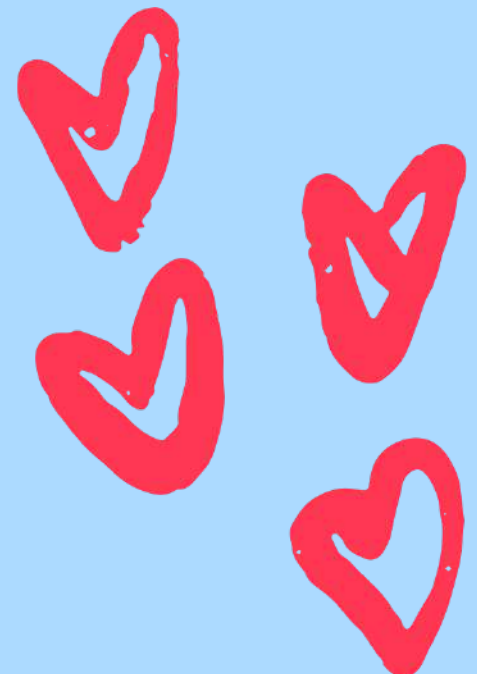




Spectrum



Oxytocin

THE LOVE HORMONE

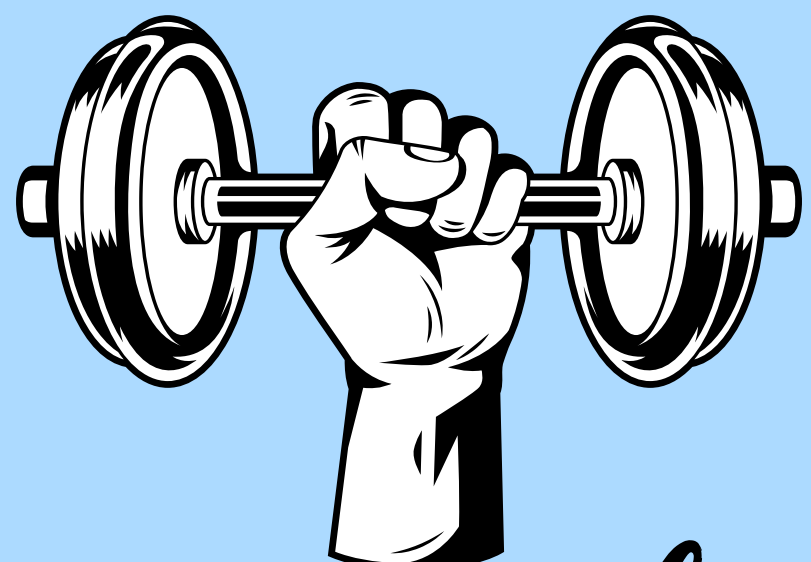
- Socialising
- Physical touch
- Petting an animal



Dopamine

THE REWARD HORMONE

- Achieving a goal
- Sleeping
- Eating food



Endorphin

THE PAIN KILLER HORMONE

- Exercising
- Listening to music
- Laughing



Serotonin

MOOD STABILISER HORMONE

- Sunlight
- Nature walk
- Mindfulness



Editor's Note

"Politics is for the present, but an equation is for eternity."

- By Albert Einstein, this time our science magazine has brought to you the very essence of a being's existence which is naturally happiness.

This journal presents to you the very essence of happiness and how science is at the very core of it all. Although you might think before reading that this too is one of those boring journals but I implore to you read till the end so you too might find happiness. This journal consists mainly of ways, how we find happiness in our day-to-day life and to enlighten us, on the science behind it all.

- Shrivansh Agarwal

In this Issue

CONTRIBUTION OF SCIENCE

TO HUMAN HAPPINESS

THE HAPPINESS CHEMICAL

WAVES OF HAPPINESS

TRUE HAPPINESS

SELF CARE

MERRIMENT WITH SCIENCE

COMIC STRIP

SCIENCE OF HAPPINESS

POSITIVITY IN DAILY LIFE

HAPPINESS IS AN EMOTION

POSITIVE PSYCHOLOGY

A Note from the Teacher

Editor

"Happiness is an emotional state, characterized by feelings of joy, satisfaction, contentment, and fulfilment". While happiness has many different definitions, it is often described as involving positive emotions and life satisfaction.

When the whole world is running after various materialistic things to gain happiness, the team spectrum has tried searching the key of this magic world "HAPPINESS" therefore we plunged into ocean of science and researched about "The Science of Happiness". We came across various chemicals, brain waves, simple activities that contributes towards the happy state of mind. Spectrum team has also interacted with lower school students to find out about their meaning of happiness. I am sure as you scroll down; each page would open a new door towards a happy world.

We take great pride in creating a quality publication that accurately reflects the institution it represents. We are always open to suggestions and critics, to be able to improve further. We will continue to unveil new surprises for you throughout the next couple of issues.

Dr. Alpana Dey

Teacher Editor

Contribution of Science to Human Happiness

- From Calvin XII 

Science has a very big role in today's life in which it has removed all the age - old ideas and superstitions which taught us how to look at things scientifically. It has invented number of things for human beings which made our lives very comfortable. People in the past believed that the earth was static while the sun and the other planets revolved around it. But later scientists proved that the earth and other planets revolved around the sun. In this way science has brought about a total evolution in human thoughts and actions in which it has totally changed our lives. Science has also invented computers, smart phones, emails and internets which have made our work very easy and comfortable. Today everything is done by the machines while human beings have to just simply sit at home and enjoy all these facilities. In today's world, we are not able to do anything without science. We are becoming more dependent upon them, but in return it also gives us happiness and comfort in our respective lives and works. For instance, People generally go to places of work by using one or the other vehicle. The food they eat is prepared on the stove or gas oven. The clothes they wear are prepared in big factories and mills. Apart from machines and technologies, science has also given happiness and joy through a sense of natural feeling. It includes dopamine, oxytocin, serotonin, endorphin etc. which enables not only happiness but also inner peace and harmony in our respective lives. It allows us to maintain a good mood stabilizer and a pain killer which kills the pains, stress and tensions that are present in our mind. Science is not only about technology, but in fact it is about everything right from the top to the bottom that is happening around the world. In today's world, people used to enjoy life only by depending upon gadgets and machines. But we all should know that depending only upon technology will only lead to laziness, self frustrated and addiction. Not only for a single day we cannot live without using our gadgets and devices. We should take it as a lesson and try to stabilize our life with natural love and affection. We can also spent some of our times going to gardens, sitting beside the trees and start carrying our works with traditional way like we had done in the past centuries. Science makes human-life easier and comfortable. However, it also exposes mankind to certain risks. Happiness is an inner-feeling of pleasant emotions while scientific discoveries should also be based on humanitarian objectives.

THE HAPPINESS CHEMICAL

Tenzin Peldon Thungon XII

The Happiness chemicals in our brain can rapidly and dramatically fluctuate our moods when activated. The four main mood-enhancing hormones are Serotonin, Dopamine, Oxytocin and Endorphin which effects ranging from boosting pleasure and satisfaction to controlling anxiety and stress. We often think positive events makes us happy but the happiness effect doesn't last. Instead, science shows us it's the little things we do everyday that builds happiness over time by focusing on increasing the happy chemicals in our brain. Serotonin is associated with satisfaction, improving social behaviour, physical, cognitive, emotional and metabolic functions. Low serotonin can cause depression, sleep trouble, thoughts of suicide etc. It is the most common antidepressant medicine to all. Our brain releases Dopamine during activities that are considered pleasurable. It is involved in the reward circuit in our brain and helps to motivate us towards our tasks, effects of low dopamine are demotivation, low concentration, anxiety disorders, constipation, weight fluctuation and many more. Dopamine and Serotonin level can be increased naturally by exercising regularly, gratitude, remembering happy memories, achievement, nutrition etc. Oxytocin is a peptide hormone involved in childbirth, trust, social connections, mother-infant bond, empathy. It is also known as 'bonding hormone'. It acts as a chemical messenger which helps us to feel loved and connected to others. Endorphins reduces pain, discomfort gives us euphoric feeling, improves self-esteem. Release of endorphins is a way of keeping us away from feelings of pain and moving towards pleasure. We can increase endorphins by eating dark chocolate, listening to musics we like, laughing, eating spicy food, getting massage, meditating etc. Dopamine reward system makes us feel motivated to think and plan to do a particular task which is further enforced by the endorphins that are released during the actual act of doing the task. Endorphins are the quicker-acting feelings while dopamine is the longer acting afterglow. Our behaviours and moods are generally shaped by these hormones as they are released throughout the day. It's fair to say that we all want to be happier. We can hack our happiness hormones by experiencing and finding out ways in which we feel more comfortable and we can also research on how to hack or increase them to feel happier. We should focus on keeping ourselves mentally and physically healthy. Science really does help us a lot in understanding our mind, body and how to hack the happiness chemicals to become a happier person.

