

THE BAY CURRENT

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There's Something Fishy In the Greenhouse

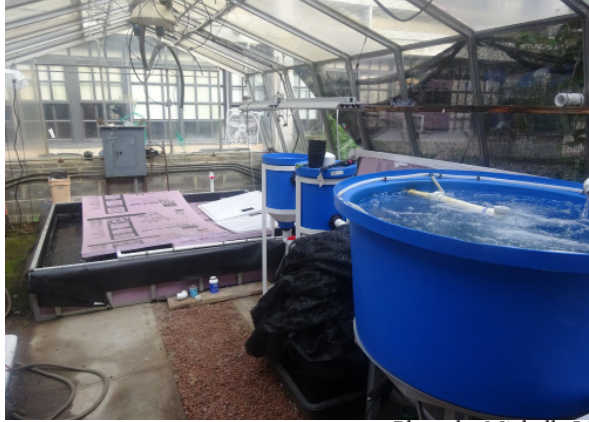
By Jessica Mindel and Gabriel Makovoz

Remember that fact we learned in elementary school about how plants need soil, water, sunlight, and oxygen to survive? Well turns out that's not always true, and proof is in Bay Academy's new hydroponic greenhouse. Although soil provides some of the nutrients plants need for growth, plants do not need soil to grow. The science department at Bay recently began growing a hydroponic garden, which is a method of growing plants without soil by using mineral nutrient solutions in water. The garden requires no pesticides to manage the quantity of greenhouse pests, such as bugs and centipedes, allowing crops to grow organically. By the time science teachers Mr. Lilly, and Mr. Davis complete construction in a few months, all of Bay Academy will be able to learn about the interesting way the hydroponic garden produces food.

So how does it all work? First, let's differentiate between aquaponics and hydroponics. Aquaponics is the combination of aquaculture (raising fish) and hydroponics (the soil less process of growing plants) that grows fish and plants together in one integrated system. Oxygen plays a very important role in making sure the garden works.

When you walk into the garden, you can immediately see a large, round tank filled with water. There, oxygen bubbles are produced. Mr. Lilly says, "Now, theoretically, you could grow plants using just the water and the oxygen bubbles, but because you are growing them solely in water, they are lacking nutrients." This is where the tilapia fish come in. With the fish in the first tank, though, we can't add fertilizers or chemicals to the water because

it'll kill the fish. This is why we will rely on the fish to do the "dirty work." They add their natural fertilizers (wink, wink) to the water. But fish have to exert ammonia, which is a colorless gas with a pungent smell, and if that ammonia builds up in the tank it can harm the fish. The next two smaller tanks help take care of that. First, water flows into a settling tank where solids are settled and the water



is calmed. The next tank is a biofilter which is crucial to the garden because it converts the ammonia that the fish made into nitrates that the plants can use. According to Mr. Lilly, "Plants can't use the ammonia when it's in its raw form that the fish produce; so you need an intermediate - the bacteria to convert it into nitrates." This special kind of bacteria grows naturally inside the tank. It takes care of changing the ammonia into a form the plants can use. After that, the water flows into the last big tank filled with the water and natural fertilizer that flowed through the other tanks.

Photo by Michelle Li

But how are the plants kept afloat in the water? Simple, through foam boards. The boards have holes drilled out of them just large enough for the pots that will hold the plants to fit snugly inside. The roots of the plant will hang in the water, absorbing all the goodness of the nutrients from the fish that are living in the tank while bubblers provide the plants with all the O2 they need. To conserve water, there is a pump that circulates the water from that tank back to the first one. Mr. Lilly said, "Once we filled it up, we haven't added a single drop of water in over four weeks." Think about how most people have to water their traditional gardens once or twice a day! That being said, Mr. Lilly and Mr. Davis have to constantly check on the levels of ammonia, nitrates, and acidity (P.H.) of the water to make sure it is balanced so the fish can swim around happily.

Despite the large effort it takes to manage the greenhouse, Mr. Lilly and Mr. Davis have been influenced by their love and appreciation toward gardening in order to create the hydroponic garden. Because of the lack of fish, the greenhouse will not be open for exploration and visiting yet. Interestingly, when the food production ramps up, Mr. Lilly and Mr. Davis have a fabulous notion of living on the crops for a month. I mean, can you imagine eating fruits and vegetables for a month without any type of junk food? I can't. Nevertheless, Mr. Lilly and Mr. Davis' main target when creating the greenhouse was to motivate health consciousness and biological awareness. Here at The Bay Current, we think they are on a delicious and fascinating path to success.

