

can be classified as chemistry, which is primarily concerned with the interactions occurring between substances that have matter. The foods we eat are mainly made up of substances such as carbon, oxygen, and hydrogen on the elemental level, with some other elements like nitrogen, potassium, and the controversial sodium present. As you move up from the level of individual elements, you reach the level of molecules, such as water, which is highly relevant to cooking. Water's high heat capacity (its ability to absorb and retain a great deal of heat) permit dishes to be heated and kept stable. This is why it takes a while to bring a pot of water to a boil, but once it's there, it can stay warm for a long time. Many chemical reactions also occur when cooking or storing food. Once such a reaction is the complex Maillard reaction, which is responsible for the browning of meats and other foods. By forming the basis of all matter, these elements and reactions play a key part in cooking, but this isn't the last stop on our journey of food science. Continuing to move up to the next level of organization further broadens the horizons.

When we eat food, we don't measure it in carbons, nitrogens, and oxygens, but in more familiar macromolecules consisting of these elements and a few others, which brings us to our next level of organization: biochemistry. Biochemistry is the study of how chemistry is relevant to living organisms and introduces us to a new level of organization with the macromolecules, namely proteins, lipids, and carbohydrates. Cooking leads to changes in structure in these biomolecules, such as denaturing or changing the shape of proteins with heat while cooking them. This is what happens when someone cooks an egg. The change in colour and composition of the final product, the omelette, results from denaturing the egg proteins. Biochemistry also explains how these individual molecules supply energy to us, measured in calories. By breaking the chemical bonds in molecules such as sugars, we are able to extract the energy that was stored and use it to power our own cells. Biochemistry is key to kitchen science, but at some point, we need to move beyond

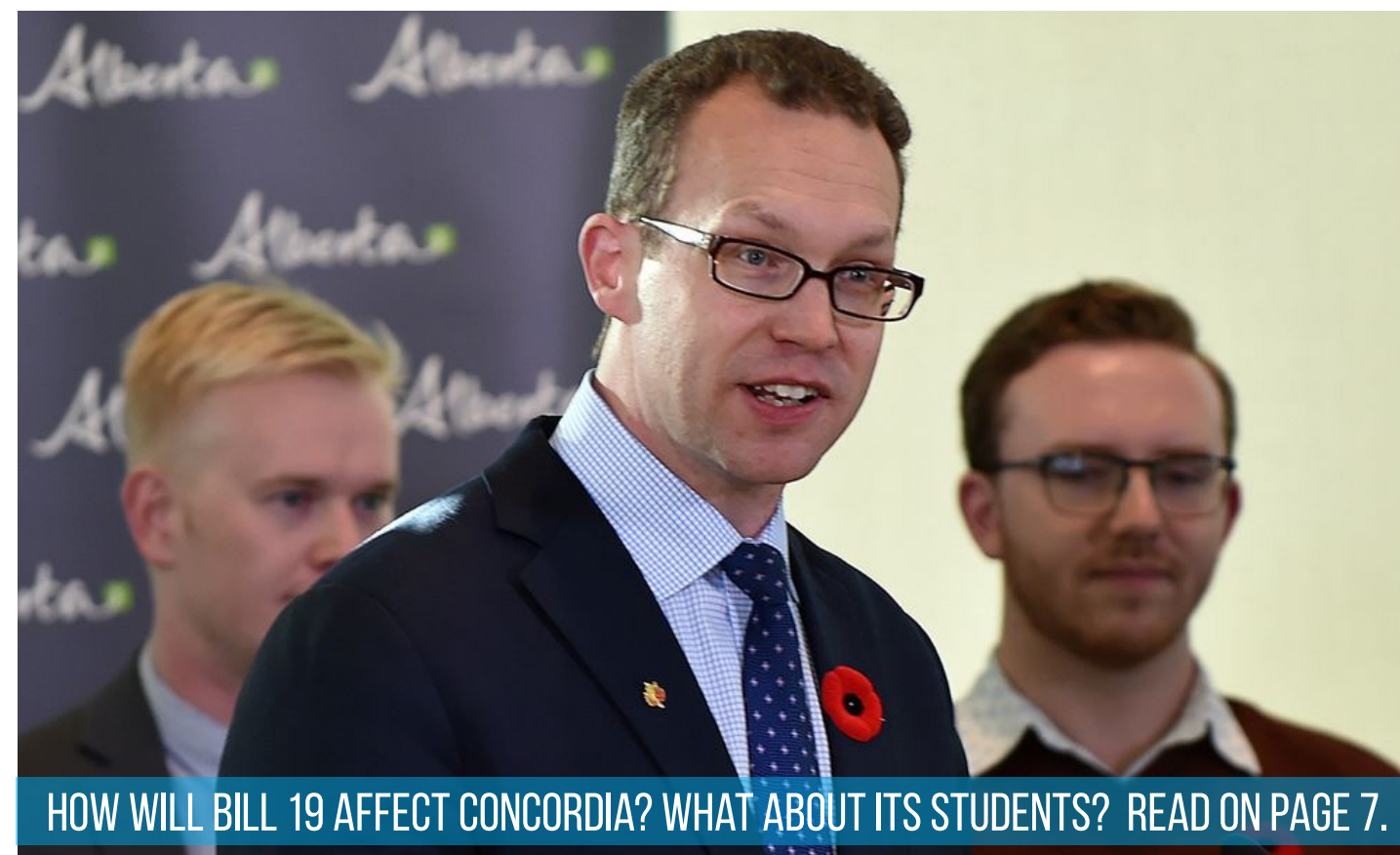
the small scale and enter the world of cells, tissues, and other living things--our final level of organization.