Reference : www.verywellmind.com

DOPAMINE

THE REWARD CHEMICAL

- Completing a task
- Doing self-care activities
- Eating food
- Celebrating little wins



SEROTONIN

THE MOOD STABILIZER

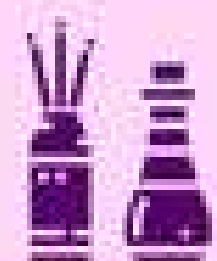
- Meditating
- Running
- Sun exposure
- Walking in nature
- Swimming
- Cycling



ENDORPHIN

THE PAIN KILLER

- Laughter
- Essential oils
- Watching comedy
- Dark chocolate
- Exercising



OXYTOCIN

THE LOVE HORMONE

- Playing with a dog
- Playing with a baby
- Holding hands
- Hugging your family
- Giving compliments



WAVES OF HAPPINESS

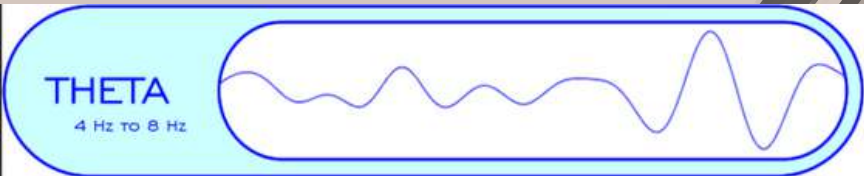
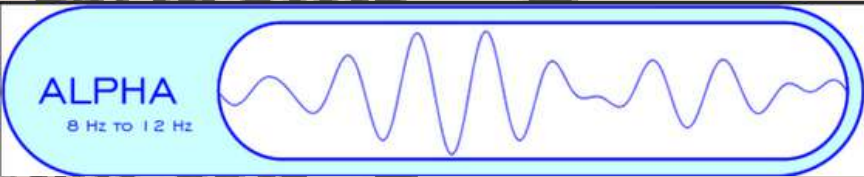
- ADIELLA KHARKONGOR - XII

HAPPINESS IN A NORMAL MAN'S LIFE WOULD MEAN A STATE OF JOY, CONTENTMENT AND GRATITUDE. BUT WHAT IF THERE WAS ANOTHER WAY TO DEFINE HAPPINESS? THAT TOO, ONLY IN 4 WORDS! "ALPHA, BETA, THETA, DELTA." DID YOU KNOW THAT THERE ARE DIFFERENT TYPES OF WAVE PATTERNS GENERATED WITHIN OUR BRAINS? AND DID YOU ALSO KNOW THAT EACH TYPE OF BRAIN WAVE IS REPORTED TO HAVE A DIFFERENT EFFECT ON OUR MIND AND BODY? THESE BRAIN WAVES ACTUALLY APPEAR TO MAKE US HAPPIER AND SOME OF THEM MAKE US LESS HAPPY. BUT MOST IMPORTANTLY, THIS CONCEPT SAYS THAT WE OURSELVES CAN INFLUENCE OUR OWN HAPPINESS. THUS ACCORDING TO THIS CONCEPT, WE CAN HAVE SOME CONTROL OVER OUR LEVEL OF HAPPINESS BY FINDING WAYS FOR OUR BRAINS TO PRODUCE THE "HAPPINESS" WAVES MORE THAN THE "UNHAPPINESS" WAVES.

BETA WAVES THE MOST RAPID OF THE FOUR WAVES IS CALLED A BETA BRAIN WAVE. BETA WAVES CAUSE PEOPLE TO THINK AND BEHAVE VERY POSITIVELY. THESE PEOPLE MAY THINK POSITIVELY AND BE CONSIDERED HIGH ENERGY OPTIMISTS. BY INCREASING BETA ACTIVITY - SPECIFICALLY IN THE LEFT HEMISPHERE OF THE BRAIN, IT MAY EVEN HELP WITH DEPRESSION. ALPHA WAVES ARE ASSOCIATED WITH SUPER LEARNING WHICH IS AN ABILITY TO LEARN, PROCESS, STORE AND RECALL LARGE AMOUNTS OF INFORMATION QUICKLY AND EFFICIENTLY. WHEN THERE IS AN INCREASE IN ALPHA BRAIN WAVES, AN INDIVIDUAL MAY FEEL FEWER SYMPTOMS OF DEPRESSION AND ANXIETY. AT THE SAME TIME, THERE IS A POTENTIAL FOR AN INCREASE IN CREATIVITY. THERE MAY BE A RELATION BETWEEN THE TWO. WHEN THE SYMPTOMS OF DEPRESSION AND ANXIETY FADE AWAY, THE POTENTIAL FOR EXPRESSING THE CREATIVE SIDE MAY BLOSSOM.

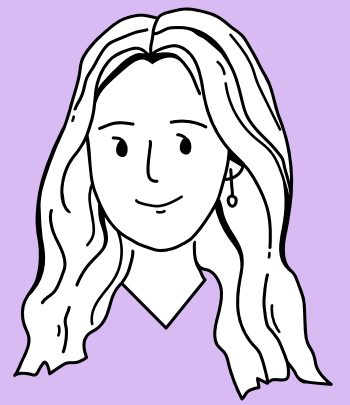
THETA WAVES EXPERIENCES WHERE WE SUDDENLY HAVE AN INSIGHT OR A GREAT IDEA ARE TYPICALLY ACCOMPANIED BY BURSTS OF THETA WAVES IN OUR BRAIN. THETA IS BEST KNOWN AS THE BRAIN WAVE STATE OF DREAMING SLEEP, AND IS ASSOCIATED WITH SEVERAL BENEFICIAL EFFECTS, INCLUDING INCREASED CREATIVITY AND MEMORY. BEST OF ALL, THETA WAVES ARE ALSO A STATE OF SIGNIFICANT STRESS RELIEF. IN THE THETA BRAIN WAVE PATTERN, THE BRAIN PRODUCES RELAXING ENDORPHINS THAT ACT TO REDUCE STRESS - PHYSIOLOGICALLY.

DELTA WAVES THE FOURTH AND SLOWEST BRAIN WAVE PATTERN IS CALLED DELTA, WHICH IS THE BRAIN WAVE PATTERN OF DREAMLESS SLEEP. ONE OF THE MOST PROFOUND EFFECTS OF DELTA BRAIN WAVES IS AN INCREASED SENSE OF EMPATHY AND COMPASSION FOR YOUR FELLOW HUMAN BEINGS. DELTA WAVES MAKES YOU MORE COMPASSIONATE AND MORE IN TOUCH WITH OTHER PEOPLE. DELTA BRAINWAVES ARE ASSOCIATED WITH A SENSE OF PEACE AND HARMONY. DELTA WAVES MUSIC HELPS ACHIEVE EVEN DEEPER STATES OF TRANQUILITY DURING MEDITATIVE SESSIONS.