Meet Bay Academy's New Teachers



Ms. Savion, Latin

How many cups of coffee do you drink a day?

Two cups, light and sweet.

What is the worst car you've ever owned?

A Nissan Stanza, because I had no money. I now drive a 2017 Lincoln truck which I am much happier with!

Popcorn or candy at the movies?

Popcorn - it has fewer calories than candy.

What would be your spirit animal?

A dolphin. I always wanted to be a marine biologist. I encourage my son to be one.



Ms. Abdelrazzak, Special Education

What are some of your hidden talents?

I'm good at arts and crafts.

Would you rather exercise or stay at home and watch Netflix?

I think stay at home and watch Netflix.

If you had a superpower, what would it be?

To tell the future.

Cats or dogs?

Dogs.



Ms. Marinello, ELA

What's your favorite food?

Pizza. It always hits the spot. I could eat it every day.

What's your spirit animal?

The German Shepherd. They're determined, smart and have a lot of hair!

If you weren't teaching what would you be doing instead?

I would like to design roller coasters.

What's your favorite thing to do when you're not teaching?

Sleep.



Mr. Devivio, Social Studies

Have you ever broken a bone?

I've never broken a bone before.

What would be your talent if you were a student at Bay Academy?

My talent would be music, specifically woodwinds.

Thrift or designer?

I prefer thrift.

Favorite book?

Either "Ender's Day" or "The Giver."



Ms. Buback, Math

Who would you eat dinner with, living or dead?

My grandfather and Billy Joel.

What's the farthest you've ever travelled?

Greece.

What alternate time period would you like to have lived in?

I'd like to have lived with the Native Americans. I wouldn't need to be bothered - I could just wake up and pick some food.



Ms. Catala, ELA

Where does your family come from?

My mom is Puerto Rican and Dominican. My dad is Puerto Rican.

Where is your dream vacation and with whom would you go?

Anywhere in Europe. I would take my husband and kids.

Are you a procrastinator?

I do things on time to get them out of the way.

Where would your dream house be?

Cinderella's castle in Disneyworld.

To Be Honest...

Opinions are the columnists' own and do not necessarily reflect the opinions of The Bay Current or The Bay Academy.



By Malika Nasriddinova

To be honest, no matter how bad students may think it is, the SHSAT test is an important aspect of many teenager's lives. What is the SHSAT? Well, the acronym stands for Specialized High Schools Admissions Test and every eighth grader who chooses to go to a specialized high school must take it. The test will be graded and the scores will determine whether or not you'll be accepted into the high school of your choice. That being said, the SHSAT is fairly difficult. It covers the programs of 8th, 9th, and 10th grades. The time limit is three hours: 1.5 hours for the English section and 1.5 hours for the Math section. There is a total of 114 questions and in 2018 we've already been told it will be different from the previous exams. This is the hardest part about it—tutors can't fully prepare you for the test since they're not sure what's going to be on there. But even if you can't afford a tutor, you can study by yourself.

However, Mayor Bill de Blasio recently finds issue with this and has proposed revising the admissions criteria governing eight of the specialized public high schools in New York City. Instead of using the SHSAT exam, they would take the top 7% of students from every public middle school. This would make the student bodies more inclusive due to the fact that admissions are currently dominated by Asian-Americans (while African American and Latinos are particularly underrepresented). The mayor believes that the current student body is the victim of institutional racial discrimination since the system in place tips the balance of admissions away from some ethnicities and toward others. However, the blowback to Mayor de Blasio's plan has been severe. Alumni associations from some of the schools posted open letters of opposition and Asian-American community leaders rallied against the plan and accused the mayor of racism himself (which is ironic since that's the exact thing he's trying to address). But apparently the mayor thinks that removing the SHSAT is the right thing to do.

The acceptance into the specialized high schools is solely based on the SHSAT score a student receives. Some students are intelligent, but they just don't do well in school because they don't want to or simply because they think they don't have to. Additionally, some students just do their best to get good grades even though they aren't the top minds in their class. The top 7% of students I mentioned earlier would most likely include the students with perfect attendances and homework grades. However, some students are just absent from school a lot for tons of different reasons (many of which may not even be their fault). To be honest, if the test were to be removed, the top minds would be declined the opportunity to expand their knowledge and skills because the top minds' GPAs often do not fall in the top 7% of a middle school's ranks.

