



virtus semper viridis

The VILLEage Green



Lawrenceville's Sustainability Newsletter...For our community and for the Earth

Winter 2021-22 | Volume 6

Winter Edition: L'ville and Beyond



Lawrenceville returned strong this fall, and campus looked more normal as Covid-19 restrictions relaxed. The Sustainability Council has had a similarly strong comeback this year, working with its largest-ever group of students. Events outside Lawrenceville's gates have also initiated great change: recent examples include the UN Climate Change Conference (COP26) in Glasgow and the release of the Sixth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC). In this edition of The VILLEage Green, the Sustainability Council shares both **a summary of the Council's work this past Fall Term and a survey of some recent global developments and news in sustainability.** Moving forward, the Council hopes to further involve students and the broader school community in sustainability-related discussions and Lawrenceville's zero-waste and zero-emissions initiatives.

1 Report on Sustainability @ L'ville by StuCo Sustainability Rep Michael Sotirescu '22

This year, as part of the Student Council's initiative to standardize House Council positions across all Circle, Crescent, and Lower Houses, every House on campus (including V Form Houses) now have Sustainability Representatives. Each House's Sustainability Representative is a dedicated member of the Sustainability Council and is in a position to spearhead initiatives specifically for their own house and for the Council at large.





On September 19, the Sustainability Council, along with the Food Committee and Outdoor Programs, visited the [Double Brook Farm](#), a sustainable meat and vegetable farm in Hopewell, New Jersey. On the tour, students met farm owner Jon McConaughy and learned about regenerative farming practices. Moving forward, we plan on providing more opportunities to visit and engage with other local organizations with commitments to sustainability.

We launched the Zero-Waste Initiative, which seeks to reduce waste and raise awareness across campus, rather than simply relying on recycling. As the first part of this initiative, we introduced refillable dry-erase markers into the academic departments and the library to propose as an alternative to wasteful EXPO brand markers, which are discarded after they die out. We also launched the ongoing Zero-Waste Competition, in which each House Sustainability Representative is responsible for collaborating with members in the house to build a proposal—including a summary, the benefits, and implementation plans—for one zero-waste idea. During the first few weeks of the winter term, the Leadership Committee will review each house's proposal for a zero-waste idea and work to actualize the most promising proposals.

The Sustainability Council also began working on launching the Green Revolving Fund (GRF). The GRF will serve as a community-based source of capital to address environmentally-focused infrastructure improvements (e.g., water and electricity meters, EV charging stations, and electric lawn care equipment) on campus. The structure of the GRF will allow for more efficiency than one-time investments that may similarly fund infrastructure improvements, and more transparency, so the school community can track the GRF's production and progress. During the fall, members of the Leadership Committee met with Lawrenceville Chief Financial Officer Mr. Ben Hammond P'23 '25 and Harkness Travel Director Mr. John Hughes to discuss the GRF. Stay tuned for more updates on this front.

Photo Credit: Lawrenceville Explorations Council



Letter to the Editor: Why Sustainability is about More than Recycling

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For a majority of the past half century, recycling has been seen as a default solution to the excess waste that we produce. The process is simple: we put plastics,

Recycling is Not Equal to Sustainability

glass, and paper into a bin, and the material is remade into usable products. However, according to the United States Environmental Protection Agency, roughly twenty-seven percent of the glass and only nine percent of the plastic actually gets recycled. The rest of our waste ends up in landfills and major water bodies, just like the bulk of our garbage. Clearly, the system of recycling cannot be the only sustainable solution at current recycling rates.

Luckily, there is a more sustainable resolution that attempts to reduce waste production in all stages of excess material: going zero waste. The philosophy of zero waste is described by the Zero Waste International Alliance as “the conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threatens the environment or human health.” Zero waste supporters look to reduce waste that ends up in landfills as a result of inefficient recycling by diminishing waste produced during initial production. For example, industries would produce already-reusable products, so no additional waste would be left. Zero waste also sees all waste already in landfills or water bodies as resources to use later. However, the priority is to reduce the amount of waste in all aspects and stages of waste production.

Lawrenceville's Sustainability Council is recommending that the school implement zero waste principles wherever possible, which means implementing a variety of creative methods to achieve that target. So far, there have been small steps taken to eliminate forms of waste in Lawrenceville's daily life. The classic Expo markers used in class can only be used one time. Instead, Lawrenceville has replaced them with new markers that have refillable ink cartridges. The Sustainability Council has looked to reduce the amount of plastic bags used in the Jigger Store and to apply reusable Tupperware in dining halls. The Council even had a Zero-Waste Initiative competition in which students and faculty members could submit a proposal to limit the amount of waste produced on campus. This got more people involved in the push for sustainable solutions that benefit Lawrenceville's ecological and social communities.

As a large community, Lawrenceville must work together in order to create change for the long term. We have the ability to implement additional sustainability practices by recognizing that zero waste should be a goal wherever possible. Through hard work and social awareness, Lawrenceville can make a wave of environmental sustainability and inspire others to do so with our vast network.