Kids Corner

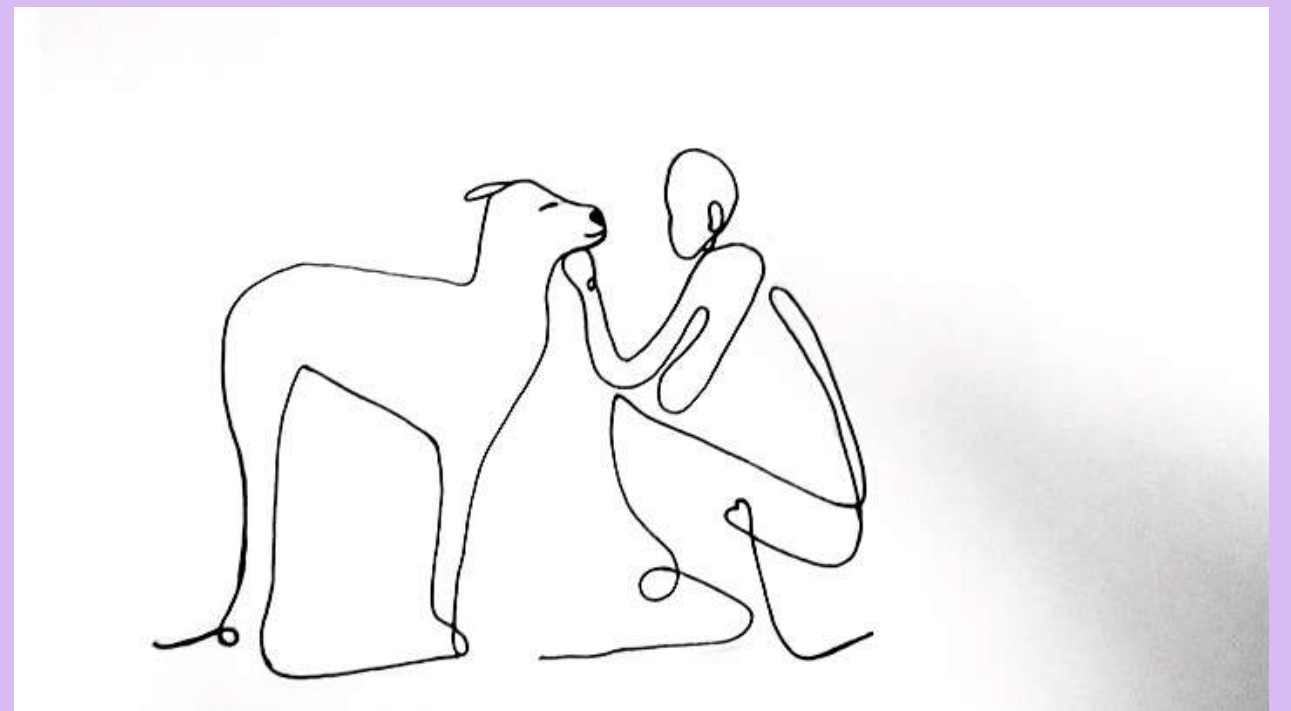
True Happiness



- Adrika Dey-VII 

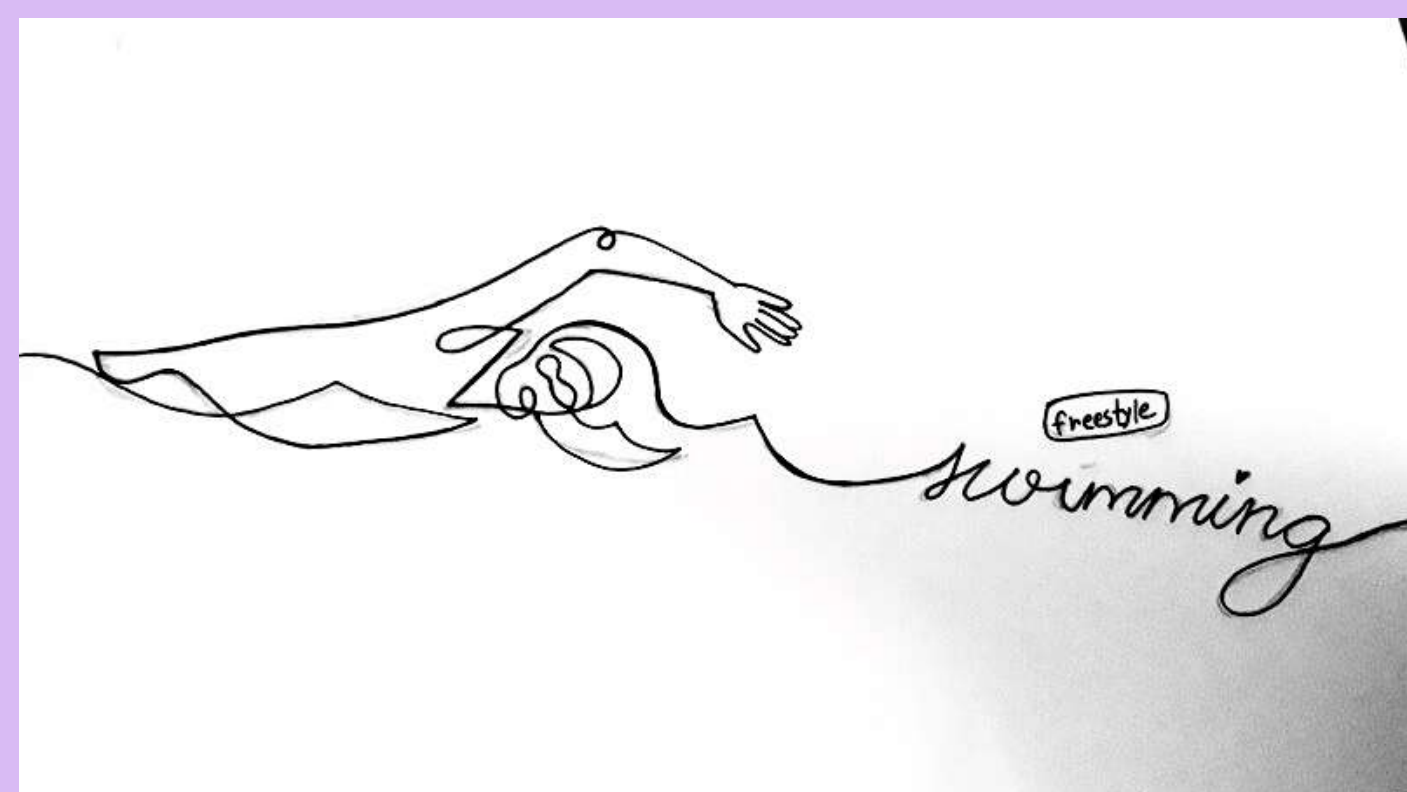
Tina was a naughty girl. she never did her homework and always caused trouble for others. she was never happy with her life when Tina's friend told Tina how she could scientifically take care of herself, Tina also started doing activities and took care of herself.

then her freind came to help. Tina's friend told some jokes to divert her mind, they both laughed a lot. In turn Tina's pain reduced due to the release of a substance called endorphin



She started cycling on the streets and felt happy due to the release of a substance called dopamine. During summers she went for swimming which made her happy.

she often sat in her garden and meditated for at least 15 minutes every day, she felt calm and happy due to the release of a substance called serotonin. she started visiting her friends and enjoyed playing with their pets, she loved playing with the animals due to the release of a substance called oxytocin. As Tina started taking care of herself, she became happier



What is the science behind happiness?



Academic Achievement causes release of dopamine that gives happiness and motivation to improve further

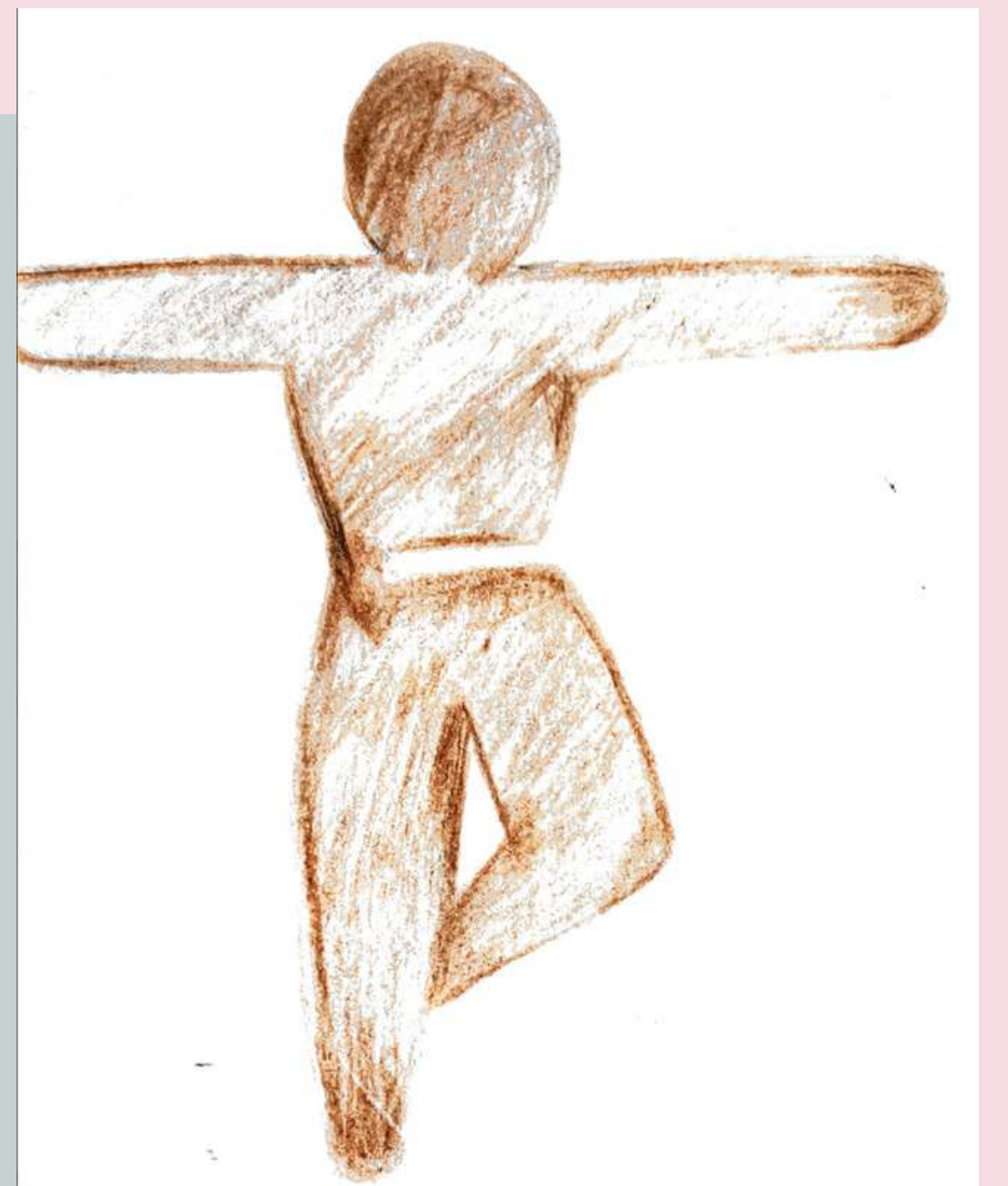
In this pandemic, computers have become very important part of our life





