



# Index

Posters and supplementary worksheets are available at the project's website [www.projectcaca.org](http://www.projectcaca.org)



1. Say Hello! | 1
2. A Poem | 3
3. It Feels Good to Be Me | 4
4. Pay Attention to Your Feelings | 8
5. To Sir, With Love | 10
6. In Pursuit of Happiness | 14
7. Secrets | 18
8. It Is Not Your Fault | 20
9. It Is Okay to Be Scared | 21
10. Men are from Mars, Women Are From Venus. Oh Really? | 22
11. Comedy of Genders | 28
12. Sometimes Saying No Is Important | 31
13. Right Body Language | 34
14. Bullying Is a Bane | 35
15. Cyber Bullying | 39
16. Open Sesame | 42
17. Artificial Intelligence | 44
18. How to Choose Well | 46
19. Good Friends Are for Keeps, but... | 48
20. A Friend In Need Is a Friend Indeed | 50
21. The Two Boxes | 53
22. Moral Compass | 56
23. Have Mercy on Me | 61
24. Child Rights | 62
25. A Child in Conflict with the Law | 67
26. Triple Filter Test | 69
27. What Is Self-Defence? | 70
28. The Good Samaritans | 72



## Say Hello!

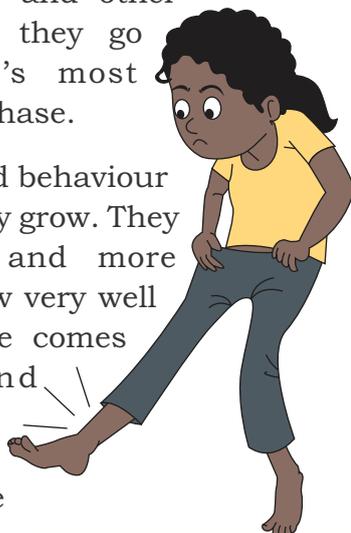
Sana and Arpit are both children. They are children because people under 18 years are defined as children, and those above 18 years are adults. They are in their early teens and are good friends.



Every Saturday, along with their classmates and teachers and as part of their school's community outreach, the three musketeers go to a nearby Anganwadi centre to teach children and assist the Anganwadi workers. Sana is known for her extraordinary football talent and has won many medals. Arpit is famous for his dancing skills. He, too, has won many accolades and, just like Sana, made everyone proud. Nature is responsible for how they look, but they can work upon and improve their skills with practice, sincerity and guidance. And so they do! Their skills and qualities like courtesy, humour, and patience make them likeable in their peer group.

They have known each other since they were in kindergarten. They live in the same neighbourhood and go to the same school. Pokso is their tiger friend. He spends time with them and helps them, and other children stay safe as they go through adolescence's most exciting and confusing phase.

Their bodies, minds, and behaviour are also changing as they grow. They are becoming more and more independent. They know very well that with independence comes responsibilities, and growing up also means learning about responsibilities. Unlike



## #Health/Wellbeing: Adolescence Issues/Feelings

when they were younger, they now like to spend more time with their friends rather than their loved ones - parents and grandparents. Sana and Arpit often disagree with their advice about the kind of clothes they should wear, the type of friends they should have, the kind of movies they should watch, and more.



There is a generation gap between their loved ones and them. There was, is and always will be a generation gap between parents and their children because adults and children think and behave differently. However, who can deny that parents have much more experience in life than children and do their best to keep their children happy, healthy and safe? After all, they are our loved and trusted ones, and they, too, were children at some point. Children should also do their best to make their loved ones proud. The parents of Sana and Arpit, like everyone else's parents, are pretty busy, but they still manage to spend time with them. Sana and Arpit are often together with their parents and grandparents at the dinner table, sharing their experiences.

Researchers and popular media, by and large, categorise people in terms of their date of birth and their understanding and usage of digital technology. *Baby Boomers*: They were born between 1946 and 1964. *Gen X*: 1965 and 1979/80, *Gen Y or Millennials* - 1981 and 1994/6. *Gen Z* is the newest generation to be named and was born between 1997 and 2012/15.

Their science teacher, Hina ma'am, has explained that they live in a time when science and technology are changing the lifestyles and the basic fabric of human society at a superfast pace. There are *test tube babies*. Families are becoming nuclear and urban. Women also

work to earn a livelihood. More people live longer than ever.

Sana and Arpit often mesmerise their grandparents by telling them about the wonders of technology of the 21st century, which include smartphones, robots and artificial intelligence. Recently, they have learnt in their school how the human body works and how babies are born. Learning about the human reproductive system has helped them to take better care of their bodies and be healthy and safe. Like any other teenager, both like making new friends, but friendships and relationships are never one-sided. Friendship is no doubt fun, but they are careful when choosing friends..

**This is how Sana and Arpit feel as teenagers:**

- a. When others don't understand me, I lose my temper.
- b. As I grow, I notice new changes in my body that make me feel uncomfortable.
- c. I sometimes feel confused about things and don't know whom to talk to.
- d. At times, I wish I looked more attractive – thinner, taller or better than I do now.
- e. I sometimes find it difficult to say no to my friends, even if I disagree with them.
- f. Sometimes, I feel pressured to do things because my friends/peers are doing them.
- g. It feels nice to dress up and be complimented on how I look.
- h. I am influenced by television, movies, celebrities and advertisements.



**A. Tick mark the above points (a to h) if you feel the same. It is perfectly normal for adolescents to feel like that.**

**B. Write the generations to which your parents, grandparents, class teacher and principal belong.**

Parents: \_\_\_\_\_ G. Parents: \_\_\_\_\_

Class Teacher: \_\_\_\_\_

Principal: \_\_\_\_\_

**Adrenaline rush:** Some situations in our daily lives cause fear, anxiety, stress or excitement, leading to a response mechanism. This mechanism is immediate and has a significant impact on us. The impact can stay for an hour even after the situation has been resolved. In adolescents, the mechanism is quite easily triggered, and its response is quite fast. Adrenal glands trigger this mechanism by pouring the hormone adrenaline (adrenaline rush) into the bloodstream. Within a few minutes, the hormone generates a rush of signals to vital organs like the heart, muscles and brain. The heart rate goes up, blood pressure increases, pupils enlarge, and there is an increase in the supply of blood to vital organs. The metabolism also gears up and increases the glucose (energy) levels in the bloodstream. The extra energy is to perform to the fullest against the stressful situation, for example, running away when attacked by a lion. Adolescents are no longer running away from lions. However, they are under fear, anxiety, stress or excitement when playing video games, going through peer pressure or examinations, and when they are in conflict with their parents and teachers. The adrenaline rush is designed to give us the energy to run away from the stress. If this stress is not released, our body will have all this extra energy but no place to go. The extra energy can lead to anxiety and irritability, thus affecting our mental health. It is constructive for adolescents to be involved in outdoor activities like sports, exercises and yoga.