As we move on from macromolecules, we reach the cellular level. These first consist of small bacteria and, finally, large organisms with organs such as ourselves. In doing so, enter the realm of biology. A great deal of time and energy in cooking is aimed at this level in attempting to generate pleasant tastes and smells. Our sense of smell and taste appear at this level and are the result of small molecules interacting with our organ systems, such as our noses. Many of the steps taken in food storage also fall squarely into the realm of biology, the study of life--or, from the perspective of the cook, the pursuit of stopping bacterial and fungal life from taking over stored food. Refrigeration, for instance, serves to preserve food by lowering the temperature outside of the comfortable range for many microbes. Unfortunately, some can still function, leading to some decay and spoilage, even if this does mean refrigerated food lasts longer than food left on the counter. Freezing food acts in a similar, but more extreme, fashion. By freezing food and maintaining it at temperatures below 0, we severely handicap any microbes from growing and spoiling food. Refrigeration isn't the only application of biology in cooking, however; baking is another opportunity to use microbes, this time encouraging them to become active. The use of microbes isn't limited to baked goods, as they are also key to the fermentation of alcohol. This can be of keen interest to many students. These are just some of the applications of biology in the kitchen.

Hopefully our journey through the science of the kitchen--from the mathematical to the biological level--has been enlightening and not left you too hungry. While a knowledge of these fields isn't required to be a good cook, it certainly helps explain some of the results we see in the kitchen. So the next time you reach for the minute plus button on the microwave, crack an egg, or find that your bread has become a fungal incubator, remember how these relate to the various levels of science.

# THE BOLT NEWS

## BILL 19: AFFORDABLE EDUCATION



HOW WILL BILL 19 AFFECT CONCORDIA? WHAT ABOUT ITS STUDENTS? READ ON PAGE 7.

Photo by Ed Kaiser/Postmedia

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### SPACE NEWS: EARTH

In the final edition of Space News, Tyler DeWacht turns us back toward Earth to look at our plans for the future among the stars.

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### US VS. THEM MENTALITY

Nicole Beaver discusses the psychology of fear, its link to hate in modern society, and the trouble it can bring if we leave it unchecked.

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### WORLD WAR I

This year marks the 100-year anniversary of the end of World War I. Natasha Eklund looks back on how the war to end all wars affected Canada.

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### KITCHEN SCIENCE

Donavan Makus turns the microscope on our kitchens to demonstrate how many scientific practices are at work in our day-to-day lives.

## SPACE NEWS: NO PLACE LIKE HOME

by Tyler DeWacht

Hello, and welcome to the final edition of Space News. In the last article (which is available online), I covered the rocks of our Solar System. This last article in the series will bring us back home to the third rock away from the Sun that we know as Earth and its compatriot moon we call the Moon. Without further ado, let's get into the news, shall we?

A lot can go wrong in space where technology is concerned. Manufacturing defects can slip past even the most thorough inspections, somebody made a calculation half a millimetre off that resulted in a catastrophic error, a moving part doesn't move properly in zero gravity. For example, the Hubble Space Telescope, a groundbreaking technological marvel that has given us profound sightings into the universe, recently ran into some trouble. The gyroscope, which allows it to reposition itself, broke down recently. The backup unexpectedly also broke down, so operations had to stop for a while. Some fiddling was done around with the controls, and the problem was able to fix itself, so now it should be working normally once again.

You're probably familiar with the International Space Station, the joint effort of multiple spacefaring nations to establish a base of operations in the final frontier. The 3-6 person crew onboard the ISS is supposed to rotate about every six months, but the Soyuz rocket that was supposed to perform the next rotation unexpectedly failed and had to make an emergency landing in Kazakhstan. Thankfully, everyone on board survived in good condition, but the current crew is going to have to extend their stay. They can't leave the station unmanned, and 3 uncrewed Soyuz launches will be required before the Soyuz craft is approved for another manned launch.

There are no other rockets available at this time.

Russia is not having a good time in space lately. In addition to the rocket failure, a tiny hole was discovered in the hull of a Soyuz capsule attached to the ISS. The hole had to be sealed temporarily after it was discovered to be leaking precious oxygen, with a more permanent solution in the works. The Roscosmos investigation launched into the matter has revealed that the hole was most likely created deliberately with a drill. Was this just a production defect, or could it be a case of sabotage in space? The investigation is still underway at the time of writing this article, but nothing has been ruled out yet.

How long is the International Space Station going to be around? Legislation has been introduced to extend operations until 2030, but the station will eventually become too expensive to upkeep, so it will eventually be brought down and disintegrated upon re-entry, making a controlled fall into open waters so larger fragments don't risk hitting populated areas. There are currently no American plans to replace the ISS, but China plans to launch their own space station that will be operational by 2022. The Tiangong (translated as Heavenly Palace) programme's third phase space station will have up to 13 laboratories for conducting various experiments within a 10-year timeframe, and it will be open to all UN member nations.

The China National Space Administration has recently been stepping up their space game in their efforts to make China the next dominant world power. The Soviet Luna 9 probe was the first to land safely on the Moon, but the upcoming Chang'e 4 mission in December aims to land a probe safely for the first time on the dark side of the Moon. For those curious, Chang'e is the Chinese goddess of the Moon. They also have an ambitious project to launch a bright artificial moon over the city of Chengdu that will provide continuous lighting, though they've stayed silent on the exact details of that plan. We'll just have to see what happens with this and how it could affect local wildlife. China isn't always transparent with their plans, and their space program is no exception to this.

