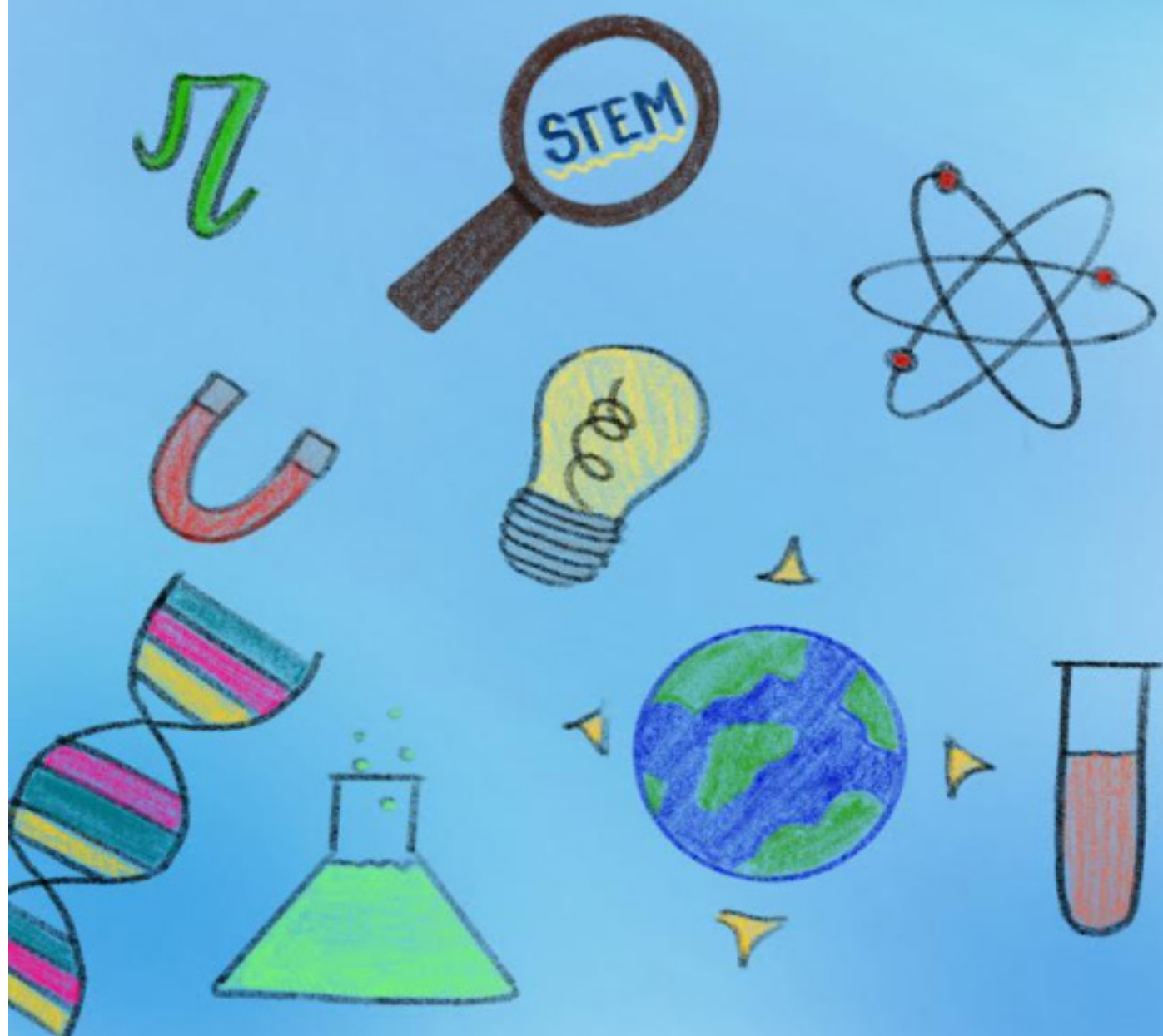


STEMIA SCOOP

Go Sparks



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Cultural Week

By: Jude Olsen

As surely everyone is aware, we have a wide variety of cultures and ethnicities who attend our school. From February 8th to 10th, we celebrated our first-ever cultural week at STEM Innovation Academy. Every day from Wednesday to Friday, we had a new event to celebrate the diversity in culture of our student population. On Wednesday, we had cultural attire day, where students were invited to wear clothing and accessories which represent their culture. Many students came to school in intricate and unique attire, and it was super interesting to see everyone's culture being represented by their clothes. On Friday, people wore clothes bearing the colors of their home country's flag. Everywhere you went, you would see lots of bright colors everywhere. The coolest, and most-successful event of culture week took place on Thursday. At lunch, students lined up around the school to have a chance to attend the cultural food fair, where they could try lots of unique dishes from around the world, all brought in by students. For one dollar, students were able to try one portion of a meal of their choice. Lots of food was brought in due to the generosity of parents, and everyone was surprised by how popular the event was. Next year, we hope that cultural week will be even bigger and grander than it was this year.



STEMIA Science Fair

By: Harshini Patil

The annual STEM Science Fair this year was held on Friday, February 24th and run by Ms. Bretner. The fair is an opportunity for science enthusiasts to partake in research-experiment-innovation based projects for topics that they are interested in learning more about. As exciting new science projects were exhibited throughout the gym, judges from the School Board and local scientists themselves came to view the creative and ingenious projects. Many projects such as the "Rear-end crash detection test" project, and "How we can use robotics in surgery?" included models and working prototypes that helped enhance their project. The fair was a huge success, as many students also came to view the projects which have been in the works for a few months. "Preparing for the fair can be pretty difficult and stressful," said a runner-up, "but the end results are totally worth it." The competition to advance to the Calgary Youth Science Fair was quite intense, as there were close to 50 participants and only 18 available spots (9 winners, 9 runner ups). The CYSF competition will be held in-person on April 21st, where our 18 STEM winners will compete against other schools around Calgary for medal prizes (bronze, silver, gold) and possibly advance to provincial and national level fairs.



A few of the projects that were displayed were:

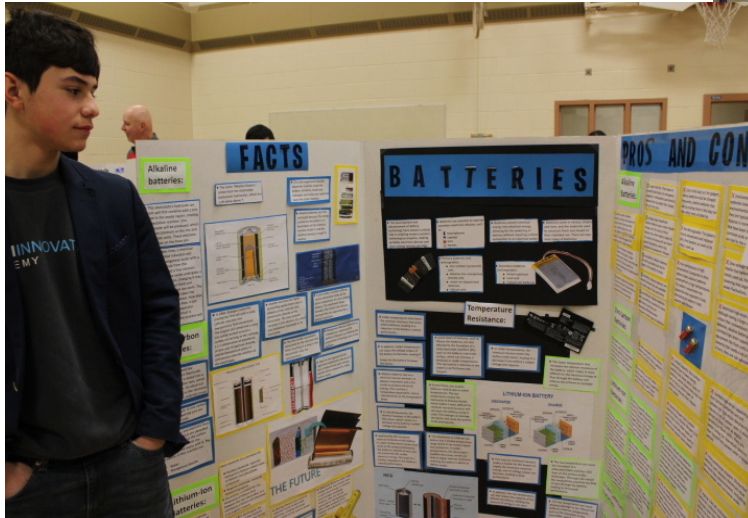
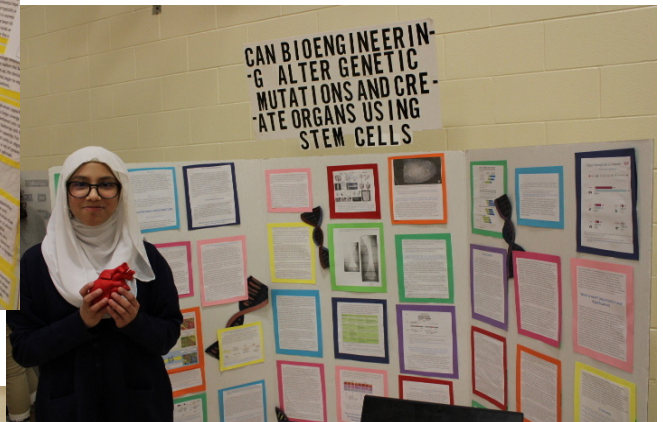
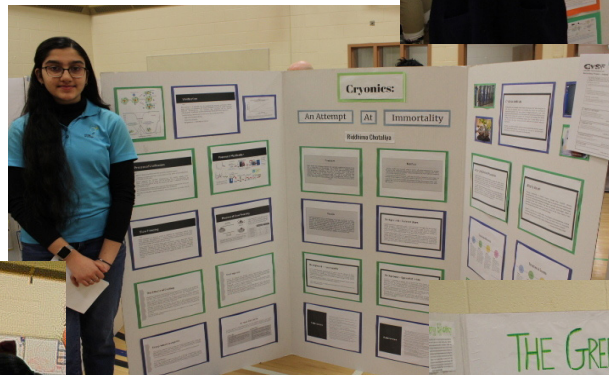
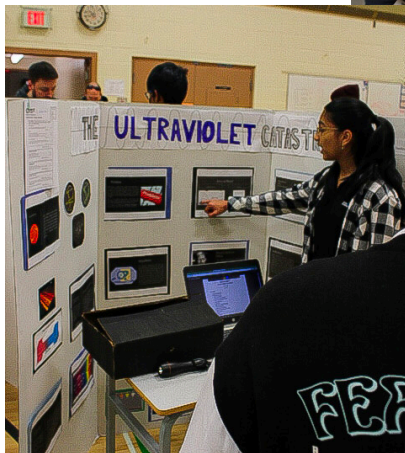
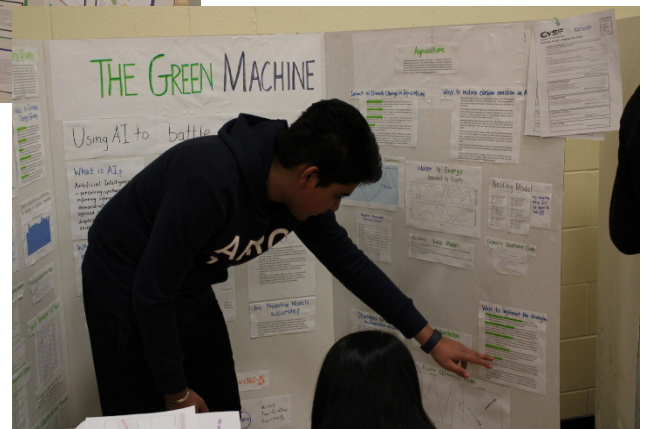
- Cryonics: An Attempt at Immortality
- The Ultraviolet Catastrophe
- Benford's Law to Expose the Truth
- The Science Behind Rollercoasters
- Using Real-Time Object Detection to Improve the Safety and Quality of Life
- How Can We Detect Lung Cancer

1st Place Project Winners:

Study: How can we use CRISPR to cure colour blindness? (Aryaman Anand)

Experiment: How do negative and positive reinforcements impact an athlete? (Josephine Trigg)

Innovation: Using Real-Time Object Detection to Improve the Safety and Quality of Life (Joel Amaldas)



Chess Tournament

By: Chloe Chiang

One move could destroy your battle plan. Or one move could win you that fallen king. This is chess, one of the oldest, strategical games. And STEM is presenting its very own chess tournament. The Chess Board Committee, consisting of the following: Mr. Hoffman (Gr. 8/9 math & science teacher), Phineas Sandro (Gr. 9), Ian Zubkoff (Gr. 9), Austen Chiang (Gr. 8), Pralekh Dahal (Gr. 8), Prabnoor Dawar (Gr. 9), Ishan Arvikar (Gr. 9), Brian Choi (Gr. 7), are currently hosting a chess tournament. The executive, Austen Chiang, since early January, has been recruiting chess competitors, and in the past few days, the chess tournament has been a big hit. Our executive has been seen mingling around the tournament room, and even competing himself. It seems that he's making a name for himself, but that raises a question: how did it all happen?



Getting Started

His love of chess started when he was only 7 years old, and flourished during his time spent at his local library.

"I first found out about chess when I went to the [local] Calgary Public Library. I found out there were these cool pieces laying on the table and I was going to figure out: What are they? With my dad, we both studied how the pieces moved. Every Sunday, the library would have chess boards, and there would be this old man who was a volunteer that helped teach kids play, and I was one of them. He was from CJCC, Calgary Junior Chess Club. He taught me for a little while, but not long, because it was getting busy. I didn't meet him that much, but I began to really like chess after that."