Be careful about your friends because a person is known by the company they keep.

## To Sir, With Love

“Good morning, ma’am,” the children wished as principal ma’am walked into the classroom, escorting a man with vision impairment. “Good morning, students. Please sit down,” the principal replied. “I want to introduce you to someone today,” she said, and the man faced the class. “Everyone, he is Zakir sir, your new class teacher and the English teacher for the time being. As you all know, Rohini ma’am is in the family way\*. She is on leave and, at times, will work from home. Have you all understood?” The students answered, “Yes, ma’am”, in a sing-song voice, and with that, the principal left the room.

\*The Maternity Benefit (Amendment) Act, 2017, protects the employment of women during the time of their maternity and entitles them to maternity benefits.

Students’ attention shifted to the new teacher, Zakir sir, and they waited for him to speak. After folding his white cane and tucking it into his bag, he introduced himself, “Hello, students. I am Zakir Ahmad. Zakir means grateful. Since today is the first day, I want to get to know you. Can anyone tell me how many students are in your class?” Pokso, the class monitor, answered, “There are 35 students in the class, sir.” “Okay,” sir said. “Now, starting from the last bench, can you tell me your name and one thing you like doing the most?” After the small introduction session, he said, “Well, let’s do something now, all right? Everyone, I want you to imagine that you have been blindfolded. Now when that happens, if your friend traces an alphabet in your palm with their finger, would you be able to make out that alphabet?” Everyone tried it and said, “Yes, sir.”

Zakir sir explained, “Well, I read the alphabet and numbers by touching them. There is a



written language called *Braille*. Braille writing system consists of characters with rectangular blocks called cells. These cells have tiny bumps called raised dots. These raised dots form patterns representing the alphabets I can read by touching and feeling.” All of the students peered attentively at their teacher. He said, “The brains of those born blind have enhanced compensatory abilities such as a heightened sense of hearing, smell and touch, as well as cognitive functions such as memory. The Braille system was created by Louis Braille, who was not born blind like me but lost sight due to a childhood accident.

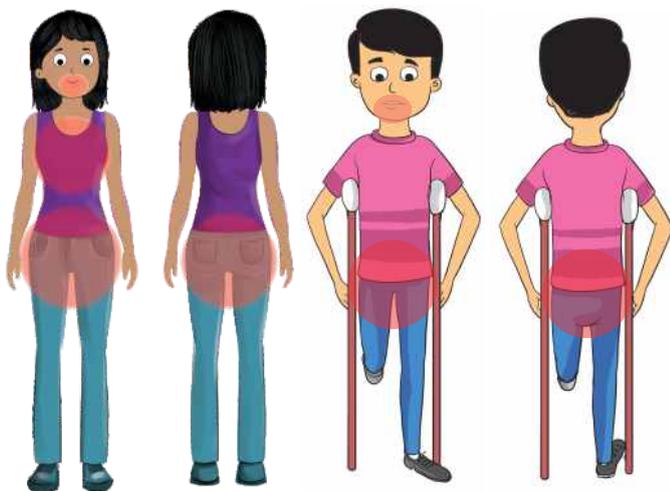
**Point to ponder:** Do blind people also dream? What kind of dream do they have? Do their dreams have visuals?

The new teacher continued to talk more about disabilities. He said, “Do you know that in India, there is a law which helps and assists people with disabilities? The law is called the Rights of Persons with Disabilities Act of 2016. The law comes under one of the UN’s international human rights treaties, the Convention on the Rights of Persons with Disabilities.

This Act includes definitions of disabilities based on a dynamic and evolving concept. It

also increased the types of disabilities from the original 7 to 21, including rights for acid attack victims, speech and language disabilities, and specific learning disabilities. Thanks to this right, we are ensured inclusive education, some even free, reservation in higher education institutions, government jobs, allocation of land, poverty alleviation schemes, and more.

People with disabilities are more accurately represented in movies and TV shows nowadays. Some people get surgery to replace their deformed body parts. This happens through prosthetics, and organ donation, overseen by the legislation called the Transplantation of Human Organ Act (THO) of 1994. People can also donate body parts or organs like eyes after their death. This is, of course, regulated. No one can take your body organs by force or without your knowledge. It is because you are the sole owner of your body and its first caretaker. Also, nobody should touch your private parts.” “Yes, sir, we also read about private parts in the previous class and how they are to be kept clean and covered at all times for health, hygiene, safety and self-esteem,” said Sana. Sir then showed them images indicating the private parts of people. The private parts were marked in red colour.



Sir continued, “Private means only for us. There are *body safety rules - the ‘8-step safety rule’*- to be followed so that we can keep ourselves safe.

**Step 1:** Make and follow safety plans.

**Step 2:** Be aware of your surroundings and your body language.

**Step 3:** Listen to your feelings.

**Step 4:** Say “NO!” to the person doing the unsafe thing.

**Step 5:** Get away.

**Step 6:** If physically overpowered, use self-defence techniques to get away.

**Step 7:** Talk to a trusted adult.

**Step 8:** Keep telling till someone believes you.”

“To implement these body safety rules, we must understand abuse and boundaries. Abuse is the harm caused by a person to another person, whether they are adults or children. The person who abuses can be an acquaintance or a stranger. Someone who abuses is called an abuser. An abuser is a person who is in a position of superiority. The superiority can be in age, physical power, money, and more. Abuse, irrespective of the abuser, is always wrong. There are various types of abuse:

1. *Physical:* These are actions to hurt, harm or injure someone. For example, a teacher hits a student with a ruler on the knuckles for not doing homework.

2. *Emotional:* This is also called psychological or mental abuse. It means doing something on purpose that we know will emotionally or psychologically harm someone.

3. *Sexual:* It includes any unwanted verbal or physical contact or behaviour of a sexual nature. When verbal, it is also called sexual harassment, and when physical, it is known as molestation. Touching anyone inappropriately, touching someone’s private parts, taking pictures of their private parts, making them see or touch your or others’ private parts, and groping are a few examples of sexual abuse. Sexual abuse can be physically, mentally and emotionally detrimental to a child. Stalking is characterised by unwanted visits, phone calls,

texts, emails, or letters. Giving unwanted presents, watching or staring at someone at home or school and following someone are all considered stalking. It is another example of emotional abuse and can take the form of sexual abuse.”