Who else is working towards accessing the final

## KITCHEN SCIENCE

by Donovan Makus

When identifying similarities between environments, your kitchen and the scientific laboratory may not appear to be all that similar on first glance. One is a familiar environment, often the heart of the home, where family members spend time, eat and gather together. The other one is an impersonal environment, although it does offer a great opportunity to make friends, from which many students seem to be in a hurry to leave as quickly as possible. Yet the same scientific principles studied in the lab can also be applied in your kitchen at home. From the foundations of science in mathematics to the higher levels of organisms studied in biology, all scientific fields can be observed in the kitchen. After all, a cookbook is, in effect, a laboratory manual, with the results of this homemade research hopefully being more pleasant and palatable than dry numbers and statistics. Understanding these scientific principles can hopefully help us improve as cooks, reaching our full potential in the kitchen.

Math and physics. These are unpleasant topics for many students, who strive to either avoid these courses or just get through them unscathed if they are degree requirements. Yet when working in the kitchen, the concepts from these fields are foundational and never too far away. Thankfully, you don't need a background in theoretical mathematics or physics to cook; fortunately, the grade school basics provide an ample foundation. Cooking, and especially baking, involve a great deal of measuring and adjusting. Stating that "some" flour should be mixed with "a few" bananas and "several" eggs can lead to wildly different results, as I can report from my banana pancake recipe experimentation. The amounts measured are critical to ensuring consistent results. Fractions, in the form of volumetric measuring cups, also make an appearance, and while I recognize not

everyone is fastidious enough to eat their ice cream from a measuring cup as I do, fractions are key to kitchen science. Moving onto the field of physics opens up a wealth of applications, shaping many of our cooking processes. These processes, easily explained by physics, are vital in the process of cooking food. For instance, your appropriately-named microwave uses electromagnetic radiation to cook your food. Other heating processes, such as cooking in an oven, also involve the transfer of energy. Finally, physics also helps explain why the same amount of heat can lead to varying cooking results, from the perfect omelette to one that looks runny, through the study of thermal conduction, and surface area to volume relationships. While it is possible to cook without the benefit of math or physics, using these help make your cooking easier and more accurate.

Moving a level up in organization brings us to the field of chemistry. A great deal of kitchen science



a true sense of Canadian identity.” The soldiers who overtook Vimy underwent several weeks of training and specialist roles such as machine-gunners, riflemen and grenade-throwers were assigned. This was the first time the four Canadian divisions attacked together, storming Vimy at 5:30 AM on April 9. The Canadians had single-handedly charged the machine gun nests and forced the surrender of Germans in their protective dugouts. This battle took three days, and the Canadian operation had been a success.

The victory at Vimy is seen as one of Canada’s greatest military triumphs, as it has been referred to as Canadians “Birth of a Nation.” The Canadians suffered the loss of 3,578; additionally, 7,000 were wounded.

The Military Service Act had come into effect on August 29, 1917 as Canada introduced conscription and placed men within six categories. The first category placed single men aged twenty to twenty-four within it, and the sixth category were married men aged forty-one to forty-four. Anyone who was physically unfit or had an essential job was allowed to file for exemption from this conscription. Failure to report for duty would result in five years of jail time with hard labour. Across Canada, 403,395 men had reported within class one and 380,510 filed for exemption. Of those who filed, 334,989 were granted exemption.

Germany and France were the most impacted by the war on their population as each had sent approximately 80% of their male population between the ages of 15 and 49 into battle. By the end of war, 628,562 Canadians served within the military forces and 60,661 were killed. The Geneva Convention in 1925 signed off that chemical weapon use to restricted, something which is still in effect to this day.

Most of us tend to think of Remembrance Day as a day when we wear poppies, but this year, take a moment to think about the things our soldiers had to go through. appear to be all that similar on first glance.

Alberta Health Services

## Why does cannabis affect people under 25 differently?

A. It doesn't      B. Because science  
 C. Their brains are still developing      D. Both B and C

**D. Both B & C are correct**

Cannabis has risks at any age. But until age 25, your brain is still developing. Weed can damage that.

What's Your HIGH Q?

Take the full quiz at: [drugsafe.ca](http://drugsafe.ca)

frontier? Asia has a lot of players in the game. India isn't too far behind the leaders; the Chandrayaan-2 lunar probe is scheduled for a 2019 launch, while the Indian Human Spaceflight Programme intends to send people to space (following training in Russia) for the first time aboard the Gaganyaan by 2022. Pakistan's space program SUPARCO, not wanting to be left in the dust, is planning its first manned mission in the same year with the help of China. Japan isn't as interested in manned missions to space, instead focusing on the technological possibilities. In addition to the Hayabusa2 probe discussed in the last edition, a new collaborative mission between JAXA and the ESA launched on October 19, and the target destination is Mercury. The BepiColombo will be travelling as one unit for a while before splitting into two spacecraft that together will give us more detailed information about this seldom-seen planet.

The British Commonwealth has been active in the satellite department, with the United Kingdom's high-resolution satellite system that can track pollution, pick out ocean trash and potential poachers, and serve as an early disaster warning system. One such satellite, the newly-launched NovaSAR-1 co-controlled by Australia, works even at night and in cloudy conditions. Australia and Canada will benefit from this as well since some new information-sharing agreements were recently negotiated. Perhaps the Canadian Space Agency could also use this knowledge to improve our satellite security, which has been criticized recently for being too vulnerable against cyberattacks.