The argument where people say that, "Well, maybe some people just don't have the money to prepare for the test" may seem valid. But, those people can study on their own. There are many practice tests online, and even if you don't have the access to technology or internet at home, you could go to the library and use its computers. You can also have a friend help you and share whatever they learn from their tutors, just like a few of my own friends who ask me. There are many free programs throughout the city that prepare you for the test. For example, the Dream Program; most of their students get accepted into the specialized high schools of their choice. So, why can't other children try and do the same? To be honest, anyone can do anything if they set their mind to it.



By Elizabeth Goldengur

The Supreme Court is able to pass and veto laws and can prove if something that a President has done is unconstitutional. Becoming a judge on the Supreme Court is a enormous privilege and has to be deserved. It is also a lifetime position. Brett Kavanaugh graduated from Yale Law with distinction and worked in the capacity of a lawyer or judge. On July 9, 2017, he was nominated by Donald Trump to become the Associate Justice of the Supreme Court largely due to Kavanaugh's devoted life to public service.

On September 16th, 2018, Ms. Christine Blasey Ford came forward with a shocking allegation of sexual abuse by Mr. Kavanaugh which already occurred during their high school years in 1982. Ms. Ford is a professor of psychology at Palo Alto University with a PhD from the University of North Carolina at Chapel Hill. The repercussions of the allegations are significant. "If the allegations are not true, then his career, his family and his reputation have been irrevocably damaged. Anyone in his situation — that was not guilty — would feel outraged," said President Trump.

Because of these allegations, Kavanaugh's nomination approval was delayed while he awaited an investigation by the FBI. To say he was under a ton of scrutiny would be an understatement. On September 27, 2018, Mr. Kavanaugh gave his opening testimony in front of the Senate Judiciary stating that he "denies the allegation immediately, unequivocally, and categorically." His response was strong and emotional.

Many people were skeptical about the reasons behind why Dr. Ford came forward now, after 36 years of silence, just before Brett Kavanaugh was able to be confirmed for his position. Some say movements like Times Up which began in the past year as a way for women to gain strength and courage to speak out about their experiences with abuse point to the reasons why Ms. Ford spoke out. The movement has gained huge momentum and has given unity and a voice to many women who have been victims of sexual assault. Others say that her allegation was fabricated by the Democratic Party to destroy Kavanaugh's career. But a third camp exists, who said that Kavanaugh was innocent until proven guilty while the FBI were working on a thorough background check.

Curiously, this entire situation mirrors another allegation against a potential Supreme Court justice back in 1991 when Anita Hill claimed that Clarence Thomas sexually harassed her in a workplace setting. Clarence made it through the process relatively unscathed, and still sits proudly (primarily due to the United States' respect of due process).

While at this time I personally believe that Kavanaugh is innocent, United States law ensures that anyone and everyone is innocent until proven guilty. The Declaration of Human Rights states that "Everyone charged with a penal offence has the right to be presumed innocent until [proven] guilty." At this time, the FBI completed their search on Kavanaugh and found no conclusive evidence to support the allegations of Blasey Ford. In addition to this, Brett Kavanaugh has been declared the newest Associate Judge. To be honest, we need to respect our nation's basic tenants and allow Kavanaugh to live and work without issue until the evidence suggests otherwise.

Bay Back When



Photo courtesy of the Library of Congress

Fancy Swimmers Compete For Honors

by Emily Louie

Many people living in the Sheepshead Bay area are familiar with the bay. Although murky, dark, and at times a bit foreboding, the bay itself contains a huge number of organisms such as crabs, oysters, sea robins, shrimp, swans, and even ducks. Not so scary after all! Take a walk down Emmons Avenue and you'll notice the piers, yachts and fishing boats. Now, the bridge over the bay leads to Manhattan Beach. But, did you know that the pier actually used to be a beach itself? Back on July 16, 1914, the beach was used for a woman's fancy swimming contest. Mrs. Lillian Howard organized it and 40 ladies left with aquatic honors as part of the Women's National Life Saving Society. The purpose of the society was to teach women and girls how to swim to protect themselves from drowning, a common problem in the early 1900s. We should be proud of the history of our school's location and how it impacted lives.