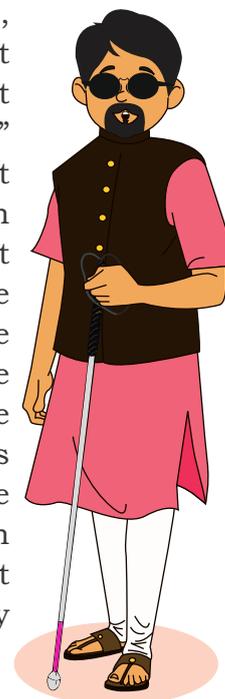
“Sir, can there be cyberstalking?” asked Fatima. “Yes, kids, cyberstalking is when one compulsively stalks someone’s social media over all platforms, so much so that they breach their personal boundaries,” he answered. “What is a personal boundary, sir?” asked Birsa, whom everyone lovingly called Tenali Rama.

“A boundary is a stop sign! Physical boundaries are invisible to our bodies, but we know they are there. Our physical boundary is how close to us we let someone come before we start feeling uncomfortable or unsafe. No one likes it if their physical boundaries are crossed. Different people have different physical boundaries. We may like it when our mummy hugs us but not when an auntie hugs us. Personal boundaries are about how we let others treat us. It is essential to set personal boundaries. When we set personal boundaries, we tell others how to treat us. This helps them be respectful towards our bodies, feelings and things. So, if our friend has done something that hurts us, we must tell them how it made us feel and not do it again.

Just like our bodies, our physical and personal boundaries belong to us. Everyone has personal and physical boundaries. Just as we want others to respect our boundaries, we should also respect others’ boundaries. People need permission to cross our boundaries unless it is accidental or necessary. For example, someone falls on us while standing in line for the morning school assembly. Or when a doctor asks us, in the presence of our loved ones, about the colour of our urine for medical purposes. Our loved and trusted ones are our parents, teachers, grandparents and close

friends. Boundaries are different for different people. Some like kissing, others don’t. Some like holding hands while walking, while others don’t. Some like to sit or stand very close to whomsoever they are with, and others don’t. Just as boundaries are different for different people, the same person can have different boundaries for different people in their life. We have smaller boundaries with our loved and trusted ones, and our boundaries change as we grow older or as situations change.”

Salman, the carrom champ, asked, “Sir, is it true that abusers can easily target persons with disabilities?” “Unfortunately, that is true. That is why when a victim is a person with a disability, the punishment for the abuser is always more stringent,” replied sir. Finally, he concluded, “Most people are good at heart and helpful, but we have to be careful when it comes to our safety. Let us now come back to our subject, English literature. Let us now talk about William Shakespeare’s play *Comedy of Errors*.”



**Privacy:** When something is private to a person, it usually means that something is inherently special or sensitive to them. In a landmark judgment delivered in August 2017, the Supreme Court of India recognised the right to privacy as a fundamental right under Article 21 of the Constitution as a part of the right to “life” and “personal liberty”. The Information Technology (Amendment) Act 2008 covers Internet users’ e-commerce and privacy-related matters, including cyber abuse. Sexual abuses, harassment, stalking, and molesting are punishable crimes under various criminal laws.

Here is a book by Helen Keller for you to read. The book is her autobiography. She was an American author, a political activist, and a lecturer. She was a deaf-blind person. To read the book, you will first have to decode its title. Here is the primer for decoding it.



Braille Alphabets

<b>A</b> ● ○ ○ ○ ○ ○	<b>B</b> ● ○ ● ○ ○ ○	<b>C</b> ● ● ○ ○ ○ ○	<b>D</b> ● ● ○ ● ○ ○	<b>E</b> ● ○ ○ ● ○ ○	<b>F</b> ● ● ● ○ ○ ○	<b>G</b> ● ● ● ● ○ ○
<b>H</b> ● ● ○ ○ ○ ○	<b>I</b> ○ ● ○ ○ ○ ○	<b>J</b> ○ ● ● ● ○ ○	<b>K</b> ● ○ ○ ○ ● ○	<b>L</b> ● ○ ○ ○ ● ○	<b>M</b> ● ● ○ ○ ● ○	<b>N</b> ● ● ○ ○ ○ ○
<b>O</b> ● ○ ○ ● ● ○	<b>P</b> ● ● ● ● ○ ○	<b>Q</b> ● ● ● ● ○ ○	<b>R</b> ● ○ ● ● ● ○	<b>S</b> ○ ● ○ ○ ● ○	<b>T</b> ○ ● ● ● ● ○	<b>U</b> ● ○ ○ ○ ● ●
<b>V</b> ● ○ ● ○ ● ●	<b>W</b> ○ ● ● ● ○ ○	<b>X</b> ● ● ○ ○ ● ●	<b>Y</b> ● ● ○ ● ● ●	<b>Z</b> ● ○ ○ ● ● ●	<b>Braille Cell</b> 1 ● ● 4 2 ● ● 5 3 ● ● 6	

<b>T</b>	<b>H</b>	<b>E</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>O</b>	<b>F</b>	<b>?</b>	<b>?</b>	<b>?</b>	<b>?</b>
2	1	1	2	2	1	1	1	1	1	1	1	1
3	2	5	3	3	3	2	3	2	3	2	4	5
4	5		4	4	5	3	4	5	4	3	4	
5			5	5	5	5	6					

**A. Write the name of the book here:**

---



---

**B. Are privacy and dignity interconnected? Why?**

---



---



---



---



---



---

**C. Have you ever met a blind person?**

---

**D. Find out whether your city/town/district has a school/hostel for the blind. With the help of your teachers, arrange for a visit to the place.**

**E. Women get maternity leave of 26 weeks. However, only 2 weeks of paternity leave is given to fathers. Don't you think this would create a negative bias towards the women employees in an organisation as companies would prefer male employees? Why do you think so?**

---



---



---



---



---



---



---



---



---



---

**Teacher resources:** National Organ & Tissue Transplant Organisation under the aegis of Directorate General of Health Services, Ministry of Health & Family Services (Government of India) maintains the waiting list of terminally ill patients requiring transplants. Helpline 1800 11 4770. There is organ and tissue donor pledge for adults on NOTTO - <https://notto.gov.in/>

Answer key for A on page 20.

## In Pursuit of Happiness

#Life Skills: Critical Thinking



The three musketeers, as usual, had gathered at Sana's home. They were watching a movie. An advertisement popped up. Grandma, the wise old woman of the house, watched the three musketeers as they sang along the advertisement jingle:

*"If you are in a bad mood, order this food,  
Come hungry, go happy! Doo-do-do-do-doo"*

The children were hungry, so they decided to order food from the same restaurant. But, a heated argument between Sana and Arpit erupted over what they would order. Even Pokso couldn't pacify them. But then grandma intervened. Sana and Arpit were in no mood for a lecture by grandma but then what she told them opened their eyes forever. Here is what grandma told them.

**A lion in a circus:** While writing stories or telling tales, we often use the words "emotions" and "feelings" as if they mean the same, but they are not. Psychologically speaking, they are quite different. We all are born with a brain with the same emotions wired into it, but we acquire feelings with time as we grow up, just like we learn languages from our surroundings. Feelings are reactions to emotions. Psychologists have defined a dozen core emotions associated with our brains, such as joy, anger, disgust, surprise, fear, and more.

