

Living Green Quarterly

June 2023



Sentinel believes that sustainability – or living “green” – is at the heart of protecting our future. Working together we can find the fun in being Green.

GREEN vs. GREEN

Which fun fact will you show off at the next dinner party?

ORIGIN OF GREENHOUSE:

The first modern greenhouses were built in Italy in the 16th century to house the exotic plants that explorers brought back from the tropics. They were originally called “giardini botanici” or botanical gardens.

Source: [New World Encyclopedia](#)

There is more carbon dioxide in the atmosphere now than at any time in at least four million years, National Oceanic and Atmospheric Administration officials said.

Source: [NYTimes](#)

The ⚡Shocking⚡ History of Electric Cars

By Skye Randazzo



The road to the modern-day electric car is long and windy. In fact, it's difficult to know which inventor or even which country originated the electric car, but after the electric motor was created in the early 1800s, innovators from Scotland to the Netherlands, and the US to Hungary, were delving in to create some of the first small-scale electric carriages and cars. In the US, it was around 1890 that the chemist William Morrison debuted the first successful six-passenger electric car to Americans to great popularity.

It's true, the electric car had its glory day in the late 19th century, far outpacing the steam car, which could take up to 45 minutes to start up, as well as the gasoline car, which had to be crank started and needed Hulk muscles to shift the gear. Meanwhile, the electric car was quiet, easy to drive and didn't emit a smelly pollutant. Its popularity, however, is one of the reasons for its downfall. Everyone from Henry Ford (who partnered with Thomas Edison) to Ferdinand Porsche were looking to monetize their version of the electric car, and they put a hefty price tag on their vehicles. This enabled the burgeoning middle class to choose Henry Ford's assembly line produced Model-T that was more than half the price, and with technological advancements, like the electric starter, it was easier to drive. Combine this with the new roadways spanning the country, the discovery of Texas crude oil producing cheap gas and gas companies pouring money into building filling stations across the country, the gasoline-fueled car became king of the road.

Electric cars couldn't go very far and with a lack of electric car charging stations car makers all but gave up on the electric car.

Fast forward to the 21st century, and we are on the precipice of an electric vehicle revolution and possibly the new “king of the road.” Investment bank UBS estimates that by 2025, at least 20% of all new cars sold globally will be electric. Meanwhile, global sales of electric cars rose by 43% in 2020, to a total of 3.2 million, despite an overall car sales slump by about 20% during COVID-19. Car companies are looking ahead as well; GM, Jaguar, Volvo, Lotus and Volkswagen plan to be all electric, or mostly electric, between the years 2025–2030 and every Ford sold in Europe will be exclusively electric by 2035, aiming to have 50% of sales in America by 2030. Fortunately, this will be attainable due to the 500,000 charging stations being built throughout the country in designated “alternative fuel corridors” along approximately 165,722 miles of the National Highway System, and there is a reserve of funds set aside to add needed additional stations. Tesla, Inc. also has opened their car charging stations for all makes of electric vehicles, which helps facilitate this administration's ability to spread the alternative fuel corridors where they are really needed.

This is all great news, and will lower the carbon pollution dramatically. If or when your current automobile needs to be replaced, or if you are looking to purchase your first car, the future looks to be electric.

Sustainability Spotlight

By Karen O'Brien



April Angell
Glenbrook Manager

What does sustainability mean to you?

What sustainability means to me is living a lifestyle where we preserve our earth's natural resources by maintaining them for the prosperity of future generations.

How do you encourage residents to live an environmentally conscious lifestyle?

There are several ways that we encourage residents to live an environmentally conscious lifestyle. From the day they move in, we offer reusable grocery bags and reusable water bottles. We also encourage everyone to participate in our onsite recycling program. In addition, we invite all residents to participate with our staff in events that involve improving our community. Some of those things include volunteering with Habitat for Humanity, participating in beautification of our local parks, food drives, toy donation drives and offering plants to start their own indoor garden.

What made you decide to become a more environmentally conscious individual?

Realizing the impact of items, such as plastics, can be monumental on the environment. For instance, plastic bags are usually not biodegradable. Once they end up in a landfill or trapped in waterways, they stay there for centuries and pollute our water and soil. We all can take steps that will make a huge impact on our natural resources. If this year everyone decides not to use plastic bags, think of the impact that would have on our planet. We only have one earth, and we must take care of it for our future generations.



The Dawn of the Solar Era

By Eirene Tsakales

The history of solar energy dates to 1883 when American inventor Charles Fritts developed the first solar cell, using selenium as a semiconductor. It was the first instance of successful conversion of sunlight into electricity and in 1884 it allowed for the first rooftop solar array installation in New York City. Unfortunately, the industrial revolution was booming, and the use of selenium was expensive. Additionally, the 1884 invention of the fossil-fuel burning steam turbine was both cheaper and produced more energy. This caused solar to be largely ignored for decades, until the dawn of the space race when the first solar-powered satellites propelled into space in 1958. 65 years later, they are standing the test of time and are still in effect today.