Humans of Bay

Interviewed by Emily Louie and Victoria Solodkova

Meriam Mantaser's father, Abdul Mantaser serves in the military. He is a Sergeant in the Air Force, and used to be in the Marines before he started a family. He has been in the military since he was 18. Recently, Mr. Mantaser was deployed in Niger, Africa for 8 months and hasn't been home... until now.

Meriam was in ELA class when her father came in to surprise her. She says, "In the morning, I saw his (her father's) car but I didn't know he was there and I had to sleep over at my grandpa's house because my mom had an "appointment". I saw his car and I was never expecting for him to come to school. I was shaking when I saw him because I was really shocked but I was happy at the same time." Even the teachers were surprised and emotional at the reunion. Mrs. Maletta said, "We were completely grateful for his service to our country and our



Photos courtesy of the Mr. Weinstein

hearts were filled with love when his daughter saw him for the first time."

Meriam's father gets deployed every month for about a week to New Jersey, but has never been away for this long or this far away. Meriam is sad every time her father leaves, she says, "I felt really sad and depressed because he is always there for me." The good thing is, modern technology lets Meriam stay connected with her father; she says she Face-Timed him nearly every day when he was deployed.

Meriam is very proud of her father because he is about to become a Lieutenant and is also a police officer. She says, "I am really proud of him because he works a lot of the time. I'm not mad or sad because he's in the military, I'm really proud." Even though when her father is deployed, Meriam has to help out her mother with taking care of her younger siblings, Meriam is never anything but proud of her father's hard work and we thank him for it.



LAB NOTES



Surprisingly, the world doesn't know as much as you'd think about hurricanes, blizzards and tornadoes. It's mostly theoretical stuff. Hurricane season begins on June 1 and ends on November 30, so we are still in the midst of it.

By Jessica Mindel

Hurricane Florence, which hit in early September, was one of the most destructive major hurricanes to hit along the East Coast of America in some time, striking North and South Carolina. The destruction cost between \$38 billion and \$50 billion in damage and economic losses after bringing severe weather, tides, and flooding to the region. More than 1 million people had to evacuate and were displaced, with 10,000 of those people placed in shelters. Hurricane Michael, which just recently hit Florida, had sustained winds of 155mph and was the first category 4 hurricane to make land-fall on Florida's Panhandle and the fourth strongest storm ever to strike the United States. Experts estimate the damage will cost as much as \$30 billion, accounting for public infrastructure, uninsured property and lost economic activity. Even though these storms eventually end, how do these types of storms get so powerful?

Hurricanes, which are storms with extremely violent wind, are the most vicious storms on Earth. We don't really have to worry about many hurricanes because they mostly form near the equator. This is because warm air rises over the ocean water and is replaced by cooler air. The cycle continues and eventually storm clouds form. A single hurricane stirs up millions of miles of air and can dump more than 2.4 trillion gallons of rain a day. But along with violent winds and heavy rain, hurricanes can also create high waves, widespread flooding, and tornadoes.

Tornadoes can be even deadlier. A tornado is a violent, rotating column of air that extends to the ground. It forms when warm, moist air from the Gulf of Mexico meets cool, dry air from Canada. When these two air masses meet, rising air from the ground pushes up on the swirling air and tips it over. The funnel of swirling air begins to suck up more warm air from the ground. The funnel grows taller and taller until it reaches the ground. An important thing to know is that no terrain is safe from tornadoes.

Most of our information about these storms actually comes from storm chasers. As you can probably tell from the name, storm chasers pursue any type of severe weather conditions, from thunderstorms and hail to tornadoes. According to National Geographic, storm chasers typically chase after tornadoes, hurricanes, and thunderstorms. This may sound all action-packed, but storm chasers have to go through a lot of training to be able to do what they do. Professional storm chasers have meteorological training that allows them to understand the storms they're chasing so they can better predict when conditions are safe and when they are too extreme. What most people don't know when they think about storm chasers are the 8 to 12 hours spent driving around with no guarantee of actually seeing a tornado. You see, chasers start by checking the internet and radio satellites for places that may be the site of an oncoming storm. Then they drive around looking for towering cumulus clouds that may be the start of a formation of a supercell (an area of rotation within the storm called a mesocyclone) that can spawn a tornado. When they see a storm is forming, chasers will position themselves ahead of the storm. Sometimes they end up "core punching" or penetrating the rain and hail core to get to the part of the storm where they can see if a tornado is forming. You may be wondering, "What do they do when they catch one?" Take pictures, observe, and stay out of its way. Even though storm chasing is an incredibly dangerous job, we would know even less than we already do without them!