In contrast, thousands of feelings like happiness, panic, and peace occur in our minds as we live our lives. Feelings are connected to our mind, whereas emotions are

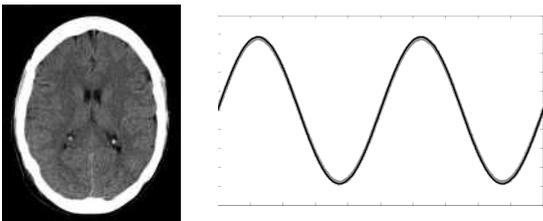
associated with our brain. Feelings are personal and stored as memories in our brain. Unlike emotions, feelings are difficult to understand. Feelings always follow emotions, but the kind of feelings vary from person to person and situation to situation. They are shaped by individual experiences, beliefs, values, upbringing (conditioning), and other factors. For example, if we see a roaring tiger performing under a ringleader in a circus, our emotion should be fear; instead, we may feel admiration for the majestic lion or pity if we are *wildlife conservationists*.

**A lion in a jungle:** When we accidentally touch something hot or cold, our hand or finger instinctively, automatically or in a reflex, withdraws itself. We do not have to think about withdrawing it. Emotions are instinctive too. We have no control over them. They are related to our immediate survival. For example, we meet a roaring tiger, but this time not in a circus or a zoo but deep in a jungle where somehow we got lost. We will be filled with fear and run. After all, our ancestors in the jungles did not survive by negotiating with the lions (predators). Those who did not run did not survive, and today we all are the successors of those who survived. Unlike emotions, feelings are not instinctive, and we can control them. Since we can control how we feel, we can also control our actions based on our feelings. Actions can be safe or unsafe, healthy or unhealthy, and they can have consequences that can be short or long-term. We have to learn to express as well as control our feelings appropriately. Feelings are learned behaviours that are usually *hibernated* until triggered by an external event.

**A. Do you think our ancestors were cowards because they ran away when predators attacked them?**



**Measuring happiness:** Unlike happiness (a feeling), joy (an emotion) involves little cognitive awareness. We feel joy without consciously deciding to, and it is long-lasting. While happiness is usually influenced by and dependent on external conditions, joy is something we experience more deeply. To understand happiness, let us do a thought experiment. Imagine we conduct a CT scan and an EEG test of the brain of an unhappy farmer. She is unhappy because she is poor; to make matters worse, she has lost all her crop to a bad monsoon. Her EEG test shows the electrical activity in her brain in the form of wavy lines. It shows 8 valleys and 2 peaks. We compare it with a happy person who is rich and has also just won a lottery. She has 10 peaks and 0 valleys.



**B. Do you think that just like blood pressure, pulse rate and temperature, we can also measure happiness?**

**The chemistry of happiness:** Now, a psychiatrist administers medicine that has dopamine to the poor farmer who cannot repay her loan, so she is unhappy. Soon, she begins to feel good, and after a few more doses, she feels happy. *Dopamine*, like *adrenaline*, is a hormone produced by the organs of our body. It performs many functions, keeps us motivated, and makes us feel good, provided it exists in the correct quantity in our body.

**C. Do you think the farmer is really happy after having the medicine, or will it be better if she gradually develops a coping mechanism without the medicine to deal with the ups and downs of life? Why?**

---



---



---

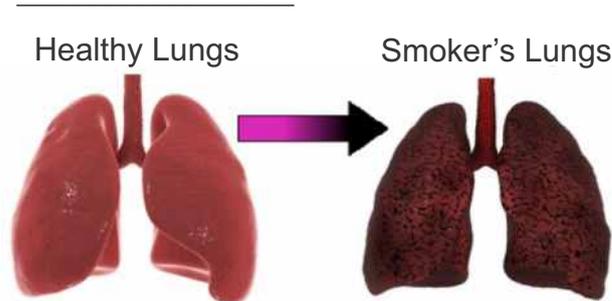


---

**D. Drinking alcohol or smoking drugs like cannabis makes us feel happy by altering our hormone levels in one way or the other. Do you think they really make us happy?**

**The boiling frog:** Once, on a winter day, a frog fell into a pot of hot water. Instead of jumping out, the frog stayed in the pot and liked the hot water. However, the pot was on a gas stove. The water slowly and steadily grew hotter and hotter. The frog's body could not notice this slow change. Eventually, the water started to boil, but it was already too late before the frog could realise what was happening. The frog was boiled alive; what a pity!

**E. Do you agree that the frog would have jumped out of the pot immediately if the water was boiling?**



The hot water was a *sweet but slow poison* for the frog, just like smoking and drinking are to us.

**F. Here are a few sayings about happiness. Underline 3 sayings that you think are most appropriate.**

Happiness is a direction, not a place. |  
 Happiness depends upon ourselves. | It is not

how much we have, but how much we enjoy, that makes happiness. | The real secret of happiness lies in taking a genuine interest in all the details of daily life. | People should find happiness in the little things, like family and friends. | There is no happiness like being loved by your fellow creatures and feeling that your presence is an addition to their comfort. | Happiness is not something ready-made. It comes from your actions. | Happiness cannot be travelled to, owned, earned, worn or consumed. | Happiness is the spiritual experience of living every minute with love, grace, and gratitude.

**G. We all are in pursuit of happiness. What makes you happy? Share it with your friends, the three musketeers.**

---



---



---



---



---



---



---

**A tricky world called advertisements:** Most advertisements or ads for various items or products like junk food, cars, motorbikes and clothes that we see or read in newspapers, magazines, TV and the internet try to exploit or manipulate our feelings. These products are sold based on how they would make us feel rather than their utility or productivity values. The ads' visuals, images or videos also have people or actors emoting or performing to the script to convince us that we will feel the same as they do. Most ads deceive us by playing tricks on our feelings. For example, ads for junk foods tell us that we will feel good or happy if we eat them, and the more we eat, the happier we feel. However, they do not tell us the nutritional value of the food item sold. It is the nutritional value of the food that keeps our bodies healthy.

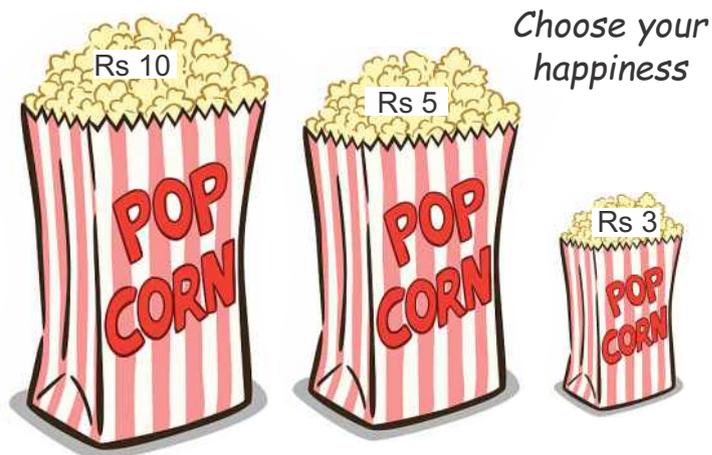
How can we be happy if we do not have a healthy body?