On the business side of affairs, SpaceX continues to move forward with their dreams. The Big Falcon Rocket is nearly ready to test, starting with re-entry dives to test the heat shield. If everything goes according to schedule, the first commercial space flight will occur in 2023 with a flyby of the Moon. Yusaku Maezawa, a Japanese billionaire who founded the online website Zozotown, is confirmed to be one of these passengers, and he'll be bringing 6-8 artists with him for an art project called #dearMoon. What new works of art could this voyage inspire, I wonder?

Last but not least is the United States, and they've had no shortage of news lately. NASA recently turned

60, for instance! So, what does NASA have planned next? With the current US government's introduction of Space Policy Directive 1, the Moon is going to be walked upon once again. There is a new space station in the design phase as well, the Lunar Orbital Platform-Gateway, that will serve as a midway point between the Earth and the Moon. In the future, when a lunar base is finally established, it will also serve as a direct line of communication and a stepping stone to the ultimate target Mars.

The Fermi Gamma-ray Space Telescope is ten years old now as well, and NASA has named some new constellations to commemorate this milestone. They're not your typical constellations; rather than being based on stars, they're instead based on gamma rays, which are the strongest form of electromagnetic radiation. These new constellations, 21 in total, have interesting designs. Some are based on important landmarks or technological feats such as the Eiffel Tower, Mount Fuji, and the Fermi satellite itself. Others are a bit more abstract, like The Little Prince and Schrodinger's Cat. Still others are pop culture references like The Hulk, Godzilla, and the Starship Enterprise. If you want to learn more about them, there's an interactive map available online that has all 21 in their respective celestial positions.

It's hard to go a week without hearing something new about Donald Trump, and to say he's a controversial President would be an understatement. Why am I bringing up politics now? Well, if you've been following the American situation, you've probably heard of Trump's proposed Space Force. Intended to be the 6th branch of the US military, the Space Force would monitor space, carry out rescue operations, and protect the Earth from hostile forces and rogue asteroids. Negotiations are underway, and if everything goes according to plan, the Space Force would be up-and-running by 2020. Disregarding your opinion on Trump, what are your thoughts on the Space Force? Does the military have a place up in space?

With that question, I leave you to think about the universe we live in. Thank you for reading Space News and The Bolt News, and I hope you continue to gaze into the cosmos. This is Tyler DeWacht, signing off for now.



gas. While there had been skepticism about its use, it reluctantly gained approval to be used. The French and British had received warning of this, but neither believed it to be true as they couldn't believe that Germany would violate the laws of a civilized war (trial by gas). On April 22, 1915 at Ypres, also known as Flanders, the British, French and Canadians experienced the first attack of gas. The gas looked like a greenish-yellow wall of fumes that slowly drifted across no-mans-land and into the trenches of the Allied Powers. Soldiers were unprepared as they had no gas masks: they "choked and gasped for breath, feeling a stabbing pain in the chest with some vomiting a yellow substance and others staggering, falling, and rolling on the ground in their death throes." A Canadian gunman, Andrew McNaughton, had been making his way to the front to offer some relief when he saw the soldiers running "as if the devil were after them, their eyeballs showing white, and coughing their lungs out – they were literally coughing their lungs out; glue was coming out of their mouths."

The results from a low-level of exposure to the gas would result in difficulty of breathing and a burning sensation in the nose, eyes, and throat. Extended exposure to this gas would result in the destruction of respiratory organs and cause a slow, painful death by suffocation.

On April 24, a second attack of chlorine gas was launched, but this time, they aimed specifically at the Canadians. The Germans had released 150,000 kilograms of chlorine gas; while many soldiers fled, the Canadians continued to fight, battling for every inch of ground that they could. The soldiers reacted to this one by soaking their handkerchiefs in urine acting as makeshift gas masks, holding them to their noses and mouths. Oswald Monteith said that "[The Germans] wait on the wind and when the wind favours the devilish thing, they pump it out in tons and the wind brings it right on you, then the coughing, spitting – it turns you blind, useless for days..." Their rifles jammed as a result of their rapid firing, but the Canadians did not panic or flee. Instead, they were

able to successfully achieve their objective of preventing the German from breaking through. The Second Battle of Ypres resulted in 6,036 Canadian deaths.

This use of gas proved to be a heavily psychological weapon as soldiers began to nervously anticipate the attack of gas, knowing the extreme physical harm it could do to them. There was a common fear that the neutralizing agents of their gasmask would fail before the air was safe to breathe. As well, these masks were awkward and troublesome as soldiers had to carry them, and breathing in them was difficult as they were, basically, a small and enclosed container which made them feel as though they were suffocating within the masks. As well, it made any activity much more difficult when wearing them. Occasionally, a soldier would remove his mask in a desperate attempt to breathe before the danger of the gas was over.

When remembering the battle of Flanders Field (or Ypres), a Saskatchewan Private named A.G. Hall recalled that it was "death-strewn, shell-torn waste of desert" and that "corpses lie around everywhere, the stench of corrupting bodies fills the air and all around nothing, but carrion, flies and rats are to be seen." Private Stanley Kay said that when he was fighting, he had become "possessed with a hate that is terrible to describe. I saw my pals fall all around me...I had to look down at the headless body of my best friend. This made me savage and I pumped that gun as fast as the trigger would go..."

