

# Southern Lee Environmental Science Club

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Issue 13

## Electric Vehicles Harm the Environment and Don't Deserve a Tax Discount



The Hong Kong government decided to cap the tax discount on electrical cars at 97,500 Hong Kong Dollars. These cars, despite being electrical, use energy that is ultimately produced by burning fossil fuels. Additionally, over half of Hong Kong's electricity is generated by burning dirty coal. Complaints from electrical car owners include the lack of charging stations and what environmentalists criticize is that the government is not aware that the manufacturing of steel and other parts of the cars create giant carbon footprints. Written by Victor Soriano. <http://www.scmp.com/comment/letters/article/2075840/electric-vehicles-harm-environment-and-dont-deserve-tax-discount>

## One of the World's Rarest Whales: True's Beaked Whale



A rare species of beaked whales, known as the True's beaked whale, is so rare that only a handful of people have ever seen it alive. A 46-second video clip had been taken on a trip to the Azores. In the clip, the camera zooms in and three oblong sea creatures are undulating lazily through the water. Little is actually known about the appearance and behavior of True's beaked whales and its cousins. The size of the beaked whales population is unknown and could decline without anybody ever knowing. Written by Victor Soriano. [https://www.washingtonpost.com/news/speaking-of-science/wp/2017/03/07/one-of-the-worlds-rarest-whales-has-been-caught-on-film-for-the-first-time/?utm\\_term=.a44e8f1cfd79](https://www.washingtonpost.com/news/speaking-of-science/wp/2017/03/07/one-of-the-worlds-rarest-whales-has-been-caught-on-film-for-the-first-time/?utm_term=.a44e8f1cfd79)

## What's the Best Mosquito Repellent?



Pesky mosquitoes annoy and bite us, but can also carry diseases such as the Nile or Zika virus or yellow fever. Numerous products are marketed that advertise mosquito prevention. New studies show that spray on repellent made with DEET or oil of lemon eucalyptus are the best ways to repel mosquitoes. Bracelets with geraniol oil, a sound machine that buzzes like a dragonfly and citronella candles did not repel the mosquitoes at all. So for best results, spray liberally! <https://www.sciencenews.org/article/spray-mosquito-repellents-are-more-effective-other-devices>

*You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make.” —Jane Goodall*

### UPCOMING PROJECTS

1. Middle School Art Contest
2. Trash Pickup Day- April 22
3. Elementary School Worksheets
4. April 22 Earth Day Planting at the school
5. Submit newsletter articles/ ideas
6. Choose graduation cords



**120 Shamrocks Delivered!**



**ALL SENIORS:** If you want a graduation cord, please make sure you have paid your \$5.00 dues that will pay for them. Cords are green. Please text or tell Sarah Boone if you want one. Money is being collected and they will be ordered



*Adopt the pace of nature:  
her secret is patience.  
—Ralph Waldo Emerson*

### SCIENTIFIC EFFECTS OF ALCOHOL ON MINORS

Alcohol can lead to permanent physical and emotional changes to the adolescent brain and body. It can also increase the

risk of dangerous activity due to alcohol's ability to slow down normal processing centers and impair the ability to make clear and rational decisions. Teenage drinking is not only illegal, it can cause life-long changes to your brain, impede good health and cause you to make decisions you would not make if you were sober. Here is some "sobering" scientific research to consider:

\*Neuroscientists from the University of California found heavy drinking teenagers had **damaged brain nerve tissue** that inhibits the brain cells' ability to communicate effectively, and **reduced their ability to perform math and engineering skills** and their ability to focus on one task for an extended amount of time. ("Teen Drinking")

\* Teenage drinking **reduces the volume of the teenage hippocampus**, which is instrumental in maintaining memory. Both **long-term and short term memory processes can be damaged** due to the ethanol in alcohol which damages the brain's hippocampus cells. Because of this, many teenagers who drink experience **memory blackouts**, in which they cannot recall conversations, actions, or events. As a result, the damaged hippocampus can hinder their ability to store and recall factual information ("How Alcohol Affects").

\* There is a strong correlation between the number of patients who suffer from **depression** and alcohol abuse according to researchers at Washington University School of Medicine who have identified the CHRM2 gene, which is connected to "attention, learning, memory, and cognition" and is specifically susceptible to the consumption of alcohol ("Gene Linked"). Once a person consumes alcohol, that gene can be "triggered," making you more likely to develop depression ("Alcoholism and Depression").

\* Alcohol interrupts the normal flow of teenage hormone secretions and can lead to physical changes such as **delayed growth, loss of bone density and liver or other organ damage** ("Pubs.Niaa.Nih")

\* Alcohol exacerbates normal teenage mood swings because it acts as a **depressant** and chemically alters the brain by affecting the GABA receptors (the inhibitors) of the brain so the "swings" are more pronounced. (Psychology Today). Alcohol causes **more emotional upheaval** and prevents the teen from developing adequate coping skills and healthy emotional development.

\* Alcohol's effect on the brain's GABA receptors also **fosters excessive risk taking** resulting in physical impairment, maiming or death. Alcohol binds to GABA receptors and inhibits or prevents proper neuronal signals while signaling the reward center of the brain. ("Pubs.Niaa.Nih"). The result is **impairment of thinking skills, emotions and motor skills**. The National Institute of Health reports that "approximately 5,000 young people under the age of 21 die as a result of underage drinking" per year. ("Pubs.Niaa.Nih"). Of these, 1900 deaths are from alcohol-involved motor vehicle crashes, 1,600 deaths are alcohol-involved homicides, 300 are alcohol-involved suicides, and other deaths come from alcohol-related falls, burns, and drownings. ("Pubs.Niaa.Nih").