*Nostalgia trap:* It means longing for or getting emotional for some past period. For example, it is the feeling one gets when one sees a picture in which one's grandma is holding their hand. The nostalgia is more intense if the grandma is no longer alive. Many ads exploit nostalgia and influence us by smartly connecting or placing their products with our nostalgia. Imagine an ad which shows a mother lovingly cooking noodles for her six-year-old child. The noodle is the product that the ad tries to connect to one's nostalgia.

*Numbers trap:* Most price tags are like Rs 99, Rs 999 and so on. Most people are right-handed and read numbers and letters from right to left. While comparing two numbers like 99 and 100 or 999 and 1000, they feel comfortable with numbers with fewer digits. Of course, fewer digits would also mean a smaller number, thus cheaper. However, the question is, how cheap? When they see a price tag of Rs 99, most people miss out that though 100 has 3 digits and 99 has 2, the difference is only Rs 1.

*The Trap of quantities:* Imagine you are at a marketplace and not hungry. Suddenly you see the following tempting "offer".

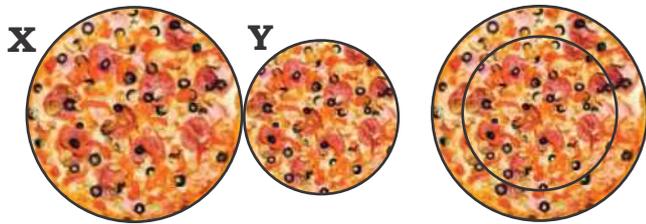
**H. Tick mark the popcorn bag that you will choose.**



Comparing the popcorn's quantities, anyone can determine that Rs 5 is the best option. Despite not being hungry, most people end up

buying popcorn or products like clothes, cosmetics and more even when they don't need them. They buy them just because the items are on sale. It is like an Eskimo in Siberia buying a refrigerator because it is on sale.

*Geometry trap:*



**I. How many times bigger or more is the pizza X than the pizza Y? Tick mark.**

25%    50%    75%    100%    125%

You must have noticed that many plates, glasses and bowls in restaurants and packed food are not rectangular or cubes but circular or cylindrical. Judging the quantities in circular, spherical or cylindrical containers is tricky. How can we compare the prices if we cannot judge the quantities? By the way, many food items like pizza (circular) and burgers (cylindrical) are deliberately shaped like that.

*Statistics trap:* Here is an ad for jobs which says - We offer the best salaries, the average salary of our employees is Rs 50,000 per month. The ad seems promising, but again most people don't understand the difference between the central tendencies average (mean), median, mode and how probability works. They fail to see that a higher average salary may result even when only a few employees get very high salaries, and most are paid quite low. So a better way would be to consider the central tendency with equal (50%) distribution of employees below and above.

**J. What is this central tendency called?**

\_\_\_\_\_

*Common sense is not so common* - Let us bring back the frog from the previous chapter. Imagine a person experimenting on a frog. The frog is well-trained. It jumps whenever told to

Answer key for J on page 20.

do so. The person cuts the legs of the frog one by one, and each time after cutting the leg, she asks the frog to jump. Each time it became more and more difficult for the frog to jump, but somehow it managed. After all, it was a well-trained frog. Finally, when all its legs were cut, it couldn't jump. She told the frog to jump repeatedly, but it was useless. So she concluded that when a frog's four legs are cut, it becomes deaf.

Analyse the statements of an ad trying to sell a packed juice called X. The ad starts with a famous saying - *an apple a day keeps the doctor away*. Then it says that X has more iron than an apple.

**K. Is the comparison in the ad correct? Why?**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The three musketeers were so impressed by grandma's talk that they decided to debunk one ad weekly and display it in their classroom. They immediately started working on the word BRAND used frequently in ads. Sana's mother had prepared samosas for them. They devoured the yummy samosas in no time.

**The Consumer Protection Act, 2019**, and the National consumer helplines 1800114000 or 14404 protect and strengthen consumers' rights. **Right to repair** refers to a law allowing the consumer to have a choice regarding repairing their devices and vehicles. The choice is that the customer can get their devices and vehicles repaired by anyone. Under this law, the manufacturer cannot bind the consumer through any warranty or guarantee violation if they do so.

**L. Is there any law in India for right to repair?**

\_\_\_\_\_

# Secrets



Zakir sir entered the class. He folded his white cane and announced, "Your class teacher is on leave today, so I will be taking your attendance." The attendance register was not there. Pokso, the class monitor, said, "Sir, I will go to the staff room and bring it immediately". Zakir sir said, "It is okay. I will manage without it." He called out the first name, "Zeba." Everyone, especially Zeba, was shocked when they saw that Sir took their attendance in reverse order (Z to A) without any help. Sir smiled and said, "sometimes, even the most mundane things can become fun only if we change our perspective." Naughty Payal, sitting at the last bench, opened her lunch box. Gurpreet, seated in the adjacent row, whispered, "*psst!* Payal, what are you doing? Sir will scold you." Payal whispered back, "how will he know? He is blind. Keep quiet, Gurpreet or else I will soak you with water balloons after school. It is our little secret. Understood?"

Zakir sir sat on his chair and said, "someone on the last bench has brought fried potatoes. If the meal is finished, can we study now?" Payal's face turned red. "Sir, Payal asked me to keep it a secret and threatened me with water balloons," said Gurpreet. The whole class burst

into laughter, including Zakir sir. "I am sure she will forgive you, Gurpreet," sir chuckled. As far as secrets are concerned, remember, there are safe and unsafe secrets, he continued. Safe secrets are fun, for example, when you make a surprise birthday card for your parents. They involve kindness.

On the other hand, a secret you hide because you don't want a trusted adult to get upset is an unsafe secret. Sharing your plans and problems with your parents increases their trust in you and your safety. You should always share information about relationships and friendships. If you can't share with trusted adults, share them with trusted friends. You should always tell them about unsafe touches and looks. Also, tell them when you get any gifts from others. Just like touches, gifts can begin as little things and suddenly create big problems for you.

Outdoor activities that do not include your parents in any role should also never be a secret. Problems should never be kept a secret. Share them with your parents so they can guide and protect you. Understand that even if your parents are angry with you for a while, they have a right to know. This will help keep you safe."