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From the Fall Term: Invasive Species @ L'ville

This fall, New Jersey was flooded with these a species called the Spotted Lanternfly. The Spotted Lanternfly is a planthopper indigenous to parts of China, India, and Vietnam, and it has made its way to New Jersey, Pennsylvania, and New York. These bugs are red, black, gray, and covered with spots. People are advised to kill these insects when they see them to prevent damage to trees and other parts of our local ecosystem.



The spotted lanternfly causes serious damage such as leaf curling, oozing sap, and dieback in trees and other types of crops. In addition to plant damage, when spotted lanternflies feed, they excrete a sugary substance, called honeydew, that encourages the growth of black sooty mold.

Electronics towards Sustainability

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In 2019, experts announced an astonishing figure of 10 million tonnes of plastic present in the e-waste produced each year. Electronics production is a time bomb against sustainability, producing up to 50 million tonnes of e-waste and requiring mining of silicon, copper, aluminum as well as some rare earth elements. As the trend of digitalization goes on, it is certain that the situation will only aggravate without some intervention from tech companies or consumers.

In 2021, remarkable improvements have been observed in the industry. Big tech companies such as Apple, Microsoft, and Acer have developed products using recycled materials to promote sustainability.





Apple

The 24-inch iMac announced on April 30, 2021, has a cover made from low-carbon aluminum, recycled plastics, tin, and rare earth elements such as tungsten and steel. The change in the chip, which is now tailored-made for Mac, allows it to run energy efficiently. These improvements significantly decrease Mac's carbon footprint by 20 percent compared to the previous generation.

In addition, since 2018, Apple has had two disassembly robots, Daisy and Dave, for disassembling iPhone components and reusing some components and materials such as rare earth elements, in the production of next generation devices.

Microsoft

On September 22, 2021, Microsoft announced a new mouse, the first of its kind to promote sustainability. Its shell is made up of 20 percent of recycled plastic from oceans and waterways and comes in plastic-free packaging made of recyclable wood and sugarcane fibers. It also announced a free mail-in program, which allows customers to send their old mouse for recycling.



Acer

Now to today's sustainability winner: Acer's Aspire Vero Laptop. Announced on October 4, 2021, 30 percent of the plastic in the unpainted chassis is made from post-consumer recycled content (PCR), saving "up to 21 percent of CO2 emission." In addition, 50 percent of the plastic of the keyboard is made from PCR. The product is not only sustainable but also intends to raise awareness of sustainability. The R and E keys on the keyboard stand out in yellow, emphasizing the ideas of the 4R/3R (Reduce, Reuse, Recycle, Repurpose).



To summarize, tech companies have tried their best in promoting sustainability through their recycling programs and innovative products. As consumers, it is important that we support these initiatives such that companies may continue to invest their time and money in sustainability as we step into the era of digitalization. That being said, we must first prevent the production of electronic devices in the first place by keeping them in good condition. Only when they become faulty should we consider buying new, sustainable electronic products.

Sources: *BBC*, Electronics TakeBack Coalition, *The Verge*, Chemigraphic, Apple, Acer

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Sustainability at the Tokyo 2020 Summer Olympics

This year, Tokyo hosted the 2020 Summer Olympics from July 23 to August 8. The games were supposed to be held over the summer of 2020 but were postponed due to the Covid-19 pandemic, making it the first rescheduling of an Olympics Game ever.

In the past, the Olympics have aimed to be as sustainable as possible, with Sustainability becoming one of the three pillars of the Olympic Agenda in 2014 (alongside Credibility and Youth). According to a research study performed by Martin Müller at the University of Lausanne that quantized the sustainability points of each Olympic game, the 2002 Salt Lake City, 1992 Albertville, and 1992 Barcelona games were considered the most sustainable in their practices.

The study was unable to put Tokyo 2020 into consideration yet when it was published, but others have analyzed the most recent games. This year, the Tokyo Games aimed to be the “first-ever carbon-negative Olympics,” and they executed that by purchasing 150% of the needed carbon credits, which aim to reduce carbon emissions, as to balance out the carbon emissions that were produced during the games. The funds from the carbon credits went to local projects that aimed to reduce more carbon dioxide emissions than the Tokyo Games emitted.



Taking into consideration other factors, the Tokyo Games also tried to incorporate recycled or sustainable materials everywhere. For example, though some athletes claimed they were uncomfortable, all the beds were made of recycled cardboard; the podiums were made of recycled plastics that were collected from citizens all over Japan; the Olympic Torch was built with aluminum collected from temporary housing during the 2011 Tōhoku earthquake; and all the medals were made with melted metals from nearly 79,000 tonnes of recycled electronic devices. Sustainability was even integrated into the clothing the torchbearers wore, which was made from recycled Coca-Cola plastic bottles.