While the achievements of the Canadians at Ypres were highly recognized and Canadians had slowly begun to build their own sense of national identity as separate from the British, the Battle of Vimy Ridge was a victory for Canadians that clearly defined their national awareness.

The Battle at Vimy Ridge lasted from April 9-12, 1917, when four divisions of Canadian troops stormed the Germans. This was Canada's "first major victory as a united Canadian Army, forging, in the blood and mud,

# WORLD WAR I

by Natasha Eklund

This year marks the 100-year anniversary of World War I's end. As we all should know, the war began in 1914 with Archduke Ferdinand being assassinated. This resulted in Germany, Austria-Hungary, Bulgaria, and the Ottoman Empire forming the Central Powers as they fought against the Allied Powers: Great Britain, France, Russia, Italy, Romania, Japan, and the United States. This war, often referred to as The Great War, introduced new and extreme levels of trench warfare and military technologies. Chemical weapons such as mustard gas and phosgene were introduced, working alongside the use of planes, tanks, machine guns, and radio communication-which were all used on a large scale during this war. Although the Allied Powers had claimed victory, more than 16 million soldiers and civilians died.

This war also created massive social change as women entered the workplace to replace the men who had gone to fight, as well as women who fought for the right to vote and hold office. Nellie McClung presented the Alberta legislation with a petition on February 26, 1915, which demanded that women get the right to vote. Two months later, this was granted, and provinces across Canada slowly began its implementation. On January 28, 1916, Manitoba was the first to announce that women now had the right to vote and hold office. This was closely followed by Saskatchewan in March and Alberta in April of 1916. British Columbia women (excluding Aborigines and Asians) had this right granted by April 1917, as did Ontario. Nova Scotian women did not receive this right until April 1918. However, on June 7, 1917, Louise McKinney and Roberta MacAdams were the first women in Canada elected into an Albertan provincial legislation. On July 9, 1917, Helen MacGill was appointed British Columbia's first female judge.

It was thanks to Dr. Fritz Haber, the director of the Kaiser Wilhelm Institute in Berlin, that we have the creation of a lethal weapon in the form of chlorine



## Wellness Wednesday November

**Family Violence Day**  
 Nov. 7th - Lower Tegler - 11am to 1pm

**Reading Week**  
 Nov. 12th - 16th

**Therapy Dogs**  
 Nov. 21st - Tegler - 11am to 1pm

**Free Yoga Class**  
 Nov. 28th - GYM - Noon to 12:50pm

## SHOW TIME!

Here is what is playing in theaters this week:

**First Man**  
PG

**Night School**  
PG

**Goosebumps 2: Haunted Halloween**  
PG

**Fahrenheit 11/9**  
PG

**Smallfoot**  
PG-13

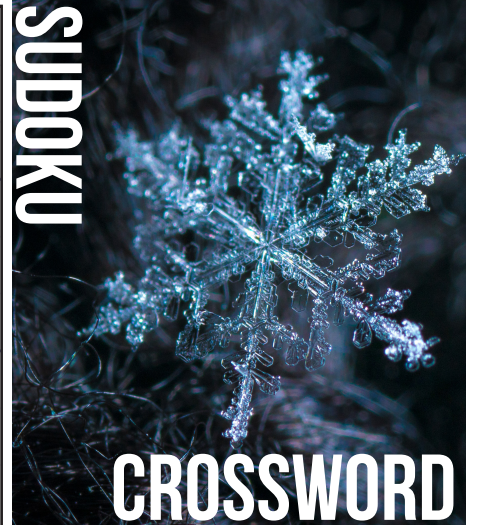
**Venom**  
14 A

**A Star is born**  
14 A

**Bad Times At The El Royal**  
14 A

**Cinaplex North**

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9	3		5			8	
3		9		5	2		1
			4			2	3
		5					8



- Across**
- Playbill roster
  - Very, melodramatically
  - White colleague
  - Higher in the hierarchy than
  - "Family \_\_\_" (Game Show Network rerun)
  - Find irresistible
  - Piece of paper currency
  - Casino card game
  - Showed sudden glee
  - Start of a quip by humorist Red Green
  - Withhold from
  - Bird on a certain ranch
  - Spoke stentoriously
  - Snowshoe or March follower
  - Molotov cocktail "fuse"
  - Exhausted
  - Aspirin label datum
  - Kappa forerunner
  - Quip: Part 2
  - Austin Powers' nemesis Dr. \_\_\_
  - What to do after you "read 'em"
  - Prepare for the National Anthem
  - "Catch on?"
  - Siblingless
  - Fashion designer Laura
  - Exist en masse
  - City near Provo
  - Quip: Part 3
  - Sweet 'N Low rival
  - Chassis rod
  - Villain
  - Offers as an opinion
  - Gravy globs
  - Fermentation sediment
  - University founder Cornell
  - Kindergartner's stickum
  - Bow and stern, e.g.
  - Appear

1	2	3	4	5	6	7	8	9	10	11	12	13
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58						59				60		
61						62				63		

