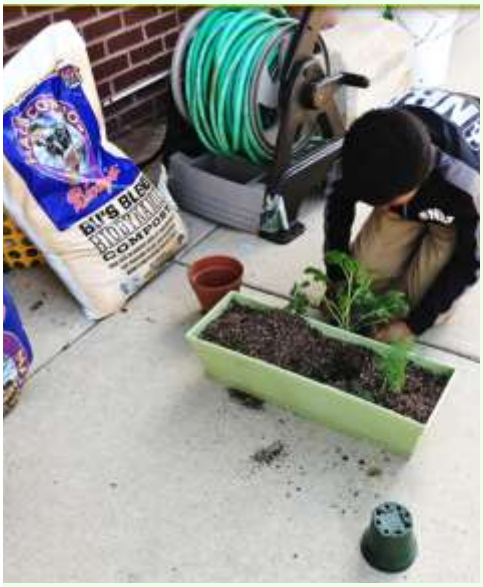
Soil testing and covering lead-contaminated soil with wood chips to keep lead out of children's bodies are important steps in lowering lead poisoning.

Biochemist Clinton Boyd PhD performed soil testing for Our Kitchen Table's farmers market vendors and yard gardeners involved in its Food Diversity Project. Boyd sees contaminated soil as particularly dangerous to families with young children who are gardening. Digging in the dirt puts the hands in contact with the toxins.

Even when container gardens are used, kneeling in or walking through the contaminated soil can track it back into the home where it may be ingested.



Lead poisoning causes a wide range of neurological problems especially in children: seizures, learning disabilities, behavior problems and more. Before you or your children dig or play in the dirt, consider having your yard professionally tested for lead and arsenic.
While agencies like Healthy Home Coalition provide resources for residents of lead contaminated homes to clean up their indoor environments, not much is available to clean up lead and arsenic based soils found in yards.



Keep Killer Chemicals Out of Your Yard and Garden

Chemicals like the glyphosates in RoundUp and 2,4D in Scott's Weed and Feed are linked to cancers and neurological disorders.

The Organic Consumers Association reports: "An analysis of the most popular lawn and garden pesticides shows more than half of the products include ingredients classified by the EPA or the World Health Organization as possible carcinogens, one-third contain known or suspected endocrine disruptors, and more than a quarter contain reproductive toxins.
Over 40% of the most commonly used lawn and garden pesticides are banned in other countries, yet U.S. homeowners annually apply 90 million pounds of these types of pesticides to gardens and lawns where children frequently play.

Homeowners apply three times more pesticides per acre to their lawns than farmers apply to agricultural crops. An EPA study found that lawn pesticides are easily tracked indoors and exist in the carpet and flooring for years.

Grand Rapids Public Schools: A Leader in Sustainability

Grand Rapids Public Schools has made a strong commitment to pursue sustainability in both district operations and in the classroom. District leadership understand that sustainability initiatives both reduce the District's impact on the environment and frequently result in significant cost savings. These initiatives transform buildings into models that teach sustainability practices to students.

The GRPS Board of Education district sustainability policies demonstrate a commitment to sustainability and supports staff efforts to green district operations. The Center for Green Schools at the U.S. Green Building Council selected GRPS as the fifth district nationwide to host a Green Schools Fellow, now the district Sustainability Coordinator, Kristen Trovillion. She collaborates with leadership and staff to bring sustainable and environmentally responsible practices into schools. She also works to reduce environmental impacts of district operations, improve student health and performance, and achieve environmental literacy.

Green Cleaning.
A district-wide inventory found that schools were using a total of 65 cleaning chemicals, many of them toxic. That number has been reduced to six safe products that are equally effective. Hydrogen-peroxide based cleaners kill just as many germs as bleach—and without the dangerous side effects. Did you know that exposure to bleach impacts the respiratory system? It can bring on more asthma attacks or prolong respiratory illness.

In 2015, the Green Cleaning Team eliminated disposable wipes and white rags, replacing them with reusable microfiber cleaning cloths, eliminating a significant portion of daily cleaning waste and saving over $100,000 annually. The Team identifies green replacements for common classroom chemicals and educates students and staff on healthier alternatives.

Sustainable Sites
Trovillion attends the Mayor's Urban Forestry Committee (UFC) to discuss the overall status and health of Grand Rapids' trees, expand the City's tree canopy, promote best practices of tree management, and educate residents on trees' value and care . To date, GRPS students have planted over 220 trees at 18 schools.

In addition to tree plantings and the green schoolyards initiative, the GRPS community has installed rain and pollinator gardens at six schools.

Overall, GRPS does not use toxic pesticides or herbicides and is switching over to organic lawn management. Kristen noted that they only use toxic herbicides or pesticides in urgent situations, e.g. with invasive species like poison ivy. When they are used, notices are posted on the school's front doors and elsewhere.