**Would you like to share with your friend Pokso a secret that you are uncomfortable with?**




#Life Skills: Coping with Emotions: It is not your fault

## It Is Not Your Fault

When people do wrong, they are afraid,  
Because from the right path they have strayed.  
They try to frighten the one they've abused,  
The person whom they have used and bruised.

They want to hide the wrong they've done  
They pretend that they're just having fun,  
So they frighten the children they abuse,  
Saying, "If you tell, then you will lose.

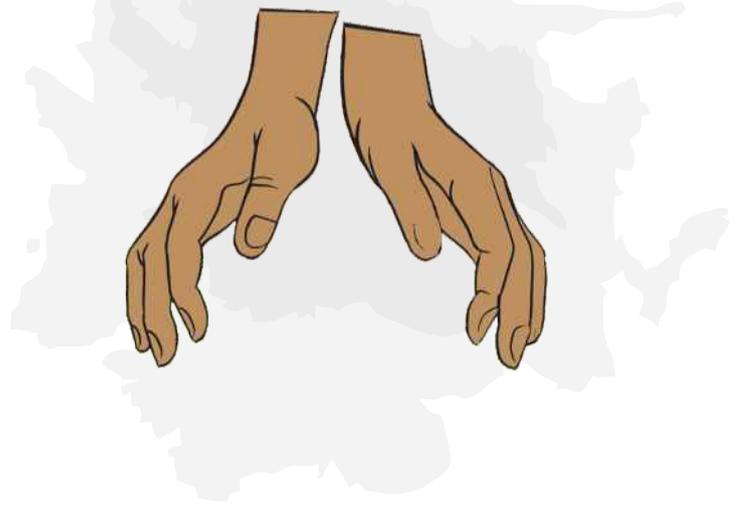
You will lose love, and you will be blamed,  
If someone finds out, you will be shamed.  
They will think it's entirely your fault,  
Because they know I don't do this at all.

It must have been something you said or did,  
That made me do the thing we hid.  
You broke safety rules, you were careless  
That is why you have got into this mess.

So don't breathe a word, don't tell anyone.  
Just come to me and let us both have fun."  
But they're wrong, they're wrong, no matter what they say  
You must tell someone, you must try to find a way.

Because they did wrong and they are to blame;  
You have only suffered, it is their shame.  
It is all their fault, you have nothing to hide,  
Do not add to your burden and shrivel up inside.

You break free. Don't listen to a word!  
Tell someone you trust! Feel the joy of being heard.  
If not the first or second, go on and tell a third.  
'Cause then it will stop, and you'll be free as a bird.

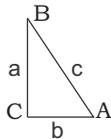


*Answer keys, page 7 - a-i; b-vi; c-viii; d-v; e-x; f-ii; g-iv; h-ix; i-iii; j-vii*  
*Answer key A, page 13 - The Story Of My Life*  
*Answer key J, page 17 - Median*

# Men Are From Mars, Women From Venus. Oh Really?

**Exam Warriors:** The exam warriors had come prepared for the maths exam. However, each student had a different aptitude for maths. Some even carried an altogether different perception of maths in their minds. However, everyone had practised hard. Kajal, the chess club's captain, could calculate and recite the value of never-ending 'pie', 3.14159..., up to 50 places. In contrast, Birsa, lovingly called Tenali Rama by his classmates for his wit, had a different approach to maths. He always connected numbers to images. For him, mathematics was nothing but images. Here is a question from the maths exam - What is **Pythagoras' theorem?** Kajal's and Birsa's answers were as follows.

Kajal:  $a^2 + b^2 = c^2$



Birsa:

A. Kajal's answer is correct, but which of Birsa's 3 images follows Pythagoras' theorem? Tick mark



**Multiple Intelligence:**

The human brain is more complicated than a supercomputer. Its working is based on many types of intelligence that help us speak, read, draw, and do much more. Every human being has *multiple intelligence*. The extent of each type varies from person to person, making us all unique and different. Aptitude is a natural ability to do something well. The concept of *multiple intelligences* is a theory proposed by psychologist Howard Gardener. Remember, it shouldn't be confused with learning styles. He proposed the following multiple types of intelligence. He also suggested that there may be other types.

1. Linguistic Intelligence (words)
  - I like reading **books**.
  - I enjoy word games like crosswords.
  - I enjoy rhyming words.
  - I like debating and extempore talks.
  - I write stories, essays or poems.
  - I can learn a new language easily.
2. Logical and Mathematical Intelligence (maths, science, computers)
  - I ask **why and how**.
  - I count numbers easily in my head.
  - I enjoy puzzles.
  - I like making working models of things.
3. Spatial Intelligence (arrangement and placement of objects)
  - I love jigsaw puzzles.
  - I like **origami** and drawing, painting or doodling.
  - I am good with following and giving directions to reach a place.
  - I find it easy to read graphs, pie charts, and bar diagrams.

Answer key for A on page 30.

- I like books with many pictures.
- I can imagine things clearly in my mind.

#### 4. Kinesthetic Intelligence (body movements)

- I like to walk up and down while thinking or studying.
- I enjoy dance, drama and **sports**.
- I use my hands and body while talking.
- I like model building, crafts and other indoor physical activities.

#### 5. Musical Intelligence

- I play a musical instrument.
- I listen to music often.
- I like to make my musical beats by tapping or humming.
- I often hum or **sing** while reading, studying or walking.

#### 6. Interpersonal Intelligence

- I **make friends** easily.
- I enjoy group games like cards.
- I prefer playing with my friends rather than spending an evening alone.
- I like to study in a group rather than study alone.
- I prefer to talk about my problems with my close friends or family instead of keeping them to myself.
- I like to cheer up my friends.

#### 7. Intrapersonal Intelligence

- I like myself.
- **I am happy with my body.**
- I prefer to take care of my feelings and problems alone rather than discuss them with others.
- I have a favourite place in the house where I like to be myself.
- I think I am confident and intelligent.
- I do my homework without being told to do so.
- I can make a timetable for myself and follow it.

#### 8. Naturalistic Intelligence

- I prefer being outdoors to sitting inside.
- I know the names of different plants/ birds/insects and like to take care of them.
- I **like nature** walks and treks.
- I enjoy looking at trees, flowers, and sunset.

#### 9. Existential Intelligence

- I wonder about life and death.
- I wonder about the **purpose of life**.
- I wonder about what happiness is.

**Holistic Intelligence:** Although the distinction between intelligences has been set out in great detail, Gardner opposes labelling learners to a specific intelligence. He maintains that his theory should “empower learners”, not restrict them to one learning method. He returned to the original definition of intelligence and reflected on the skills and abilities needed to solve problems within a culture. To further make his theory unique, he argued that we possessed all these intelligences but that each individual was strong in different intelligence areas.