It's Significance

It's all about using that momentum to push you to do something great, and Austen was able to recap how he nurtured his love of chess to grow and flourish.

"To me, chess is a strategic game. Every move impacts your future, and there will be these puzzles, these stumps, you'll be passing through, and each stump, you'll have to figure out how to get out of.

I like the competition and also the winning. Making these moves, these traps, that are brilliant, moves that shocks the other player and also me, makes me happy. When it comes to winning, there will come these stops and bumps which makes it harder for you to win. It's basically a challenge, and it's enjoyable."

The Tournament

There is a thin line between failure and success, and sometimes, all that's between the two outcomes is that leap of faith.

"When I first started the chess tournament, it was mainly me and my friend, Prahlek, and Mr. Hoffman. Then later on, we started a chess committee with many other students from grade 7 to 9 to help out with organizing the tournament.

"It was my idea to start this tournament, but with the help of everyone else, this idea became real. It all started with a piece of paper. On the paper, there were the people who wanted to be in the tournament. But since there were only 5 chess boards at the start, we couldn't have that many games going on at the same time. But later on, when other boards came, we could let more people join. Now there are around 40-50 people.

"At the start, it was kinda like you're not sure if it's going to be successful or not. But later on, when round 1 began, the chess committee believed that the tournament was going to be successful.

"Knowing how many people joined in the chess tournament, you feel this kind of happiness. It gave me this spark of glory that made me happy about what I did."



Advice

Starting something new, no matter how old you are, it is going to be hard. But as long as you fight against the odds, something will come out of all your hard work.

“First of all, I’d say: Look for the opponent's attack. Think about what they're going to do and think about ways that will help you defend but at the same time attack your opponent. Also think about ways you can trick your opponent; outsmarting them by moving pieces to a spot. But if you can’t reach that point, obviously keep trying and don’t give up.

“If you’re losing, the best thing you want to do is to draw the game. When you play chess, you are either in a winning position, an equal position or a losing position. The main thing you want to do when you're losing, is to get your opponent to draw. Make a smart move, if possible, to force your opponent to draw a stalemate.”

Future Tournaments

We all hope that more tournaments will enter our future, after all the success of this one. Here’s what Austen has to say about this:

“Since this was the first tournament of STEM, it took a lot of tries and many mistakes. In the future, when we organize a chess tournament, there will be much more success than the one we are doing currently. For example, there will be more rules, more understanding towards the rules of chess, and also the understanding of clocks and bracketing.”

This is the story of how a grade 8 boy was able to start a phenomenon with this thing called chess. We hope that more tournaments will happen throughout the years, and that many players, either beginners or advance, will come out victorious.



Semi-Finalists

We've all been waiting for this: the semi-finalists of the chess tournament. After long and tedious organization and lunch breaks, STEM's semi-finalists are finally determined! But before that, let's acknowledge and congratulate the people who played throughout the tournament and the ones who almost reached the semi-finals:

Group A – Evrett 9C; Joel 8F

Group B – Jacob, 8E, Eyad 8C

Group C – Daniel 8F, Danush 8D

Group D – Zaara 8G, Alex 8D

Group E – Jack 7B, Mani 8D

Group F – Austen 8D, Shuchir 8D

Group G – Luke 8D, Prabnoor 8D

Group H – Farhan 7C, Aarav 8A

The Semi-Finalists:

Austen Chiang (8D) v. Danush Ramanan (8D)

Daniel Rodioukov (8F) v. Jacob James (8E)

The Finalists:

Austen Chiang (8D) v. Jacob James (8E)

2023 Champion: Jacob James (8E)



Exro Technologies:

For several years, humanity has observed and studied global warming, and now strive to find a cleaner alternative to solve it. One of the solutions we've produced is changing to electric powered cars and vehicles. One of the main North American companies aspiring to make a change in this world is Exro Technologies. This is a technology company that pioneers intelligent control solutions in power electronics to help solve the most challenging problems in electrification, including electric powered vehicles.