- Down**
- Negative aspect
  - Admit openly
  - Green of "America's Sweethearts"
  - Gym fixture
  - Put one's nose out of joint
  - Villain
  - "Natch!"
  - Garlic trait
  - Biblical temptress
  - Parisian's parting word
  - Writes rapidly
  - Give \_\_\_ for one's money
  - Held onto
  - Minuscule
  - Moore's paramour in "10"
  - Takes part in a Pillsbury contest
  - Bluto's dream girl
  - Stan's tie-twiddling pal
  - Comfortably familiar
  - P.D.Q. alternative
  - "The \_\_\_ Tenenbaums" (Gene Hackman film)
  - Observe Yom Kippur
  - Like a chartreuse leisure suit
  - Hamilton-Burr incident
  - Land mass connectors
  - Charlie Brown, to Snoopy
  - Double-curved shapes
  - Vague threat
  - Marshal Dillon's portrayer
  - Rewrite for Hollywood
  - Silenced a hinge
  - The Beatles' second film
  - Soothing hue
  - Molasses-based liquors
  - Grimm work
  - Yokemates
  - Bring down
  - Brontë belle Jane
  - Humphrey's "The Maltese Falcon" role

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Although Gordie is gone physically, his spirit lives on in his work and lyrics. There will be no arbitrarily-numbered list of best Gord Downie lyrics in this article, but let's look at some of the most striking examples of his writing.

“His tiny knotted heart  
Well, I guess it never worked too good  
The timber tore apart  
And the water gorged the wood  
You can hear her whispered prayer  
For men at masts that always lean  
The same wind that moves her hair  
Moves a boy through Fiddler's Green” – “Fiddler's Green” from “Road Apples.”

“If I die of vanity, promise me, promise me,  
They bury me some place I don't want to be,  
You'll dig me up and transport me, unceremoniously,  
Away from the swollen city-breeze, garbage bag trees,  
Whispers of disease and the acts of enormity  
And lower me slowly, sadly and properly  
Get Ry Cooder to sing my eulogy,  
At the hundredth meridian” – “At The Hundredth Meridian” from “Fully Completely.”

“Building up to the larger point  
With an arrogance not rare or pretty  
We don't declare the war on idleness  
When outside it's cold and shitty  
We stay inside and try to conjure the fathers  
Of the injured and faking  
If there's a glory in miracles  
It's that they're reversible”- “Titanic Terrarium” from “Day For Night.”

“So, I'm at your house this morning  
Just a little after nine  
'Cause, it was in Bobcaygeon  
Where I saw the constellations reveal themselves

One star at time” – “Bobcaygeon” from “Phantom Power.”

“Stare in the morning shroud  
And then the day began  
I tilted your cloud  
You tilted my hand  
Rain falls in real time  
And rain fell through the night  
No dress rehearsal, this is our life” – “Ahead By A Century” from “Trouble At The Henhouse.”

Through his work and lyrics we remember Gord Downie and his legacy. Rest easy Gord, we love you.



Scott Alexander

## REMEMBERING GORD DOWNIE

by Kohan Eybergen

A year ago on October 17, 2017, the world lost an amazing musical artist. Gord Downie, the lead singer of what is often considered “Canada’s band,” The Tragically Hip, passed away from terminal brain cancer, leaving behind him a legacy of music, poetry, and activism. With deep and often surreal lyrics focused on the human experience, it’s no surprise that Downie’s music made a large impact on many people, and his work still has an effect on many Canadian lives after his death.

Often able to sum up complex and obscure emotions and experiences with just a few well-chosen words, Gord Downie is often referred to as the Canadian Shakespeare. And for good reason: you don’t have to listen to too many of the Tragically Hip’s songs (although you should) to realize that Downie truly was a poet who also happened to be the frontman of a great rock band.

Born on February 6, 1964 in Amherstview, Ontario, Downie and his family moved to nearby Kingston Ontario. Growing up in the town of Kingston, Gord, like many other Canadian kids, played hockey with a local team, winning many tournaments in the position of goaltender. In high school, Downie befriended the musicians who would eventually become The Tragically Hip: Bobby Baker, Johnny Fay, Gord Sinclair, and Paul Langlois. During the early

years while the band was touring the club and university circuit in Ontario, it wasn’t uncommon for people to remark “Gordon Downie? The goalie?”

After being signed to the record label MCA in the late 1980s, the Hip released one EP, thirteen full-length studio albums, and two live albums over their thirty-three year career. But Downie didn’t just use his songwriting talent solely on the Hip’s material. With a solo catalogue of six albums, two of which were written and released after his cancer diagnosis, and a book of poetry, Gord Downie was certainly a musician and writer both fully and completely capable of writing music on his own. Despite his solo career, Downie always stayed together with The Tragically Hip up until his passing, always insisting on the band being a democracy, writing credits of every song were always split between the five members.

Throughout his life, Gord Downie also had many philanthropic efforts. From environmental causes to the rights of Indigenous Canadians, Gord was always thinking of others and using his fame as a platform to bring awareness to many of our country’s issues. The best example of this is probably the “Secret Path” album. One of his solo albums, which Gord assured was his most important musical work, this album tells the story of Chanie Wenjack, a First Nations boy who died running away from a residential school in the 1960s.

Although a diagnosis of terminal brain cancer would certainly be a career ender for most people, Gord Downie was determined that he and The Tragically Hip would still go on tour for their “Man Machine Poem” album. Equipped with multiple teleprompters for Gord to read lyrics off of, The Hip completed their final tour in their hometown of Kingston, Ontario. The over three-hour long show included songs from every single Hip album, the last of which being “Ahead By A Century” from “Trouble At The Henhouse.”