Green Schoolyards and Gardens
In spring 2018, the Wege Foundation generously awarded GRPS and its the City of Grand Rapids a $700,000 grant to support the design, construction, and activation of green schoolyard spaces at five schools.

An inventory of all gardens at Grand Rapids Public schools is noting whether they are food gardens, pollinator gardens, or other kinds of gardens. This information will help the district see what goes into a successful garden and to better communicate with grounds staff, who sometimes inadvertently damage gardens during routine maintenance.

Energy
Utility Benchmarking During 18-19, GRPS continued to partner with WegoWise to simplify and expedite utility data management for the District. Utilizing cloud-based software, WegoWise automatically imports gas, water, and electricity data for each of the District's buildings and accounts. This support greatly reduces staff time spent reviewing and entering utility bill data.

GRPS staff use WegoWise to evaluate historical utility usage and trends by building and across the District, as well as, track and verify expected energy savings from completed retrofits.

Community Initiatives
GRPS participates in and supports key community sustainability initiatives. As a founding member of the Grand Rapids 2030 District, the District has committed to a shared goal of reducing energy and water usage by 2030. In addition, GRPS has signed on to participate in the

Michigan Battle of the Buildings, a regional contest to reduce energy consumption in commercial and institutional buildings. Tracking progress in these initiatives is facilitated with the implementation of the District's utility benchmarking software.

Green Revolving Fund

With the amendment of Board Policy #4060, the Board of Education established the district's Green Revolving Fund (GRF) in the spring of 2018. A GRF is an internal fund that finances energy efficiency, renewable energy, and other sustainability projects that generate cost savings. A GRF provides the initial funding for the project and the project's savings revolve back into the fund. In this way, a GRF is continually replenished and able to fund future projects. Typical GRF projects include lighting retrofits, boiler replacements, and the installation of water efficiency measures.

Initial seed funding for the GRF was provided by an interest-free loan from the Michigan Saves program. In addition, Consumers Energy, through their GRF Pilot Program, partnered with GRPS to make the first 12 payments on the loan. For the first project, the GRF funded an LED lighting upgrade at Mulick Elementary.

Recycling

In 2016, Facilities rolled out a district-wide, single-stream recycling program in every classroom, office, and workroom across the district. To ensure long-term success of the program, the district partnered with Kent County to design clear, replicable signage that reflects recycling signage commonly seen throughout public spaces in West Michigan.

Field trips were arranged to the Kent County Recycling Center and the district hosted guest speakers at several schools, as well as, held recycling-themed assemblies to teach students about waste disposal steps. Composting In addition to recycling, composting takes place at seven schools across the District, an initiative that Facilities and Nutrition Services staff implemented in 2014. Students and staff at Innovation Central High School, City Middle/High School, CA Frost Elementary, CA Frost High/Middle, GR Montessori, Congress Elementary and Coit Creative Arts Academy have made a significant change in how they dispose of lunchtime trash. Students are now able to compost or recycle nearly all their lunch waste.

As part of this initiative, the district has switched the school's lunch trays from polystyrene to compostable trays, removed unnecessary side dish and a la carte containers, and changed to compostable garbage bags.

80% of GRPS waste is generated in the lunchrooms. Four or five schools are composting a little bit of that waste in the classroom with the help of local Grand Rapids' compost company, Wormies, and some resident red worms. Eight schools are composting food waste, compostable lunch trays and napkins via a commercial company located in Zeeland. GRPS has to pay to have waste hauled to Zeeland. They are looking into introducing reusable trays at schools with dishwashers, but most schools are not set up for these. To date, GRPS has composted over 780 tons of organic waste and diverted over 1.29 million trays from the landfill.

Through the composting program, GRPS has diverted 1,578,600 lbs. of lunchroom waste from the landfill and incinerator over four years. Through a partnership with West Michigan Environmental Action Council (WMEAC) and Kent County Recycling Center, interested teachers are able to choose from a menu of offerings designed to connect the district's recycling initiative with student learning.

Teachers interested in providing their students a project-based learning in waste audits can show students the quantity of trash that is actually recyclable, how much waste is diverted through recycling efforts, and what contaminants (nonrecyclables) are common in the recycling stream.

Photos courtesy GRPS

As an advocate for environmental justice, OKT is proud to partner with GRPS in our Program for Growth at Martin Luther King Jr. Middle School!

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Grand Rapids Environmental Justice Collaborative

2018 Neighborhood Environmental Action Report:
Health, Environment and Race in Grand Rapids

Lifestyles Nutrition Services

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Our Kitchen Table

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OKTjustice.org