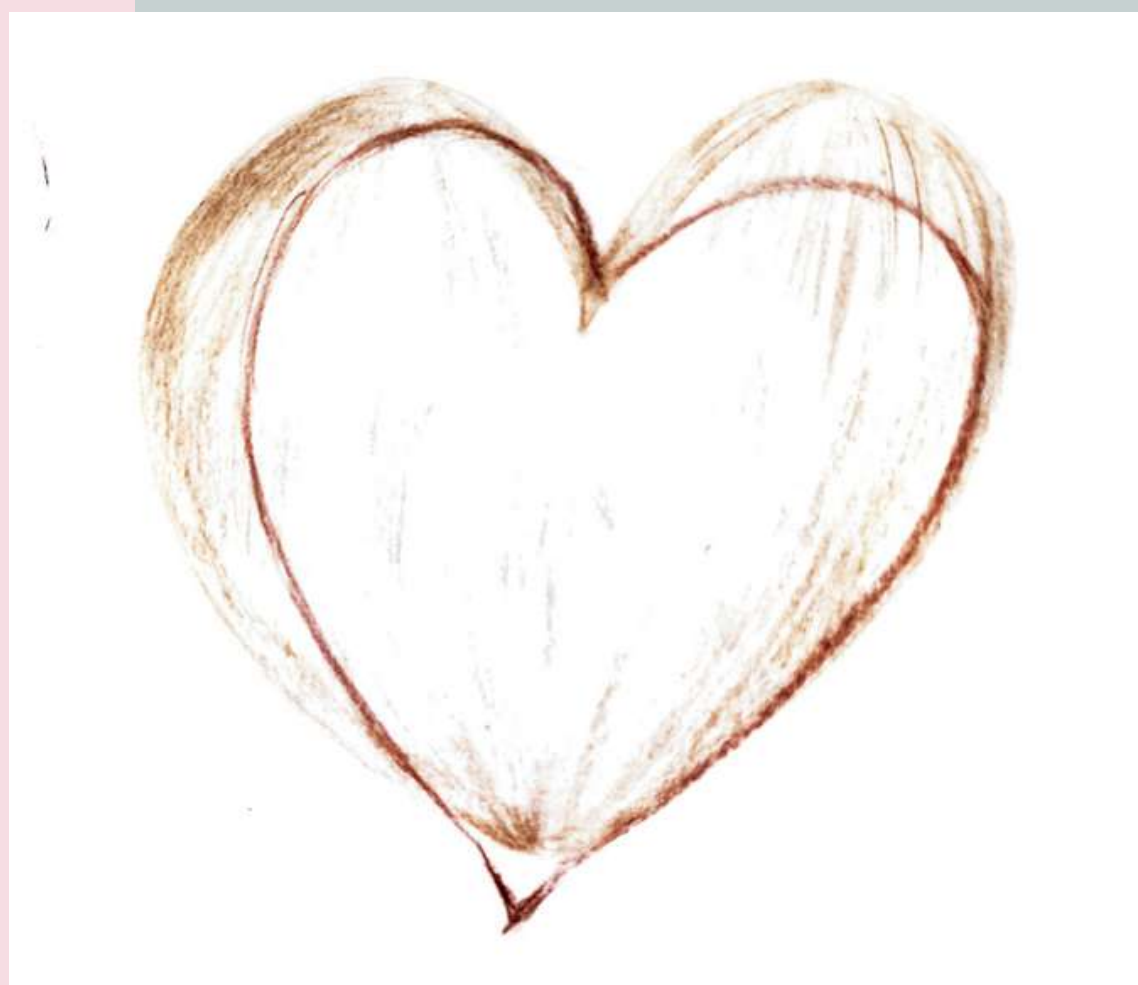
WORK

TIME MANAGEMENT
WORK BOUNDARIES
MORE LEARNING
BREAK TIME



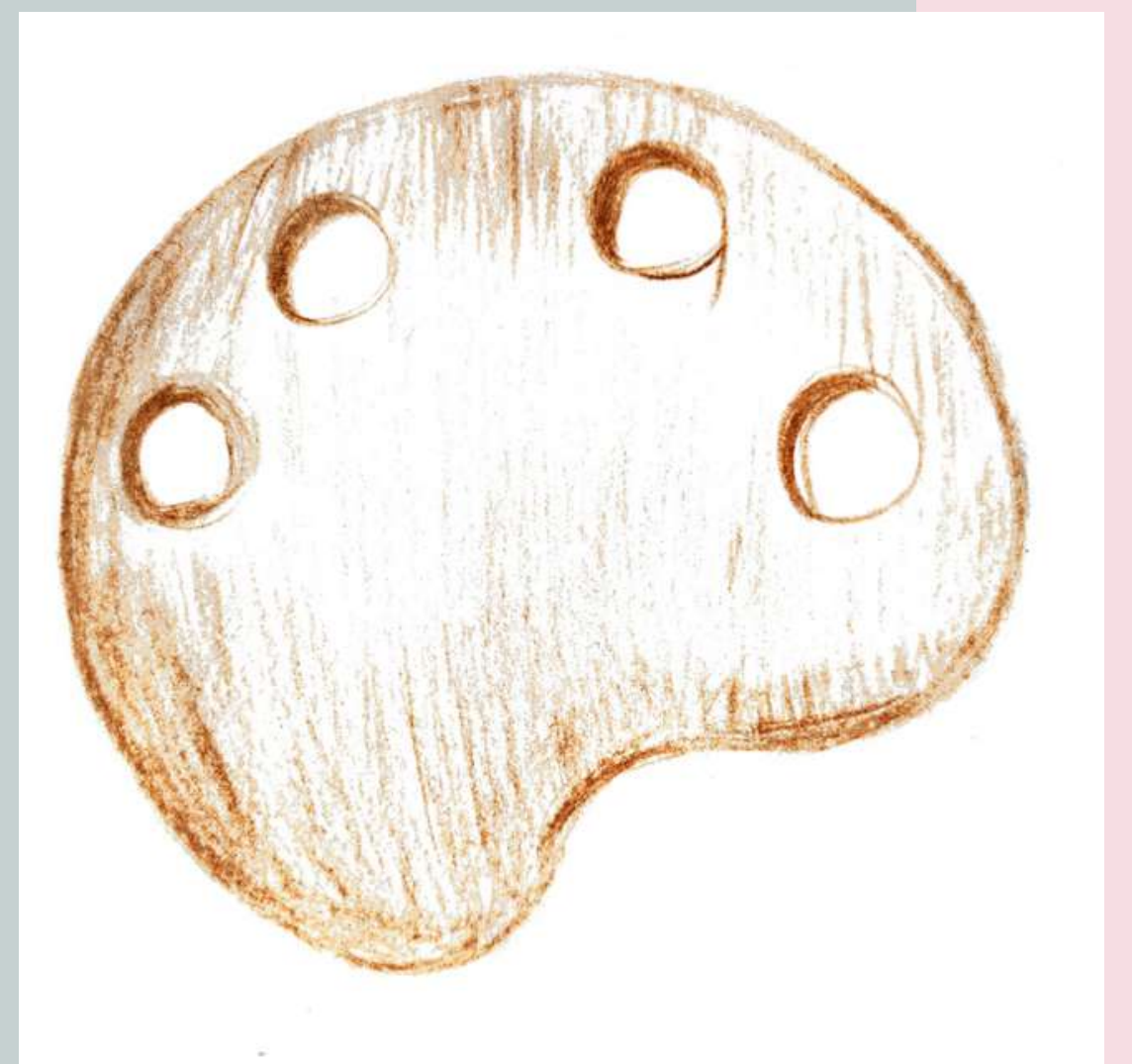
PHYSICAL

YOGA
STRECHING
EXERCISE
HEALTHY FOOD
REST
PHYSICAL RELEASE
WALKING



EMOTIONAL

STRESS MANAGEMENT
EMOTIONAL MATURITY
FORGIVENESS
COMPASSION
KINDNESS



PERSONAL

HOBBIES
KNOWING YOURSELF
PERSONAL IDENTITY
HONORING YOUR TRUE SELF

S E L F C A R E



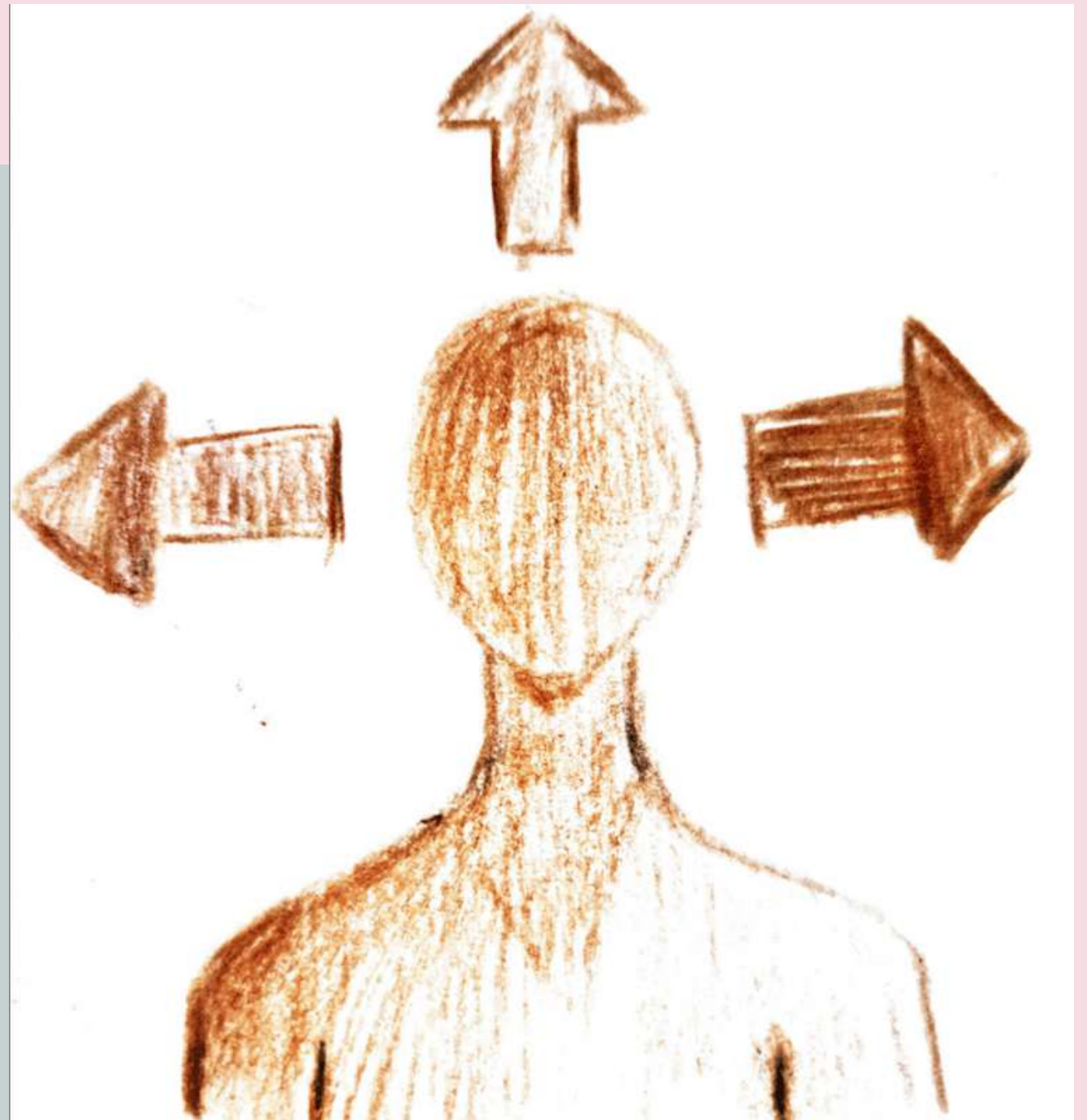
SPACE

SAFETY

HEALTHY LIVING ENVIRONMENT

SECURITY AND STABILITY

ORGANISED SPACE



SOCIAL

BOUNDARIES

SUPPORT SYSTEMS

COMMUNICATION

POSITIVE SOCIAL MEDIA

S E L F



SPIRITUAL

TIME ALONE, NATURE

MEDITATION, YOGA

SOUND HEALING



FINANCIAL

SAVING

BUDGETING

MONEY MANAGEMENT

C A R R E

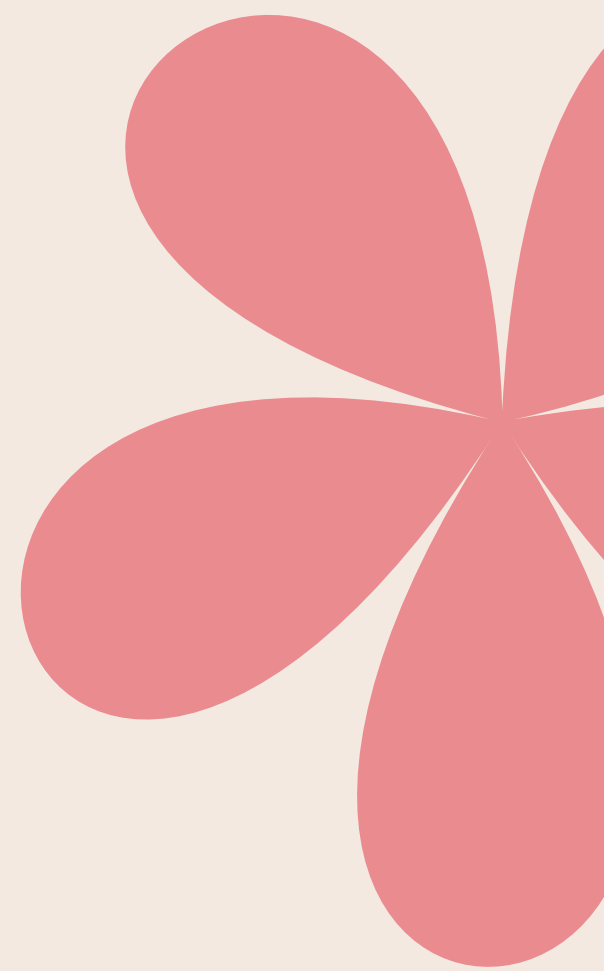