ASK A SENIOR

Advice from your peers

I think I have anxiety, but I'm too embarrassed to tell my parents, so I can't go to a doctor. What should I do?

Personally, if you think you have anxiety, then you should definitely tell your parents. Yes, it may seem like the last thing you want to do, but you shouldn't feel embarrassed opening up to them. Releasing your feelings will help lift the weight off of your shoulders. Telling them a little bit is a start. Nearly one in three adolescents (31.9%) will meet criteria for an anxiety disorder by the age of 18. So you're not alone.

The sooner you speak up, the better! Some people might not fully understand what you're going through, but telling them can lead to some more support. Being truthful will also help others know what you're facing and may get you the help you need.

In the end, you won't regret speaking to others about this situation. Dealing with these issues by yourself is tough, and you shouldn't feel embarrassed about it. As stated by Ms. Carlino, one of Bay's guidance counselors: "Talk to your school counselor or another trusted adult. You have the ability to develop the skills to overcome your anxiety. Anxiety doesn't have to control you. You can control anxiety."

Good luck!

If you have a question for our advice columnists, leave your question in our drop-boxes, outside room 244 or the second floor student bathrooms. And always talk with a trusted adult if you need serious and immediate help or advice. Our guidance counselors are a great place to start. See Mr. Caiati or Ms. Carlino in room 118.

What's Hot

By Milana Cevikce

Every day it seems like there's something new. A new shoe. A new app. A new dance. But one thing I've noticed a lot more than ever this year are the increasingly bizarre backpacks everyone is wearing. Everywhere you go in this school, it seems the hallways are filled with shark teeth and crazy patterns. The most popular brand seems to be Sprayground. These backpacks are admittedly pretty cool and if you're interested, just be aware that they could range anywhere from \$60, all the way up to \$200! There is a lot of artistic detail and style put into them, so I can see why people love them so much.

Have a comment, question or lead on a great story? Visit The Bay Current office in room 244 to share your ideas.

Another great option that seems to be a worldwide phenomenon, not just in U.S. 98, but throughout big cities in the United States and Europe, is the Fjallraven Kanken backpacks. Small ones start around \$60, but the bigger backpacks will run you over \$120 as well. Cost varies depends on the size of the bag, but according to reviews, these are all very durable and comfortable, making them the perfect "anytime" accessory for a day in the park, at school, or a hike through the woods.

However, if both of these price tags are simply too much, Zumiez.com has a number of pretty stylish options featuring brands like Adidas, Vans, and Converse which we highly recommend for more than half the price. Just remember that a bag, a shoe, a hat or a shirt does not define who you are. Be yourself, unashamedly, always. And who knows? Just maybe you'll start the next big trend yourself!



Photo by Amina Omanullaeva

Bay Academy's administration rose from the dead to celebrate Halloween, leading our school in a day of spirit and spooks.

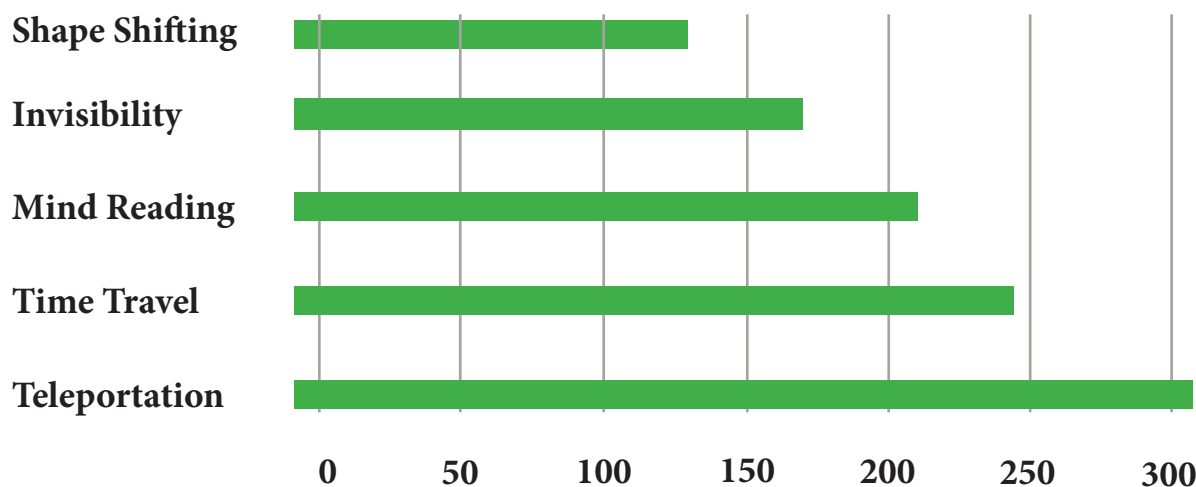


Photo by Emaan Fatima

Bay Academy students and staff participated in Denim Day to raise \$847 for the American Cancer Society

We asked 1070 students:

What Would Your Superpower Be?