Through the years, solar power has been the most abundant renewable energy source and has some of the most exciting renovations that make the future of solar energy so bright.

The Future of Solar: Scientists are working on developing solar panels that are more efficient and cost effective. These innovative panels can work after the sun sets and in inclement weather. As day turns to night, one of the panels is designed to generate power with the temperature difference as it cools. Another solar panel is designed to use friction to convert into energy in a downpour. Both developments enjoy continuous energy being created.

Solar Paint: There are three revolutionary innovations that are classified as solar paints that are trying to revolutionize how we obtain solar energy. The first type absorbs moisture from the air and uses solar energy to break it down into hydrogen and oxygen particles. The hydrogen is then used to produce clean energy. The second type of paint uses nanoscale semiconductors that capture and turn light into an electric current. The third type is spray-on solar cells utilizing perovskites to harness the sunlight and turn it into energy.

Solar Roadways: This includes using tempered glass panels with LED lights to replace driveways, roadways and highways. It is calculated that solar roadways could create over 14.5 trillion kilowatt-hours of electricity per year, producing over three times the electricity currently used in the US. Fortunately, these panels have so much more to offer than just producing electricity. First, they are easily replaceable, making potholes obsolete. Second, they can maintain a temperature a few degrees above freezing, eliminating icy roads and black ice. Third, they can filter storm water. Finally, with the use of the LED lights, they can alert a motorist of something ahead, making the roads safer. There are 18 miles of solar roadway on the Anderson Memorial Highway in Georgia dedicated to testing the highway of the future.

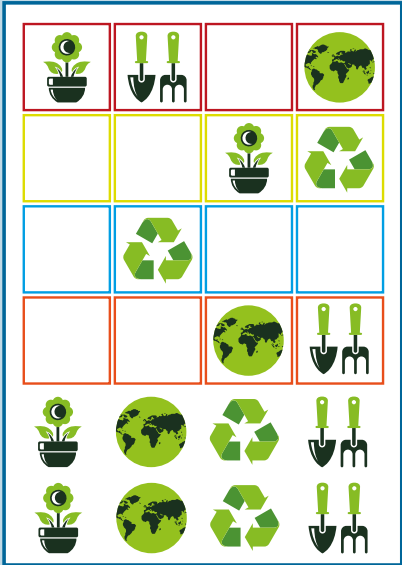
Solar Windows: Perfect for skyscrapers and homes alike, solar windows have built-in solar panels that feature photovoltaic glazing with solar cells, which converts sunlight into electricity.

Solar Cars: We will see internal combustion engine cars start to fade as the electric car gets increasingly popular and we are introduced to the solar car. There is currently a Dutch startup starting production on solar cars that plans to offer their version to the public as soon as summer 2023. Though it will be at a high price point, it will be a steppingstone for future solar and solar hybrid cars that will reduce the need for both gas and charging stations.

It's an exciting time for solar. With the modernizations and revolutions in harnessing the sun, soon we will have no excuse to rely on natural gas, coal and oil that pollute the planet.

Earth Day Sudoku

Make sure no image is repeated in a row, a column or a square.



An Exciting Earth Day at



By Rachel Mayfield

The property management team at Urban Green Apartments went above and beyond this year, hosting a clubhouse carnival for Earth Day. To incorporate fun with learning, the team invited the Urban Green Apartments' residents to participate and play games that teach sustainable best practices, with games like:

- Plant a Herb or Flower
- Keep or Toss - Recycling vs Trash Game
- Earth Day Scavenger Hunt
- Sign Our Go Green Promise & Spin Our Wheel - with all eco-friendly prizes
- Make a Vegan Dirt Dessert



Natural Ways to Get Pests to Stop Bugging You

By Eirene Tsakales and Skye Randazzo

In the summer we welcome the sun, BBQs, beach days, hiking trips and outdoor picnics. However, the warmer weather brings some natural, but unwanted, creepy crawlies during outdoor activities. Unfortunately, insect repellants can cause rashes, eye and skin irritation, headaches, coughing and respiratory irritation, nausea and stomach and digestive irritation. If you are one of the many people with sensitivities to bug sprays, below are some natural ways to keep insects at bay.

Take a Hike: Getting outside after being indoors through the winter and during the inclement weather of spring may just be what the doctor ordered. Unfortunately, those warm days in the woods can be filled with mosquitos and ticks. Mosquitos hate citronella, lemon eucalyptus, basil and garlic, while ticks avoid lemon eucalyptus and geranium. Finding your favorite potent potion can be an experimentation of your favorite scents. The easiest concoction to create for a perfect hike is a refillable spray bottle with ¼ cup of coconut oil (warmed into a clear liquid) and a teaspoon of lemon eucalyptus. Just spray and enjoy the fresh air and sights! The spray is also useful for days by the water and should be reapplied every hour or as needed.