Merriment with Science

From Calvin-XII

Science cannot be defined,
It is something that cannot be
denied. Everything else works,
Everything else evolves,
Because of science.

It is both the question and answer,
To everything else around the
world. Whatever we do,
Whatever we think,
It is only because of science.

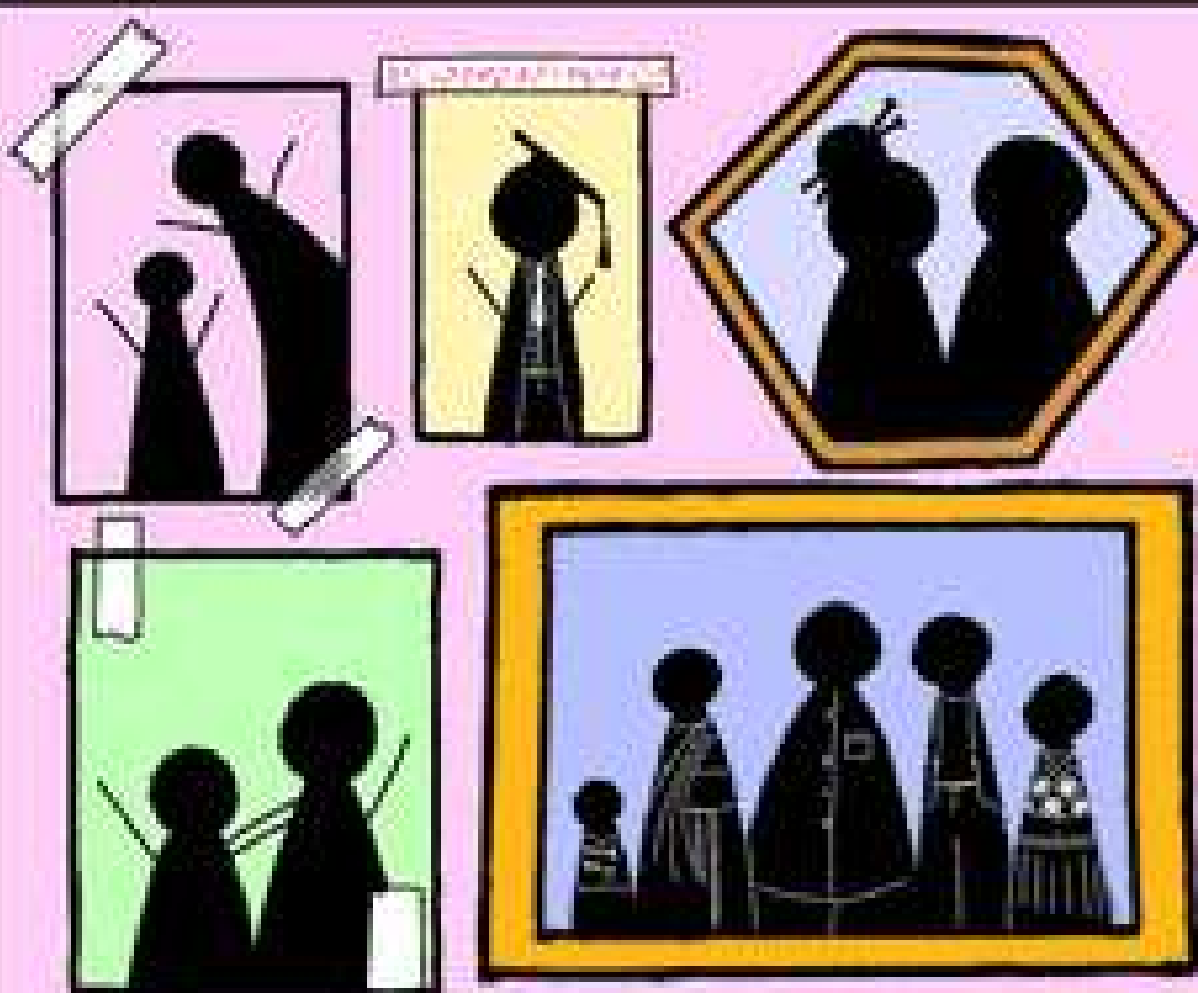
It brings happiness and joy,
Comfortable and easiness
To every single day. We
learn and honor it, Every
single day of life.



Jessi's company was not going too well, therefore he had to sell his company.



he was really sad as he lost his company and was going through a hard time.

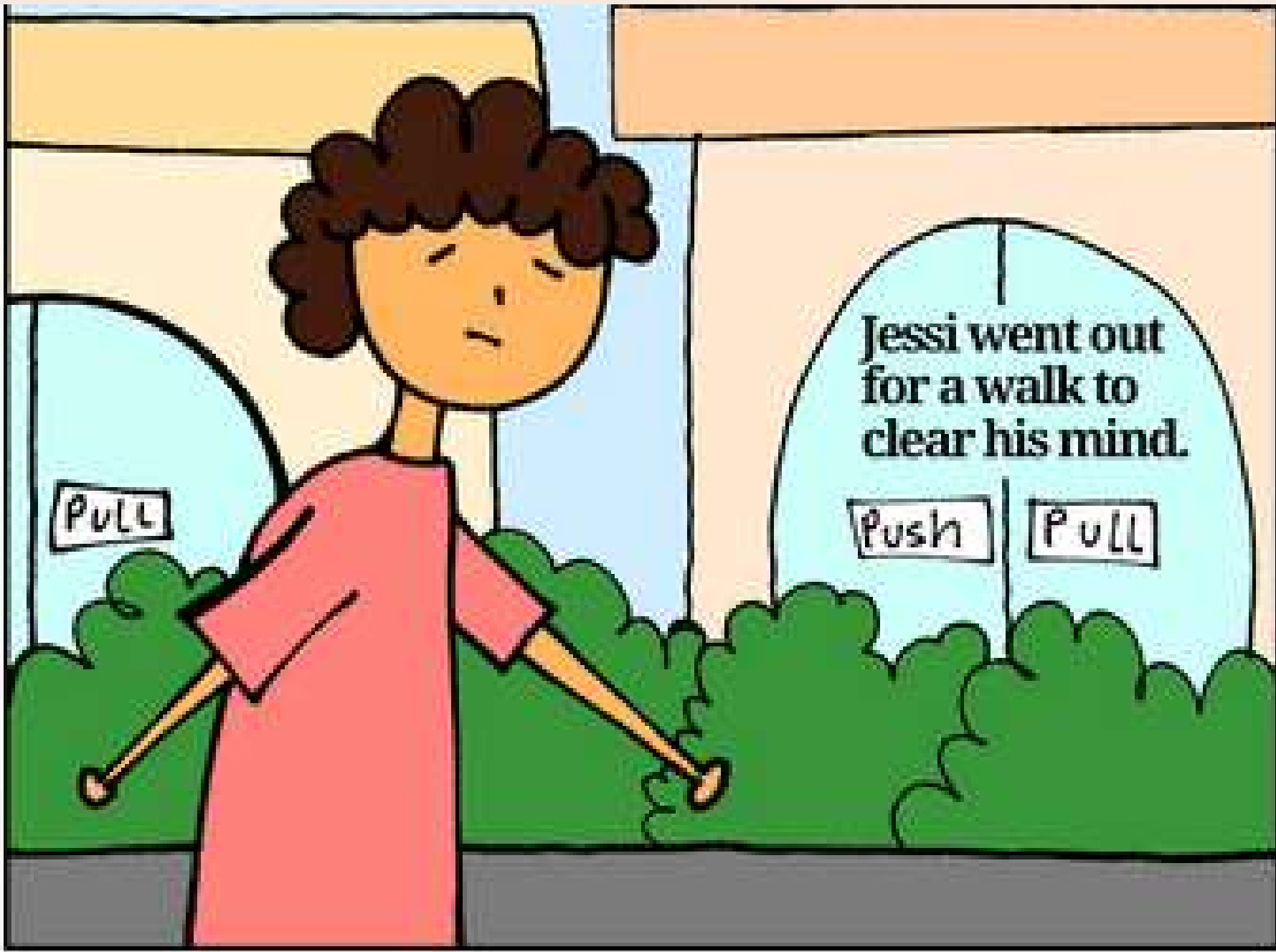


he really loved his family but one day they had a huge car accident and all his family members passed away.