Scan the QR code to connect to Bay Academy's website. Find, dates, news and events happening now at Bay Academy.



REVIEWS IN THE NEWS Books To Check Out

Wildcard by Marie Lu
Reviewed by Iris Chan

In *Wildcard*, the second installment in the Warcross trilogy, Emika Chen must choose between the greater good and the love of her life, Hideo who wants to erase all crime with mind control. He's become a part of her world, especially after her father's death. Engrossed in a web of lies and betrayal, every decision she makes has the potential to change the world. Emika is forced to make a deal with the devil when a bounty is put on her head.

The reader must hold onto every word, from the portrayal of the characters to the way you can relate to their personal battles. Attention to detail makes this fast-paced story inconceivably heart wrenching. *Wildcard* doesn't simply entertain, it emphasizes the importance of free will and humanity.

Catcher in the Rye by J.D Salinger
Reviewed by Victoria Solodkova

Catcher in the Rye follows the mind of adolescent Holden Caulfield. Holden is a rebellious teenager who is expelled from yet another boarding school. We see 16-year-old Holden leave his school early and go to New York City where his family lives. He meets many different people and has judgments for everyone. Holden has an obsession with pointing out phonies, and the only person we see him make a real connection with is his little sister, Phoebe. Filled with teenage angst, Holden's observations have small pearls of wisdom and pent-up frustrations.

This book doesn't have adventure or actions, but is beautifully written. It is captivating to see inside Holden's mind, yet if you like a book with a big climax, you may be bored. Regardless, I think at some point in their lives everyone should read *Catcher in the Rye*.

Throne of Glass by Sarah J. Maas
Reviewed by Erica Indman

Throne of Glass is the first in a 7 book series, set in a fantasy world in the kingdom of Adarlan. The novel follows the story of Celeana Sardothien, the most feared assassin in her world until she was captured and put in the salt mines of Endovier. Initially, Celeana is taken out of the mines by Dorian Havilliard, the charming crown prince. The king is holding a contest to find his personal assassin and Celeana is Dorian's contestant. Throughout the novel, she encounters challenges and adventures beyond the imagination, with an epic ending definitely worth the read.

Throne of Glass has a deadly contest, dark mysteries, intrigue, and romance, the characters are intricate and only get better as the series evolves. It's dark, it's thrilling and the plot twists won't allow you to put this book down. I'd recommend it to anyone who loves drama, a little violence, fantasy and has a penchant for action.

DRAWN TOGETHER



Top, left to right: Kamilla Avezova, Sabina Barakaeva, Gabriella Zheng
Middle, left to right: Michelle Zhong, Marcia Yang, Anastasiya Zhirova
Left: Elene Shalamberidze

Organization Tips to Start the Year Off Right

- Bullet journals are a simple and orderly way to increase productivity.
- Color coding has been known to promote coherent thinking and memorization.
- Filing boxes are an affordable and simple way to organize old notes and assignments you might need again.
- Set reminders on any devices you regularly use to stay on top of assignments and assessments if traditional planners aren't your style.
- Create incentives for yourself to get things done on time.

WHAT WE'RE WATCHING...

- ON NETFLIX...** *Atypical* is the story of a teenager searching for love and independence despite his autism and overprotective family. *Stranger Things* is a refreshing combination of 1980's cinema and science fiction; *To All the Boys I've Loved Before* is a contemporary twist on the typical romantic comedy and coming of age story.
- ON YOUTUBE...** ASMR (Autonomous Sensory Meridian Response) is oddly satisfying and known to reduce stress levels, improve blood flow and mood, the perfect excuse to watch soap cutting videos. -Technology channels are watched obsessively, especially when they include unboxing of new releases such as the new iPhone Xr and Xs. -Unboxing channels are perfect for exploring new products without the hassle of going into a store, exploring different perspectives and light entertainment.