In simple terms, Exro Technologies is a leading clean technology company that has developed new generation power electronics, by expanding the capabilities of electric motors and batteries. Their company is comprised of engineers, and other innovative fields of work such as lab workers, product designers, and technicians spread throughout North America. These workers endeavor towards a cleaner, and renewable future.

How is Exro Technologies expanding our electric horizons?

Exro Technologies mission is to utilize minimum energy with maximum results to expand the boundaries of control in e-mobility and energy storage. In broad terms, this means that they are focusing on a cleaner future, where we can make use of the ability to use less energy, while gaining the benefits of a cleaner future. This not only produces less carbon emissions, but we can also use less energy. To expand their grasp over the electric industry, the company has paired up with several other commercial partners.





Penultimately, how is Exro Technology utilizing this ability and inserting this technology into vehicles? Being a newer company, they have designed two main inputs for vehicles. One is called the Coil Driver, and the other is the Cell Driver. The Coil Driver is the most intelligent electric motor controller, optimizing electric motor performance and efficiency via direct control of the motor coil windings. The Cell Driver is a fully integrated unit, equipped with Exro's Battery Control System™ (BCS). BCS is an innovative battery management inverter combined with an advanced cell control software that enables a greater depth of control on the cells and extends retired EV battery cells into second-life energy storage applications. These are the two major ways that Exro Technologies is working towards a cleaner and brighter future.

In conclusion, Exro Technologies is investing their resources for a brighter, and more sustainable future for all of us. If you are interested in learning more about how Exro Technologies is changing the world one vehicle at a time, you can check them out at www.exro.com.

The Origin of Valentine's Day

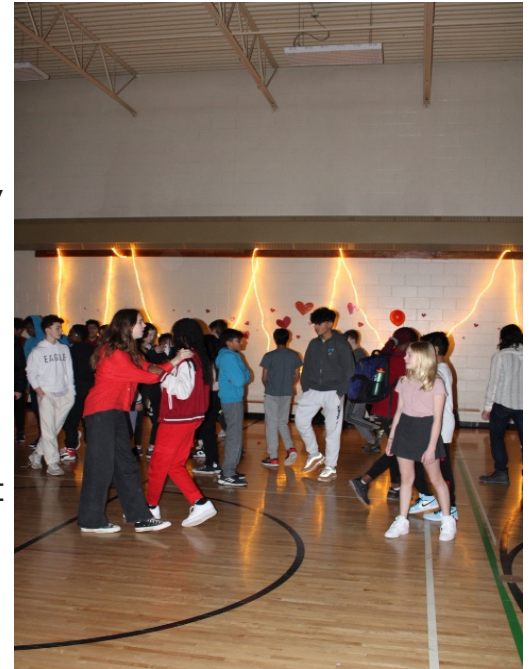
By Shewa Adekanmbi

The month of February is known for many things. Here in Canada, it's known for cold weather, Black History Month, and most recognizably of all, Valentine's Day.

On February 14th, STEM Innovation Academy held our own Valentine's Day Dance to celebrate this day of love. However, have you ever wondered how Valentine's Day truly came about?

The origin story of Valentine's Day starts way back in ancient Rome, circa 6th century B.C. At the time, this holiday was called Lupercalia. It was a festival of fertility that celebrated the coming of spring and the Roman god of agriculture, Faunus. Roman priests would sacrifice goats and dogs, turn the hides of these animals into whips, dip them in the sacrificial blood, then go out and slap both the local women and farming crops with the whips. You and I might find this practice odd, but the women of the time welcomed it, as this practice was said to bring fertility and make childbirth easy. It was quite a far cry from what we currently celebrate on February 14th, don't you think?

How did Lupercalia evolve into Valentine's Day as we know it today, though? Well, this transformation had to do with the Catholic Church. Pope Gelasius I forbade the pagan holiday of Lupercalia around the end of the 5th century, dedicating the day to the martyr, St. Valentine. There were multiple St. Valentines who had been executed over the course of several years, however, and historians are unsure which Valentine was referenced with this holiday. In fact, there were two Saint Valentines that were executed on February 14th (albeit in different years), so this day is speculated to be named after these two saints. It took several centuries for St. Valentine's Day to evolve into the romanticized version that we presently know. Around the Middle Ages, the English poet Geoffrey Chaucer made the first link between this day and the concept of being in love. In his poem 'Parlement of Foules,' he writes: 'For this was on seynt Volantynys day. Whan euery bryd comyth there to chese his make.' This was in reference to the belief that, at the time, a popular birds' mat-





Advice

By: Sara Waqas

Thank you so much for consulting the STEM IA Scoop with your questions! If you want your question to be featured in the next edition, contact any Scooper, and provide them with your query. Remember, you are never alone and branching out to a trusted adult, therapist, or emotionally mature peer is the best way to adequately deal with your hardships and prevent them from escalating.