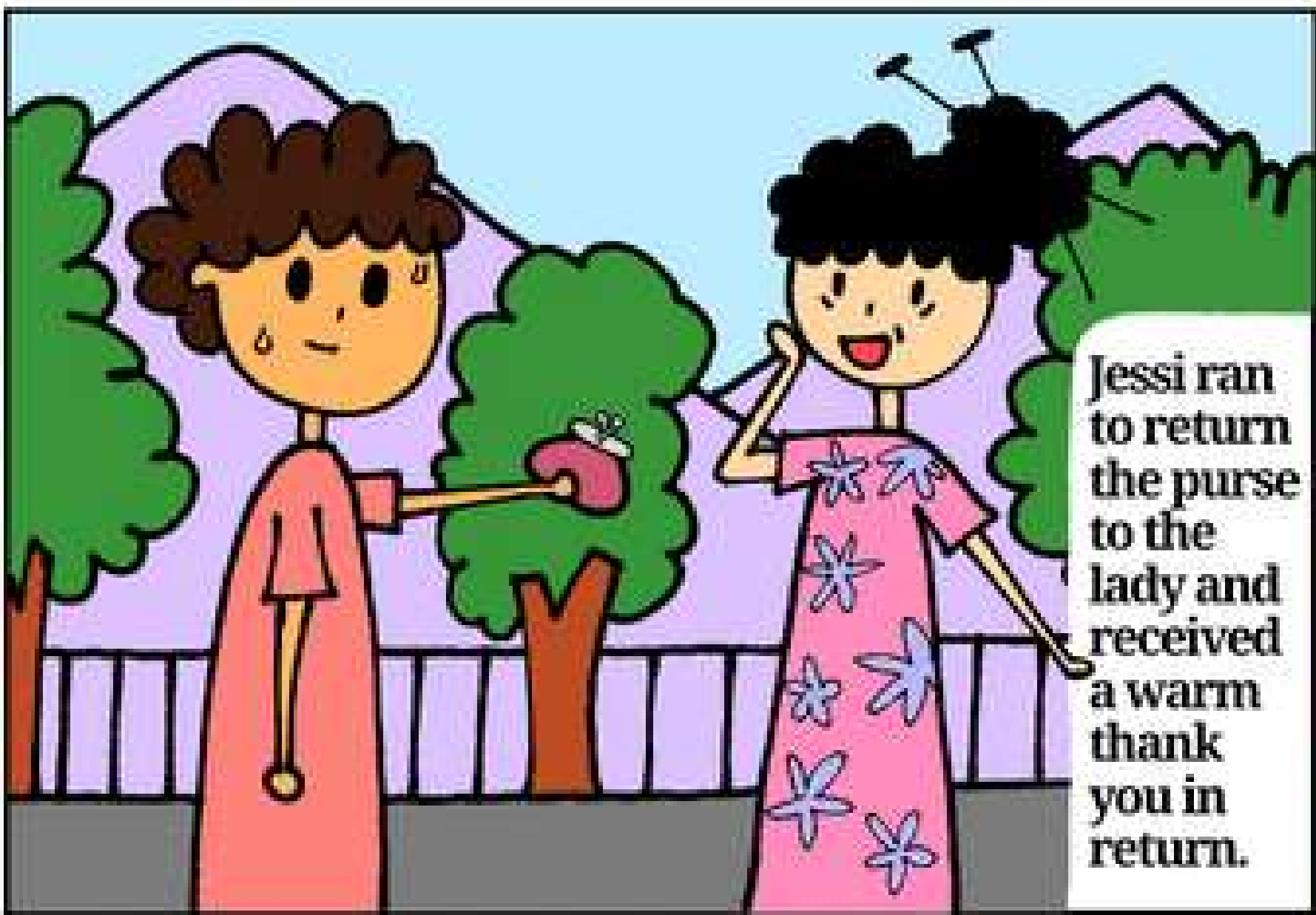
Jessi was really sad and depressed because of his current situation, he was extremely sad but suddenly he remembered an old class with his teacher about happiness and dopamine. he kept thinking about it for a long time.



I am so sad my company got sold.....
My family died.....
Oh God I am so sad.
Let's go for a walk, my parents told that a walk always helps to clear the mind when we are in a bad mood.



On his way he found a lost purse on the road which had been dropped by a lady



Jessi felt happy and victorious all of a sudden after running and returning the purse to the lady and receiving a warm thank you from her.



Jessi felt happy after receiving a warm thank you from the lady whom he returned her lost purse that fell on the road.

He felt happy because of **Dopamine** release, just like our school teacher once taught us.

Jessi liked walking in the nature as it made him feel peaceful and happy.



Jessi liked walking in the nature as it made him feel peaceful and happy due to the release of a substance known as **Serotonin**.



he started meeting people more.



his friends had many pets and jessi loved playing with them



playing with them made Jessie really happy and fresh



Jessie felt happy and fresh after playing with animals because of the release of a substance called **oxytocin**.



Jessie started taking care of himself and started exercising at home, exercising made him feel calm and energetic

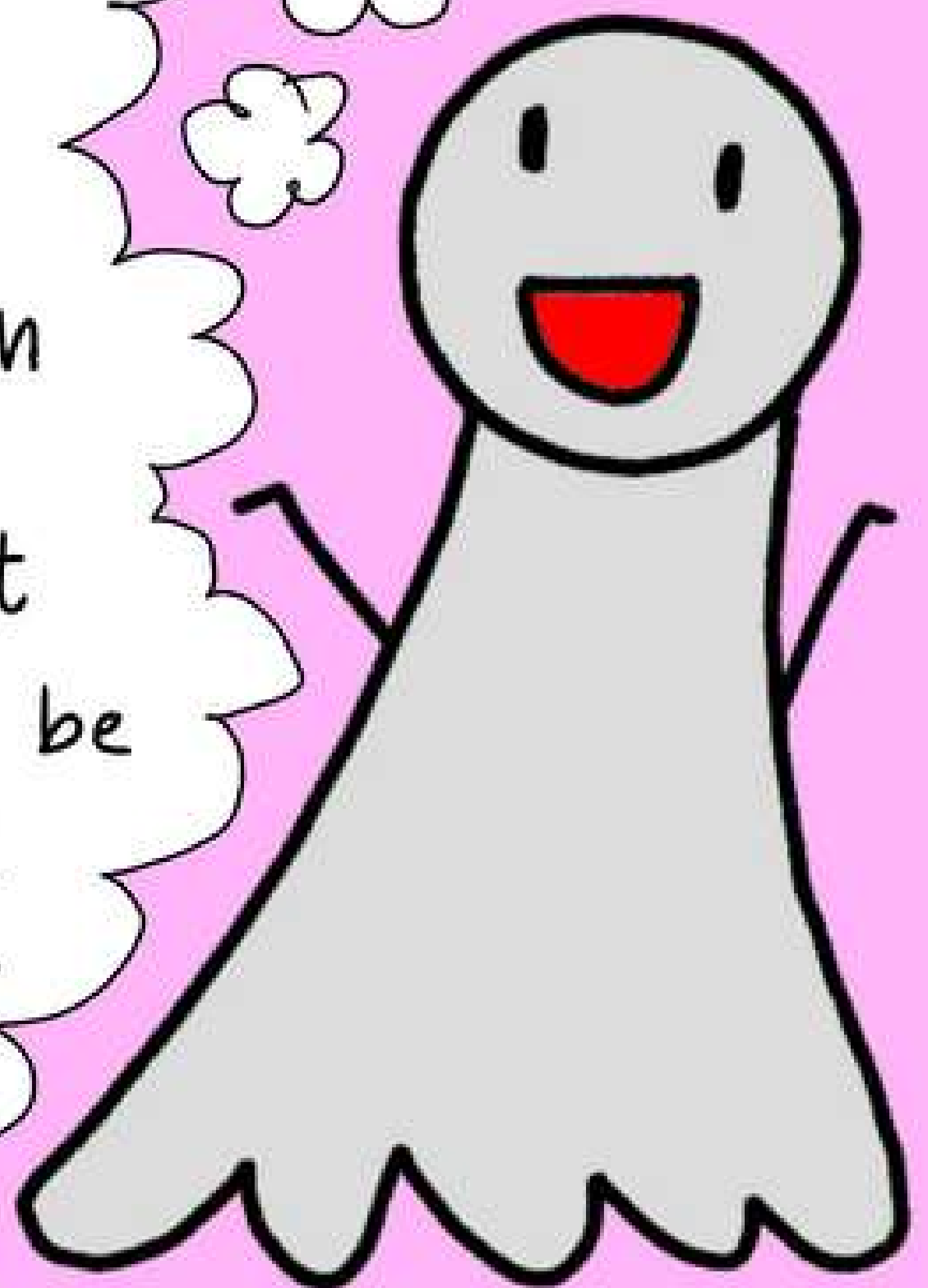


Jessie felt happy, peaceful and energetic after exercising because of the release of a substance known as

Endorphine



Even though Jessie lost his company and his loving family, he was happy. Even though Jessie lost so much and did not have any reason to be happy, he still found ways to be happy, was satisfied and peaceful.



Science of Happiness

-Bariskhyem Khyriem Pohti-X

it read their name, age, and other biodata. They wore leaves for clothes and just floated around in the emptiness. The name of these human-like people was displayed as Adam and Eve, male and female respectively. Adam then suddenly stumbled upon a strange-looking object. It looked eerily similar to a modern-day laptop. Adam saw a crack of light coming through the laptop-looking device and he was teleported to another location. He saw something new and alien to him. Colour. Then he saw different shapes and objects, this was the world recreated, the world that was consumed by the black object so long ago, except it looked like a vast jungle where there were no humans and only pure nature. Perfectly pure and untouched by human hands. This was a paradise where the only humans that existed were Adam and Eve. A few years pass in this paradise, and Adam has learned how the machine operates and learned that it runs computer programming languages. Computer languages such as Java and HTML are used to instruct the computer and create programs and apps. Adam learned that if he typed some lines, he could create and build civilization using this laptop and he was able to create the modern 2022 world with this laptop in 5 years. He found that if he wanted to create something more complex he would have to write more lines and in more complex language. He married Eve and made her his wife.