**B. Tick mark on the above multiple intelligence that you think are associated with you.**

**Nature has made our bodies:** Nature has made our bodies male or female. Sometimes people are born who do not fit into the definitions of male or female. They are called *intersex* people. The type of private parts we are born with determines our sex, like male, female or intersex. In contrast, gender is related to various roles and behaviours that society expects from people. They are not naturally made. For example, ‘men cannot give birth to babies, but women can’ is nature-made, but ‘women should do the household work’, and ‘men should be the breadwinners’ or ‘women cannot fly fighter planes’ are *social constructs*. *Gender stereotypes* refer to the beliefs and roles considered socially acceptable,

appropriate or desirable based on an individual's sex. Some people identify with a gender other than the sex they were born with. They are called *transgender*. Can you imagine a life without feelings? No! After all, we are not machines but humans. We have to respect the feelings and rights of everyone, be it a man, a woman or another.

### First in India

- Kadambini Basu - *female doctor, 1886*
- Surekha Yadav - *female train driver, 1988.*
- M. Fathima Beevi - *female judge of Supreme Court, 1989.*
- Bhawana Kanth, Avani Chaturvedi and Mohana Singh - *women fighter pilots with Indian Air Force, 2016.*
- Joyita Mondal - *transgender judge, 2017*
- K Prithika Yashini - *transgender police officer, 2017.*

### C. Who was Shikandi in the epic of Mahabharata?

### D. Who do you think has more of the following multiple intelligence? Write 'M' for male, 'F' for female, 'O' for other and 'N' if gender neutral.

- Linguistic intelligence \_\_\_\_
- Logical and mathematical intelligence \_\_\_\_
- Spatial intelligence \_\_\_\_
- Kinesthetic intelligence \_\_\_\_
- Musical Intelligence \_\_\_\_
- Interpersonal intelligence \_\_\_\_
- Intrapersonal intelligence \_\_\_\_
- Naturalistic intelligence \_\_\_\_
- Existential intelligence \_\_\_\_

**The top 5:** Here is a list of 5 people from the world over from 7 specialised fields. M stand for Male and F for Female.

### 1. Scientists

- Albert Einstein - M
- Isaac Newton - M
- Galileo Galilei - M
- Charles Darwin - M
- Nikola Tesla - M

### 3. Fashion Designers

- Marc Jacobs - M
- Giorgio Armani - M
- Manish Malhotra - M
- Karl Lagerfeld - M
- Ralph Lauren - M

### 5. Explorers

- Marco Polo - M
- Ferdinand Magellan - M
- Captain Cook - M
- Vasco da Gama - M
- Ibn Battuta - M

### 2. Painters

- Pablo Picasso - M
- Leonardo da Vinci - M
- Vincent Van Gogh - M
- Claude Monet - M
- Michelangelo - M

### 4. Chefs

- Gordon Ramsay - M
- Paul Bocuse - M
- Anthony Bourdain - M
- Jamie Oliver - M
- Marco Pierre White - M

### 6. Musicians/ Singers

- Ludwig V Beethoven - M
- Wolfgang A. Mozart - M
- Tansen - M
- Johannes S. Bach - M
- Guido D' Arezzo - M

### 7. Writers

- Valmiki - M
- Vyasa - M
- Homer - M
- William Shakespeare - M
- Rabindranath Tagore - M

The list has been attained from an Internet search. The list clearly shows that all professions are a monopoly of men, even when professions like cooking and fashion are believed to be women's forté (gender stereotype). The names on the list will vary depending upon which place and which period of history you choose, but still, it will be dominated by men. If you compare lists from the last 100 years to the last 10 years, you will find more and more women on the lists. Why? The change has come because:

- Technology and human rights are creating equal opportunities for all.
- Modern jobs no longer require physical strength but multiple intelligence and emotional skills.
- The growing recognition that a particular gender or sex is not inferior or superior to any other.

**E. Tick mark the points a, b and c if you agree.**

**F. In your opinion, which of the following inventions are the 3 most important inventions that have liberated women from household chores, thus helping them establish professional careers?**

- a. Washing Machine    b. Microwave Oven  
c. Refrigerator    d. Cooking Gas    e. Television

---

**G. How is the world's population divided by females and males? Tick mark.**

- i. More females than males.  
ii. More males than females.  
iii. Equal females and males.

**H. Tick mark the places, events or institutions where there is an equal representation of females and males.**

- a. A school's staff room.                      b. A public rally.  
c. Military.                                      d. Judiciary.  
d. Spectators gallery in a stadium.  
e. At places of higher studies.  
f. Public transport like buses, trains, etc.  
g. Legislative places like parliament.

**I. Do you think the following emotions, feelings, attitudes, behaviours, or qualities are more associated with Men (M), Females (F) or Others (O) or are they gender neutral (N)? Write M, F, O or N accordingly.**

Love \_\_\_ Sadness \_\_\_ Hate \_\_\_ Anger \_\_\_  
Jealousy \_\_\_ Greed \_\_\_ Compassion \_\_\_  
Caring \_\_\_ Sincerity \_\_\_ Humorous \_\_\_  
Fortitude \_\_\_ Patience \_\_\_ Empathetic \_\_\_  
Resilience \_\_\_ Shrewdness \_\_\_ Leadership \_\_\_  
\_\_\_ Truthfulness \_\_\_ Ambitious \_\_\_  
Assertive \_\_\_ Submissive \_\_\_

### **Pickering Girls/Harvard Computers/Rocket Girls:**

Edward Charles Pickering (1846-1919) was an American astronomer. Williamina Fleming worked as a maid to him. Pickering recognized Fleming's talent and allowed her to work as the *'human computer'* in a time much before computers were invented. She worked with him from 1877 onwards in the Harvard College Observatory, United States. She discovered many astronomical objects and phenomena like novae (exploding stars), nebulae (remnant clouds of dead stars), variable stars (stars whose brightness varies) and hot and dense white dwarfs stars. She was the actual *'Miss Universe'*. Pickering went on to hire more and more females, the *'Pickering Girls'* or *'Harvard Girls'*. They would perform observations, mathematical calculations and data analysis. However, they were paid a fraction of their male counterparts, even while working longer hours than men.

Much later, but still, in the earliest days of space exploration, *'Women Computers'* did most calculations for early space missions at the Jet Propulsion Laboratory (JPL). The *'Women Computers'* or *'Rocket Girls'* calculations helped the United States launch its first *'Explorer 1'* satellite in 1958. The following year National Aeronautical Space Agency (NASA) came into existence, and JPL became a part of it. Janez Lawson was the first African American hired into a technical position at JPL. She had a bachelor's degree in chemical engineering. The *'Rocket Girls'* helped propel humans into the space age.



Pickering and the Harvard Computers - 1913.  
Fleming is at the centre.

I can respect people for their skills, intelligence and behaviour and show my respect in the way I behave with them.