"I want to be a family lawyer so bad, but my parents are always like 'oh you need to go into stem' what do I do??"

This situation is complicated because you seem adamant about pursuing a career in law, but your family is encouraging you to consider STEM fields.

Before you commit, it is important to explore your interests in law and understand why you feel drawn towards it. Research the field, talk to lawyers, and see if you can shadow them for a day to gain a better understanding of what the job entails. Even watching some "day in a life's" on YouTube can give you insight into family law and if you would enjoy it.

Having an honest conversation with your family about your goals and interests is also crucial. Explain to them why you are passionate about law and how it aligns with your long-term goals. However, it is important to also acknowledge their concerns and listen to their perspective. They have valid reasons for wanting you to pursue a career in STEM, such as the potential job opportunities and financial stability.

The decision should be yours and not influenced solely by external pressures. Consider all the factors and make a decision that aligns with your interests, values, and goals. Junior high is your time to explore yourself by finding your passions, and more importantly, discovering what you find unfulfilling. Regardless of what you pursue, dedication will propel you towards success. "There is always a spot at the table for handworkers." – My second-grade teacher.

"Ever since middle school I feel so incredibly average. It is like when I went to grade 6 everyone just became better than me and left me behind. What do I do with that information...?"

I can derive from this question that your perception of yourself is reliant on how well those around you are doing.

Let's unpack this and look at the word "average" neutrally. Average is defined as the middle/normal, and unless you associate the term with negativity, being average should be comforting. Contrary to elementary, students in junior high are starting to pursue their interests and are pushed by their parents to excel. Prior to junior high, you had an advantage over your peers; you were naturally academically inclined, and you were "above average." Now that you are surrounded with exceptional people, the standard of excellence has been raised and you are barely passing for average. Being surrounded by people who are better than you can actually be a positive thing. It can motivate you to work even harder and strive towards becoming the best version of yourself. Constantly being showered with praise and validation may feel good in the short term, but it will not help you grow and improve overall.

Instead of comparing yourself to others, focus on your own progress and growth. Set achievable goals for yourself and work towards them consistently. Celebrate your accomplishments, regardless of how they hold up against those around you.

It is important to remember that being average means you are on par with your "competition" (do not refer to your classmates as such) and is incredible, considering you believe everyone else is transcending to greatness. Do not internalize being "average" and liberate the word from any previous connotations you have associated to it. You have the potential to improve and achieve your goals with resilience and perseverance!

Thank you, again, for the incredible questions! Want your question featured in our next paper? Scan the QR code and ask away!



Stemias Wordsearch

#3

F P D I S S E C T F
C B R D Q N D U X X
I H S O E V M J M Z
P M E P C S G N A P
S H O M Y E I V T Y
G E Y T I M S G H M
G B P S O S D S N A
G H I C I R T H V H
N D A T A C W R P M
T I D Q H B S Y Y A

Chemistry ☐

Process ☐

Dissect ☐

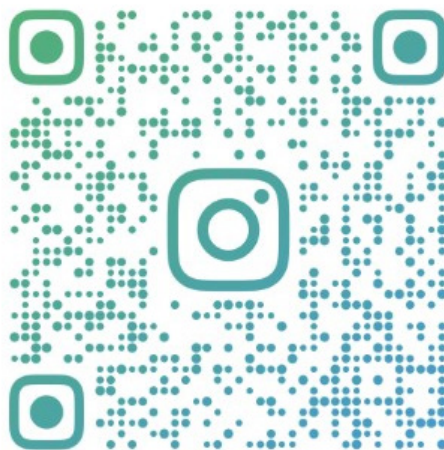
Data ☐

Design ☐

Motor ☐

Physics ☐

Math ☐



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