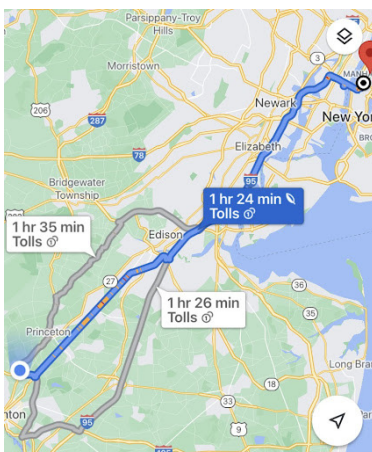
Not only were the materials the Games used incredibly focused on sustainability, but the committee also tried to reduce as much energy and space they took up as much as possible. In the 2020 Games, Tokyo took advantage of the Olympic and Paralympic venues that already existed, some even dating back to the 1964 Tokyo games. Only eight entirely new venues were built for the Games, and ten were temporary structures designed for the sake of minimizing construction and energy use. All the transportation between the Olympic Village and race venues, the power for the Olympic flame, and the Olympic Village itself were also all powered with solar energy, reducing the net energy usage significantly.

This year, the Tokyo 2020 Games had sustainability take precedence, making it, by far, one of the most successful sustainable Games ever. In the future, we can look forward to seeing even more green initiatives that would make their way into Olympic life.

Photo Credit: International Olympic Committee

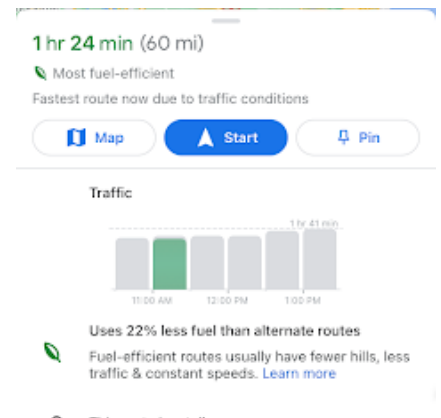
Google Map's New Sustainable Feature

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Most passenger vehicles release about 4.6 metric tons of carbon dioxide each year. To put this into perspective, about 1.5 billion vehicles currently roam the Earth, which means that roughly 6.7 billion metric tons of carbon dioxide are emitted into the atmosphere each year solely from driving. Bringing this huge number down as much as possible is essential, as fossil fuels in the environment are one of the leading causes of global warming.

Google Maps has been an initiator in helping citizens reduce their carbon footprint (the amount of greenhouse gases, including carbon dioxide, that one releases) through their new feature currently available on the Google Maps app. When a user searches their destination, the app highlights the most fuel-efficient and eco-friendly route with a leaf icon.

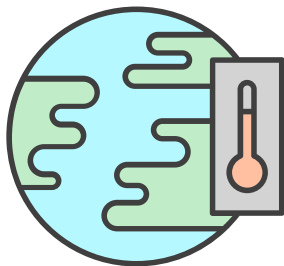


When users click the route that is deemed the most efficient, they will see the icon right next to the amount of time the trip will take, as well as at the top of the drive information bar.

Additionally, when users scroll down the information bar, they can view the amount of fuel they would save and the extra time they would drive if they follow the most efficient route.

Little by little, each person at Lawrenceville that decides to use this feature can make an impact on the total amount of greenhouse gases in the atmosphere, and ultimately reduce climate change.

Sources: Environmental Protection Agency (EPA), The Nature Conservancy, CNN, Hedges & Company,



7 Climate Change and The 2021 Nobel Prize in Physics

Sykuro Manabe, Klaus Hasselmann, and Giorgio Parisi received the 2021 Nobel Prize in Physics. Manabe and Hasselmann's projects both attempted to predict climate change based on physical models.

In the 1960s, Manabe, a senior meteorologist at Princeton University, focused on correlating the level of carbon dioxide in the atmosphere to the Earth's temperature. He found that more carbon dioxide leads to a higher global temperature. His discovery laid the foundation for future climate modeling.

Ten years later, Hasselmann proved climate model dependability by working on connecting the Earth's weather with its climate. His achievements also helped other scientists later conclude that the leading cause of global warming is the extra human emission of carbon dioxide.

Additionally, in 1980, Giorgio Parisi contributed to the understanding of patterns seen in complex and chaotic physical systems. One example of such a system is the Earth's climate.

Manabe and Hasselmann became the first people given the Nobel Prize in Physics for physical modeling of climate change, signifying the increase in understanding and awareness for the urgency of reducing global warming.

Sources: The Nobel Prize Organization, Princeton University, *Smithsonian Magazine*, *CNN*

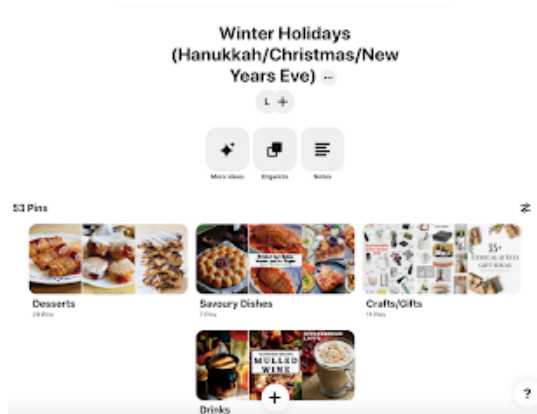
Photo Credit: *Nature*



Happy Holidays!

Make your holiday celebrations a little more sustainable!

The Sustainability Council has created a Pinterest board to highlight both food and gift ideas for this holiday: <https://pin.it/555DIRP>



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