“How are the metropolitan cities coming along?” asked a man sitting in a lavish gaming chair. The man replies in a worried voice “There seems to be some trouble. The systems are failing. The code is malfunctioning. The servers are failing.” The lights on the server racks flickered, there were random beeps across the whole room. The computer’s screens displayed error messages on error messages and all the people wore an expression of worry and distress. “All is lost!” cried one person among the worried crowd. There is a lot of hustling and people talking, the smell of the fresh bakery, and dogs barking in the pet store. Some fascinating pieces of new technology are being displayed in another nearby shop, designer babies are being adopted by people, and robotic pets are being sold in another shop. The market is bustling. At a moment’s notice, a black object was noticed by a shopkeeper who pointed it to the crowd at large. The black object expanded to consume everything that came into contact with it. The crowds screamed buildings were torn apart, and pets ran and shouted around. Soon, there is nothing but darkness and quietness. A lot of time has passed, and the silence and stillness of the mysterious dark object consuming the world, appeared two people, above their heads displayed a bunch of information,

This led to the creation of more humans. Soon the world had more people. They spread everywhere and Adam handed over the task of creating more and advancing the civilization he built to his eldest son, Abel. Around a millennia passes and the codes get refined almost to perfection, the world that once existed before the appearance of the giant black object on that fateful day. A kid called Taylor is living in this period, he gets to know about some rumours of a lost piece of code, called the Secret of Happiness. The Secret of Happiness is a piece of code that will finally rebuild the world before the black objects consumption of the world. He gets excited about this piece and wants to retrieve it, but to do that, he needs to get access to a laptop that was used by Adam to build the world. Time passes and Taylor grows up, but still, till date he wants to get access to this piece of code.

He then makes a plan to sneak into the building where they kept that laptop. He plans to sneak in the dark of the night. Night falls, he sneaks past the extremely-put-put security measures and gets a hold of the laptop after an intense 4-hour sneaking session. After getting hold of the laptop he turns it on, surprisingly it was not password protected. He immediately saw a folder named Science of Happiness. Without any thought or fear of risk, he opens the folder, and the computer displays a message. "Happiness cannot be described by science. It can never be described by any form of study. Happiness is only derived from the inside, from the heart and not the mind." Then after he reads this, the fateful event that happened on that day a millennium repeats and man repeats his mistake





Positivity in Daily Life

Lal Lulhimi IX

Happiness has been a human pursuit for as long as we can remember, positive psychology has taken this concept into the realm of scientific research in hopes of gaining better understanding of global wellbeing and meaningful living.

In general, happiness is understood as the positive emotions we have with regards to the pleasurable activities we take part in through our daily lives.

Recent studies have shown us that:

Most of our happiness is not determined by our genetics, but by our experiences and our day to day lives.

Trying too hard to find happiness often has the opposite effect and can lead us to be overly selfish.

Happiness and job performances are related and the relationship likely works in both directions. Eg- happy people do a better job and people who do good are likely to be happy.

Interesting facts about happiness-

Happiness is linked to lower heart rate and blood pressure, as well as healthier heart rate variability

Happiness boosts our immune system, which can help us fight and fend off the common cold.

Smelling floral scents like roses can make us happier

Happiness can help people cope with arthritis and chronic pain better

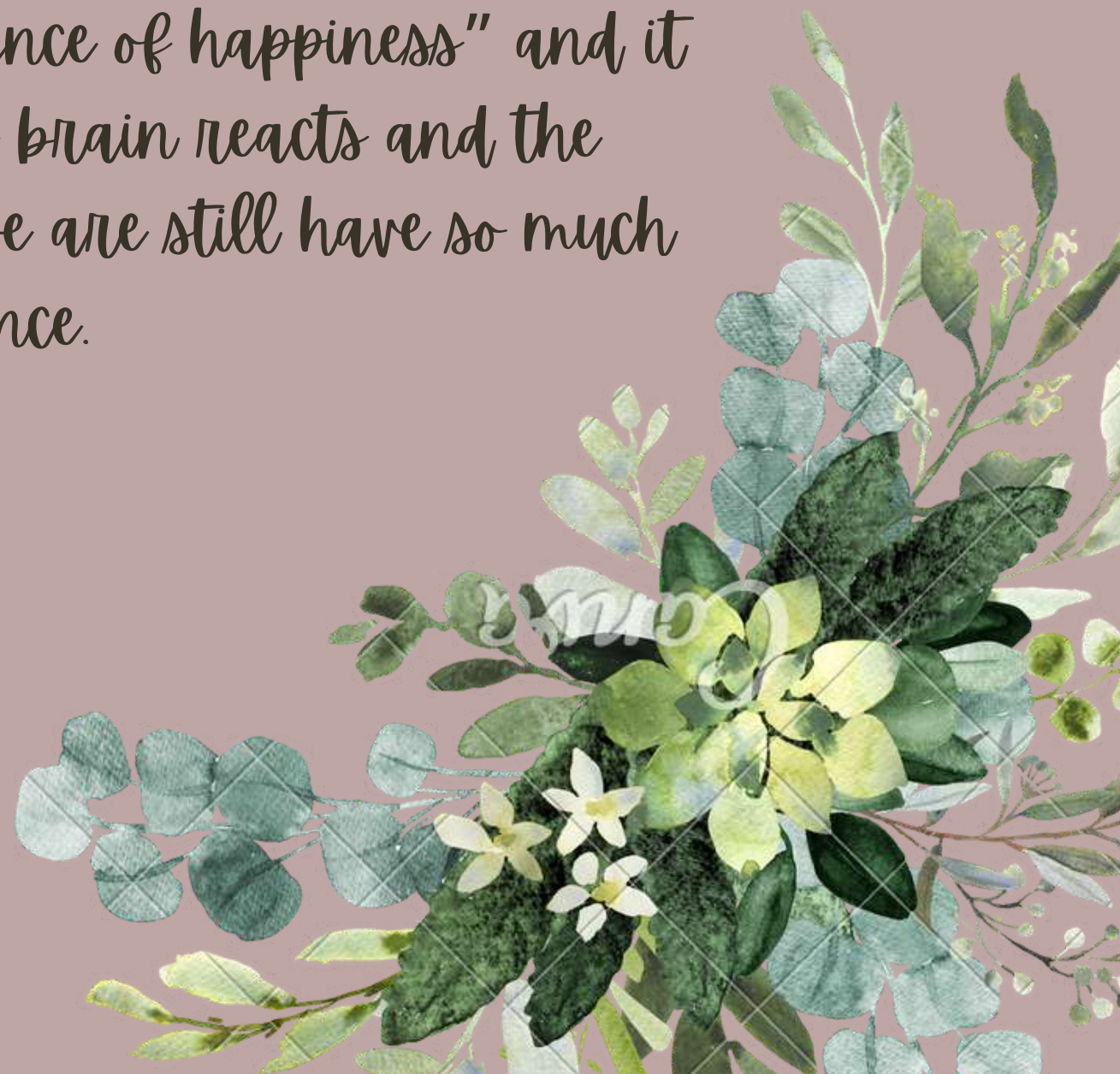
Happy people tend to make others happier as well, vice-versa- those who do good things also feel happier about themselves.



Happiness is an emotion

Mridulla Guleria IX

Happiness is considered as "a state of being happy" but it is a human emotion and people's brains are complex. Happiness can be found in such fleeting moments. Our brain produces something called Endorphins. Endorphins are our body's natural painkillers. They make us feel happy and the other three happy hormones are endorphins, serotonin, dopamine and oxytocin. These hormones make us happy whenever we see or feel something that gives us joy. Every human feels some sort of joy, just that of memories, or looking back in our past. The cause of our smile and laughter are those four hormones putting in their "science of happiness" and it is so extraordinary looking at how the brain reacts and the science happening behind so much that we are still have so much to explore about science.



Positive Psychology

Fareeha Ambreen-XII

The simplest way to convey what positive psychology is, as stated; is the “scientific study of what makes life most worth living”. Positive psychology is a scientific approach to studying human thoughts, feelings, and behavior, with a focus on strengths instead of weaknesses, building the good in life instead of repairing the bad, and taking the lives of average people up to “great” instead of focusing solely on moving those who are struggling up to “normal”.

Following are the various positive and influencing events in one’s life that focus on positive psychology:-

1. Positive experiences (like happiness, joy, inspiration, and love).
 2. Positive states and traits (like gratitude, resilience, and compassion).
 3. Positive institutions (applying positive principles within entire organizations and institutions)
- .As a field, positive psychology

studies spend much of their time thinking on human psychological topics like character strengths, optimism, life satisfaction, happiness, wellbeing, gratitude, compassion for oneself as well as others, self-esteem, self-confidence, hope, and elevation.

These topics are studied to learn how to help people flourish and live their best lives.

The founder, Martin Seligman is a researcher with a broad range of experience in psychology and has contributed largely to this study. Seligman’s research in the 1960s and 70s laid the foundation for the well-known psychological theory of “learned helplessness.”. Seligman connected this phenomenon with depression, a very common mental illness that has been quite seen among many people, especially, in recent years among teenagers. Suffering from depression initially

could make someone feel helpless and may not be the easiest for a person to ask for or seek help but eventually, 80% and 90% per cent of people with depression can respond well to treatment. Seligman and his brilliancy in working on the subject provided inspiration, ideas, and evidence to back up many treatments for depressive symptoms, as well as strategies for preventing depression.

The benefits of positive psychology that impact even the smallest details of a person's life could as well be, teaching the people the power of shifting one's perspective. This is the focus of many techniques, exercises, and even entire programs based on positive psychology because a relatively small change in one's perspective can lead to astounding shifts in wellbeing and quality of life. Injecting a bit more optimism and gratitude into your life is a simple action that can give you a

radically more positive outlook on life.

Gratitude is a big contributor to happiness in life, suggesting that the more we cultivate gratitude, the happier we will be. Those who intentionally cultivate a positive mood to match the outward emotion they need to display benefit by more genuinely experiencing the positive mood. To simply say, "putting on a happy face" will not necessarily make you feel happier, but putting in a little bit of effort likely will. Positive psychology can have a range of real-world applications in areas including education, therapy, self-help, stress management, and workplace issues. Using strategies from positive psychology, teachers, coaches, therapists, and employers can motivate others and help individuals understand and develop their strengths.