## THE US VS. THEM MENTALITY

by Nicole Beaver

With the mass shooting at the Tree of Life Synagogue, Trump calling himself a “nationalist,” and the rise of violence against people of colour and the Jewish/Islamic faiths, it is no wonder we’re all getting a collective headache. For those who are practitioners of Judaism or Islam or another minority targeted by supremacists, it is getting quite scary out there.

Fear is, in fact, the cause of many turning points in history: the fear of dying out, the fear of being conquered, the fear of losing oneself, and the fear of the unknown. The last one is what I am primarily focusing on, as it is the perpetrator regarding the rampant racism and anti-semitism. Please note that what I am about to delve into details white supremacy and Nazism. I do not condone their actions or beliefs. I only hope to explain why such hateful people exist and what might be the cause of their hatred. Making sense of disorder is a human thing to do, and what we crave. It gives us comfort and hope.

In Star Wars, Yoda summarizes this idea quite well: “Fear leads to anger. Anger leads to hate. Hate leads to suffering.” In the simplest terms, this can be equated to Islamophobia specifically. With the bombings that occurred during 9/11 and more recently in Paris, fear of the unknown is prevalent in our current society. It has, however, been consistent for thousands of years. Sociologists and psychiatrists have been studying this for a long time. Ultimately, they both agree that fear is a major part of their psychology. How do supremacists think?

Psychologist and political advisor Dr. René Carr states that “When one race of persons unconsciously feels fear in response to a different race group—fears that their own level of security, importance, or control is being threatened—they will develop these

defensive thoughts and behaviors. They will create exaggerated and negative beliefs about the other race to justify their actions in [an] attempt to secure their own safety and survival.” It seems appalling to those of us who do not feel fear towards another human being. There is also an us-versus-them mentality that many of us may possess. It’s a type of “group thinking” where, as the name suggests, individuals tend to think collectively. The human mind has a tendency to categorize people into social groups. Often, these social groups can cause us to mentally separate ourselves from those who may be different than us in some way, whether it’s race, gender, age, nationality, culture, religion, or socioeconomic status. It appears that thinking of ourselves in terms of groups automatically leads to a kind of irrational group favouritism, as studies show animosity in controlled tests between groups of people. In some of the studies done, participants are usually given an opportunity to give money (or “points”) to other participants, and tend to favour giving points to members of their own group versus members of another group. It was found that participants are more willing to see their group “win” rather than have outcomes where all people end up better overall!

It’s not hard to see how this mentality can be destructive to both ourselves and society as a whole. And it is scary to think just how susceptible we are to these biases, even under completely random circumstances! We may have evolved to think in certain ways, but it could still be our downfall. Carried out to extremes, we see this play out against groups that are seen as outsiders with deadly consequences.

What can we do to combat this thinking? Sadly, very little. We cannot sway another person easily as we are resistant to other ways of thinking (even if these ideas are morally sound and rational). It’s to the point where we will do anything to prove ourselves in the right, in spite of evidence proving otherwise. So trying to convince a neo-Nazi that Jewish people are not harmful is going to be next to impossible! You can, however, try to lower your own bias towards different cultures and beliefs. Racism is a learned behaviour, and hate is a group thought. You yourself can work to combat this! You will be surprised as to what doors are opened once you, to put it this way, “get over yourself.”

## EDITORIAL: BILL 19 WILL CAP TUITION, BUT NOT FOR CONCORDIA

by Nick Clark

The Alberta New Democratic Party has introduced a new bill to regulate post-secondary tuition at public institutions. Minister of Advanced Education, Marlin Schmidt summarized the Bill at a news conference, saying, “Bill 19 will update the Post-Secondary Learning Act to ensure that learners in Alberta will have better access to affordable, high quality post-secondary education now and in the future.”

The bill—Bill 19: An Act To Improve The Affordability And Accessibility of Post-Secondary Education—was introduced on October 29th. As of November 18, it has passed its first and second readings in the legislature without any changes, then incurred one amendment during the November 6th reading.

Bill 19 has not yet received royal assent but if it passes, the NDP will move to extend Alberta’s freeze on post-secondary tuition for a final year until the end of the 2019-2020 academic term. Beginning in the September 2020 school year, any tuition increases will be restricted to 10% of the Consumer Price Index (CPI).

You might be wondering how these changes will affect Concordia. On paper, it doesn’t affect Concordia at all. CUE is not a publicly funded institution so, just like the tuition freeze of 2015, any action Concordia takes to align with these new restrictions will be voluntary.

For the last four years, Concordia has frozen its tuition to stay competitive with the public institutions in our area. The 2018-2019 academic year brought us our

first tuition increase since then: a 2% increase on local students’ tuition and 5% increase on the new international students’ international tuition supplement.

I spoke with CSA President Brandon Vollweiler about Bill 19 to get some more specific insights into what Concordia’s plans are for the future. When I asked him about his initial reaction to the cap, Vollweiler said it wasn’t exactly what he was hoping for because it doesn’t provide enough of a safety net for students. The Alberta Students’ Executive Council (ASEC) has been involved in talks about tuition for quite some time, pushing for a more complex solution to unpredictable tuition hikes based on a 15 year rolling average of the CPI rather than the cut-and-dry 10% proposed by the NDP.

The chairman of another student advocacy group, the Council of Alberta University Students (CAUS), Andrew Bieman, spoke at the same news conference where Minister Schmidt outlined the purpose of Bill 19. Bieman talked about CAUS’ advocacy for “a long-term, predictable, sustainable tuition model,” and said he considers Bill 19 to be progress in that regard.