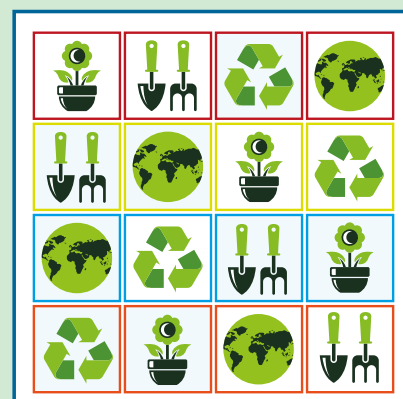
Party Thyme: Whether it's a summer BBQ, a 4th of July party or an outdoor summer wedding, when there is a gathering of people there are going to be some uninvited guests that won't "buzz off." A great way to avoid these party crashers is to make a lovely and easy centerpiece with some of your favorite herbs and scents. All you need is a quart-sized mason jar or cylindrical vase, three to four slices of lemon, five to ten sprigs of lavender, four to five sprigs of rosemary, 40 drops of lavender essential oil, water and a floating candle. Pro tip for even more protection, make the floating candle lavender or lemon grass scented. Of course, the larger the space, the more centerpieces you will need to make, but with how beautiful these are to look at and smell, it is sure to be a hit at your next gathering.

Picnics without the ANTics: Cinnamon and cloves are true treasures of nature and have been found to deter ants, roaches and even moths from invading your food and space. Their strong smell, though a delightful aroma to us, is dreadful to ants. Just place a few cinnamon sticks and cloves in a mesh bag and add it to your picnic basket to keep ants out. To ensure an ant-free experience, have a few sachets of spices and place them around your blanket.



The Original Web Designers: Spiders are helpful to those wanting to lounge on their balcony or patio without the constant buzzing of mosquitoes, flies and no-see-ums. Spiders do the work for you, and often love to hang out in the corners of the patio space. However, if you prefer that these arachnids leave the premises, apply a little peppermint oil around the area. Fill a spray bottle with water and ten to 15 drops of peppermint essential oil, and spray anywhere you would find a spider; spiders hate the smell and will be motivated to leave. Peppermint can be toxic if sprayed directly on a spider, which can be easily avoided.

SUDOKU ANSWER



Local and Seasonal Eating

By Skye Randazzo

Today, supermarkets provide a diverse array of food at any time of the year. Unfortunately, sourcing food from all over the world that is neither local nor seasonal can have a negative environmental impact; transportation alone is a large contributor of pollution to our air and waterways and adds to our dependency on fossil fuels. The food provided has diminished nutritional value because it is picked prematurely and produced with chemicals to survive the long journey from overseas.

To help lower our carbon footprint, support your nearest farmers markets that offer fresh, local and seasonal produce. Our Ratatouille recipe showcases a way to create a dish with many ingredients found at your local green market; eggplant, zucchini, yellow squash, yellow onions, garlic, thyme, tomatoes, bell pepper and basil are just a portion of summer's amazingly fresh flavor profile.



Ratatouille



Ingredients

7tbs	olive oil, divided plus more for serving	1	medium size yellow onion, diced
1lb	tomatoes (3-4 medium size), large dice	5	cloves garlic, minced
		4	sprigs fresh thyme
1	large eggplant, large dice	3	bay leaves
1	large bell pepper, large dice	¼cup	loosely packed fresh basil leaves, thinly sliced, plus more for serving
2	green zucchini, medium dice	•	Kosher salt to taste
2	yellow squash, medium dice	•	Freshly ground black pepper

Directions

- 1) Heat 2 tablespoons of olive oil in a large Dutch oven or heavy-bottomed pot over medium-high heat until shimmering. Add the eggplant, season generously with salt and pepper, and cook, stirring occasionally, until golden brown (about 2 minutes). Transfer to a large bowl.
- 2) Add 2 tablespoons of olive oil to the pot. Add the zucchini, season generously with salt and pepper, and cook, stirring occasionally, until browned in spots (about 2 minutes). Transfer to the bowl with the eggplant.
- 3) Reduce the heat to medium. Add the remaining 1 tablespoon of olive oil and the onion, season with salt and pepper, and cook, stirring occasionally, until softened and just beginning to brown (about 6 to 8 minutes). Add the garlic, thyme, and bay leaves and cook until fragrant (about 30 seconds). Add the tomatoes and bell peppers, then add the reserved eggplant and zucchini and gently stir to combine.
- 4) Bring to a simmer, then turn down the heat to medium-low. Simmer, stirring occasionally, for at least 20 minutes or up to 1 1/2 hours. A shorter cooking time will leave the vegetables in larger, more distinct pieces; longer cooking times will break the vegetables down into a silky stew.
- 5) Remove the bay leaves and thyme sprigs. Just before serving, stir in the basil. Taste and season with salt and pepper as needed. To serve, sprinkle each serving with more basil and drizzle with more olive oil.

Source: Justina Chabli's recipes