Reference-

<https://positivepsychology.com>

Brain Gym

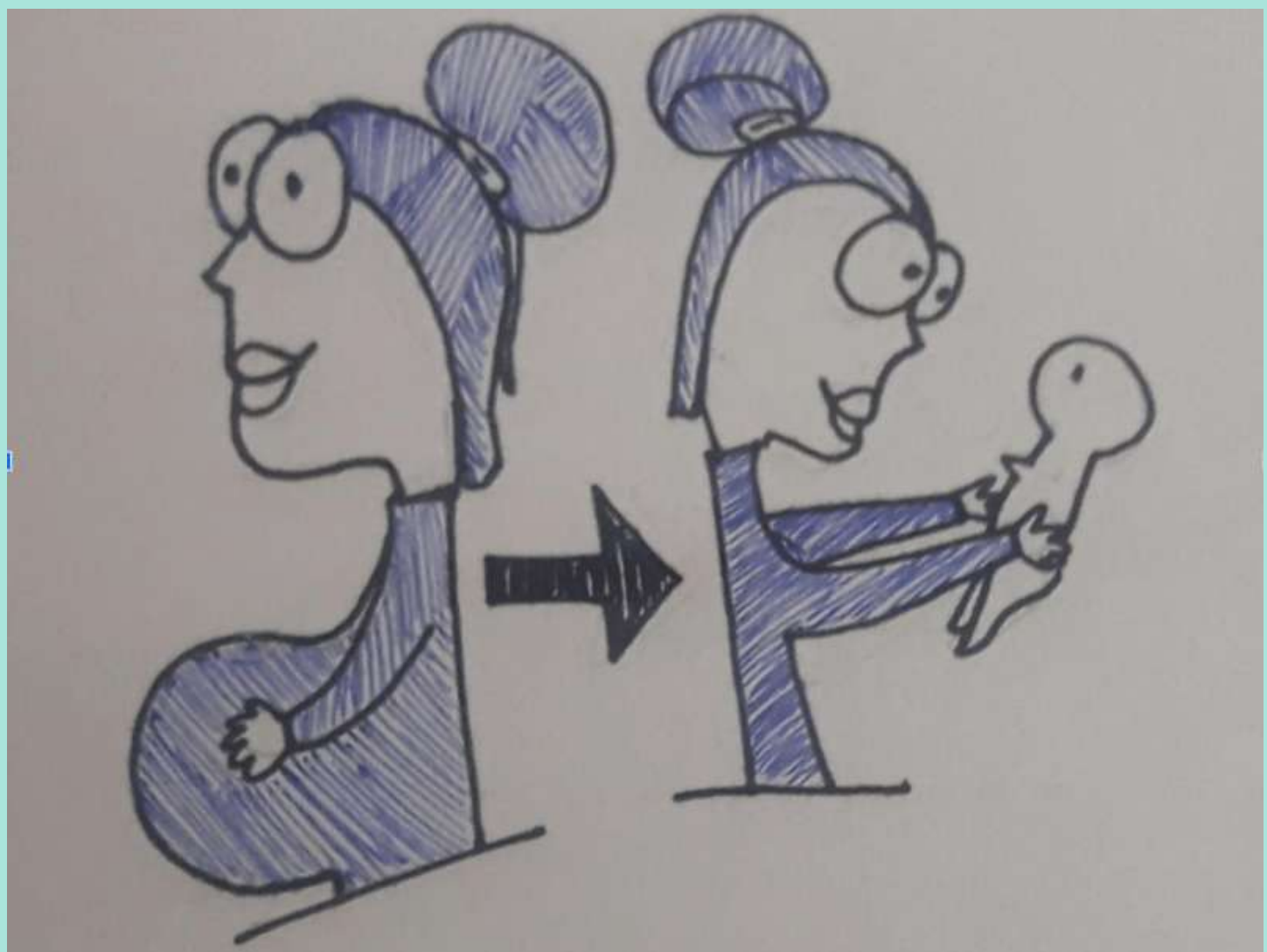
Shrivansh Agarwal- XII

Identify the secret chemicals that make you happy during these activities.



Which chemical is being released when someone is winning?

Which chemical is released to help this child being born?



Which amazing wave entered his brain that gave him instant motivation to draw?



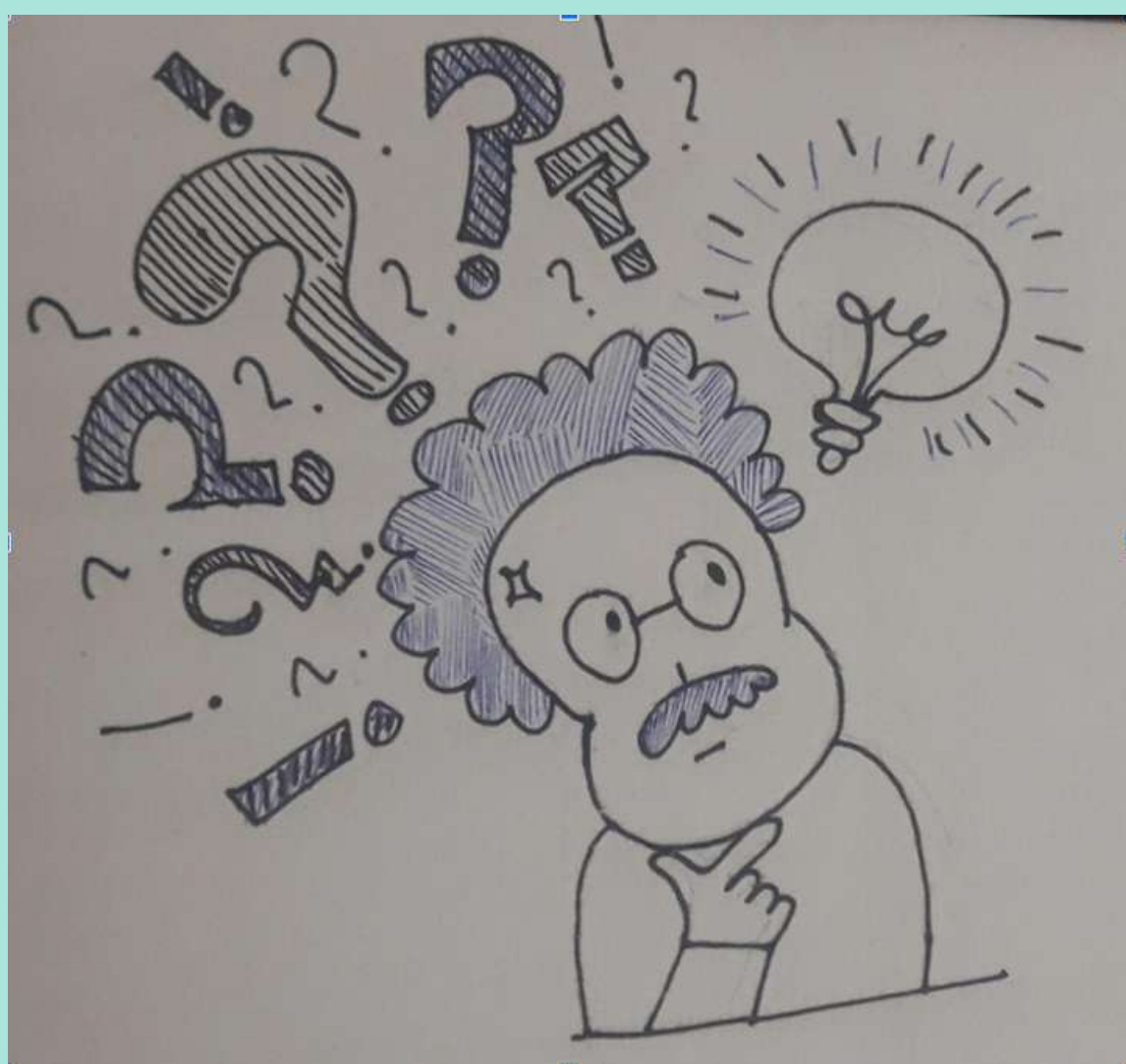


Which hormone is making her eat so much?

Which chemical when released makes her so calm and composed?



Which supernatural wave could it be that it gave him an instant idea?



PLEASE SUBMIT YOUR ANSWERS TO shrivansh.3452.2023@assamvalleyschool.com . The names of all answering correctly will be published in the next issue

Credits

EDITOR-IN-CHIEF

Shrivansh Agarwal

EDITORS-IN-DESIGN

Chinmoy Tamuli, Yashraj Agarwal

DEPUTY EDITORS

Fareeha Ambreen, Suhani Agarwala

ASSOCIATE EDITORS

Adiella Kharkongor, Prateeti Ghosh

CONTENT DEVELOPERS

*Irom Calvin, Tenzin Peldon Thungon, Adiella Kharkongor, Adrika Dey,
Bariskhyem Khyriem Pohiti, Lal Lulhimi, Mridulla Guleria, Fareeha Ambreen*

TEACHER-IN-CHARGE

Dr Alpana Dey

PATRON

Dr. Amit Jugrran

FACULTY ADVISORS

Mr. A.S. Huidrom, Mrs. Joyce Macdonald, Mr Umesh Singh

ILLUSTRATORS

Suhani Agarwala, Anvita Dey

TEAM

*Dev Agarwal, Pratiti Barua, Shivangi Puja Bora, Aditya Upadhyaya,
Angelica Saikia, Aryan Singh, Sampada Malpani, Irom Calvin*

DISCLAIMER: FACTS AND OPINIONS IN THE ARTICLES PUBLISHED IN "SPECTRUM" ARE SOLELY THE PERSONAL STATEMENTS OF RESPECTIVE AUTHORS AND IT DOES NOT REFLECT VIEWS OF THE ASSAM VALLEY SCHOOL OR THE EDITORIAL BOARD OF "SPECTRUM"