While Concordia’s plan for handling these coming changes to the post-secondary education sector may not yet be decided, positive and negative opinions from multiple sources have been pouring in. An Edmonton Journal Editorial titled “Tuition caps come with a cost” quoted MacEwan University president Deborah Saucier:

“Coming from Ontario, which has had a long history of cuts and tuition freezes, eventually you start to starve the organization. One to two years out, we’re looking at being able to balance our budget. But starting in years three and four, we’re going to have to make hard choices and these choices may affect affordability and/or access.”

Saucier also mentioned her concern that, without increased revenue from raising tuition, MacE-

wan teaching staff could be vulnerable to poaching.

Minister Schmidt took the time to reply to that editorial in the form of an opinion article in the Journal, saying “(The article is) wrong, however, to suggest we are knee-capping universities in the process (of freezing tuition and indexing future increases).” He continues, claiming that before the NDP formed government in Alberta, the province was “heading off a fiscal cliff and into the worst recession in generations.” He then recalled a previous showing of support from Saucier in which she “(applauded their) work in providing ‘stable and predictable funding.’”

The positive aspect of the kind of regulation the bill calls for is stability and predictability for students. It’s hard to paint the goal of giving students confidence in the price of their education with a bad brush. The negative argument of the long-term effects that kind of restriction could have on the institutions’ budgets is not without merit, though. Saucier specifically cited the struggles institutions in Ontario have had with similar legislation. If the NDP is going to make this work here in Alberta, they’ll have to learn from the decisions that caused those Ontario institutions so much strife.

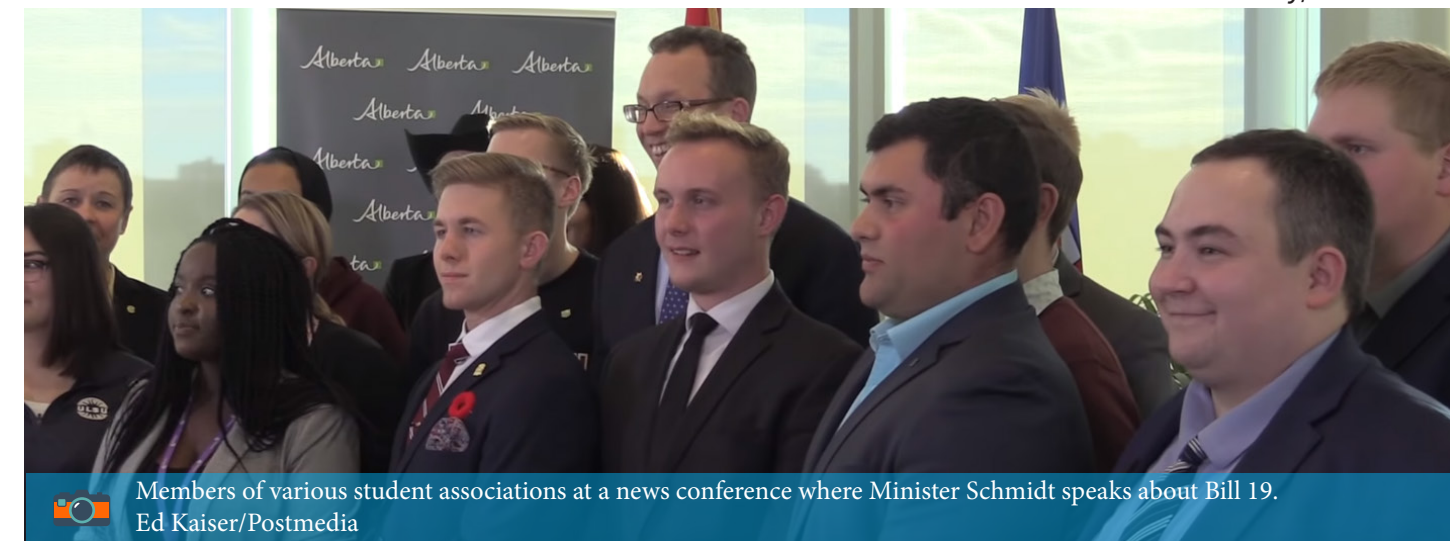
Some believe the entire bill is merely an attempt by the NDP to buy votes for the coming election. Even those who haven’t said as much aloud have asked

the question of who will pay to make this possible. If the government wants to avoid budget problems, how will they manage to offset the costs of lower tuition without charging the students the bill seeks to protect? If freshly graduated students entering the workforce and trying to pay back their student loans will be faced with higher taxes because of it, the costs and benefits must be weighed carefully.

As students of Concordia, though, we can take a different perspective on these potential challenges. Concordia is a private institution and, as I mentioned, is not bound to these restrictions the same way public institutions like the University of Alberta and MacEwan University are. If it has to, CUE can increase its tuition above the 10% CPI limit to cover its expenses or even to grow its staff.

I mention staff specifically because, if the institution plays its cards right, Concordia could be the one to receive professors who leave other universities in search of more competitive pay. With some extra space thanks to our new research centre, Concordia would do well to give more professors a home there.

Time will tell whether Bill 19 turns out to be a benefit or a burden. The best we can do as students is keep ourselves in the loop. If you’d like to read the bill yourself, the document is available to read at [bit.ly/ReadBill19](http://bit.ly/ReadBill19).



Members of various student associations at a news conference where Minister Schmidt speaks about Bill 19. Ed Kaiser/Postmedia