**Points to ponder:** The Wright Company was the business venture of the Wright Brothers, who invented fixed-wing aircraft (1903). TATA Sons is a famous Indian company. Are there companies that females founded? Are there companies that have names based on mothers and daughters or sisters?



Women's cycles had a special design because they wore dresses which wouldn't let them be sporty. Women were restricted in their physical movements because of the dresses they wore. Girls didn't get the opportunity to climb trees, ride horses and drive automobiles like boys.

**Gender Parity:** The *Harvard girls* were paid much less than their male counterparts though they were equally skilled and intelligent. This inequality continues in the 21st century in most professions.

**J. Who do you think, male or female, usually earn more or is paid more in the following professions for the same skill, talent and hard work? Write M or F accordingly.**

Cricketers \_\_\_\_\_ Footballers \_\_\_\_\_  
 Umpires/refrees in sports \_\_\_\_\_ Bollywood/  
 Hollywood Films \_\_\_\_\_ Advertisements \_\_\_\_\_

Australia's Claire Polosak became the first woman umpire for a men's test match in 2021 in the history of the *Gentleman's game*. The cricket match was between India and Australia.

**Beauty lies in the eyes of the beholder:** Nobody knows for sure what being beautiful means. Whenever we find something or someone beautiful, it is influenced by many factors like our language, culture, and history. It is also influenced by whether we are a man,

woman or other. The definition of beauty will be different for a person with sight and a blind person. Moreover, the beauty standards in one culture may be unacceptable in another. Some cultures have unique ideas about people's beauty. Here are some people from different cultures worldwide who are considered beautiful per the beauty standards of their cultures.



Myanmar



Maori Community - New Zealand



Maori-community - New Zealand



Kenya Tribe



Sudanese Tribe



Mursi Tribe - Ethiopia



China

**Witches and witchcraft:** The superstition of witches and witchcraft is as old as human civilization. It is found in many cultures and religions worldwide. A witch hunt was a search for people who had been labelled witches or a search for evidence of witchcraft. Witch hunts became quite common in Europe during the 15th and 16th centuries. Women were mainly declared witches and suffered the most; many were burnt alive.

India followed many superstitious and ill practices, like the dowry system and sati pratha. They are illegal now. There are laws against them. However, witch hunting though rare, still exists, especially in rural and educationally backward areas. There is no central law against witch hunting. Some states do have laws against superstition, black magic, witch craft and witch hunting. Check whether your state has any such law.

**Find out who Narendra Achyut Dabholkar (1945-2013) was and what he did.**

**Savants:** Sometimes, the most amazing abilities of the human brain are revealed exactly when things go wrong. *Savants* are people who have mental abilities that could only be characterised as superhuman (e.g. having a photographic memory, playing music perfectly after hearing it just once, or doing complex mathematical calculations in one's head) but are otherwise severely disabled in every day *cognitive functions* and social interaction. A person with savant syndrome can be a man, woman or other. They generally have a nervous system development disorder like autism.

Marilyn Vos, a savant, has the world's highest Intelligence quotient (IQ). According to the Guinness book of world records, she has recorded the highest IQ and can be considered the most intelligent person. However, many have tried to challenge her title.

**Point of view of the universe:** Imagine you are in your mother's womb, yet to be born. You don't know who you will be in society and have an equal chance to be anyone. How would you structure the society? You would try to maximise the welfare of everyone because you could be anyone.

To which family, country, religion, gender, or any medical condition we are born is not in our hands. We have to respect the feelings and rights of every human.

### K. Match the following intelligence

- |                             |                            |
|-----------------------------|----------------------------|
| 1. Linguistic               | a. I am happy with my body |
| 2. Logical and Mathematical | b. Purpose of life         |
| 3. Spatial                  | c. Books                   |
| 4. Kinesthetic              | d. Making friends          |
| 5. Musical                  | e. Why and how             |
| 6. Interpersonal            | f. Like nature             |
| 7. Intrapersonal            | g. Origami                 |
| 8. Naturalistic             | h. Sports                  |
| 9. Existential              | i. Sing                    |



**Suggested reading** - *Pale Blue Dot* - An essay by Carl Sagan.

**Suggested viewing** - YouTube Search 'Kim Peek, the real rain man'

# Cyber Bullying



Cyberbullying is a new type of bullying that has become prevalent with the widespread use of the Internet. It occurs when a child or teen uses the Internet for *e-mails, text messages, instant messaging, social media websites, online forums, chat rooms, online gaming* or other digital technology to harass, threaten, or humiliate another child or teen.

Unlike bullying in the real world, it can go on around the clock, and it doesn't require any physical strength or face-to-face contact. Moreover, cyberbullies can post messages, images, and videos anonymously. These messages can be shared with people worldwide in no time. It is difficult and sometimes impossible to trace the source. To further complicate the matter, anything shared on the Internet by anyone is almost impossible to delete.

## How a cyberbully hurts:

- Deliberately excludes someone from an online group.
- Impersonates you online and sends embarrassing or damaging messages on your behalf that will affect your relationship with others.
- Repeatedly posts or sends offensive, rude, and insulting messages to/about you.
- Spreads lies and rumours about you.
- Posts videos or sends unwanted or intimidating messages.

- Engages in online fights, posting scornful and offensive messages.
- Tricks someone into revealing secrets or embarrassing information, which is then shared online.

## What to do if you are being cyberbullied?

- Don't blame yourself – It is not your fault. You should not let cyberbullying make you feel ashamed.
- Block the bully – It is tough not to, but you should not respond to cyberbullying because that only worsens the situation. Use the settings on your devices to block e-mails, images, and texts from cyber bullies.
- Share/Report – Save abusive text messages or screenshots of web pages where you have been bullied. This proof is helpful when you share/report it with a trusted adult. Sharing/reporting cyberbullying incidents with trusted grown-ups is the first step to counter cyberbullying.

## How to protect yourself from cyberbullying?

1. Use computer courtesy – Whether sending an e-mail, chatting in a chat room, or posting in a forum, be courteous and respectful to others.
2. Think before posting – What is posted online today may come back to haunt us later. With cyberbullying, one cannot just turn off the computer and expect everything to return to normal. Disconnecting from the Internet or other electronic devices is not a solution.
3. Keep personal information private – Posting private and personal information in the wrong locations can have serious consequences. For example, people may try to take over your online identity for unsafe purposes. Be careful to whom you send pictures. When you post your personal information on sites such as Facebook, Twitter, and other social networking sites, it is best to restrict privacy settings so that only your friends can view it. If private information is posted in a group setting, read

the guidelines before posting to make sure such information will not be made known to others.

**4.** Create safe boundaries – Of course, you will be excited to connect with your friends and classmates online, but as a safety rule, your loved and trusted adults should always be part of your friend list on social media.

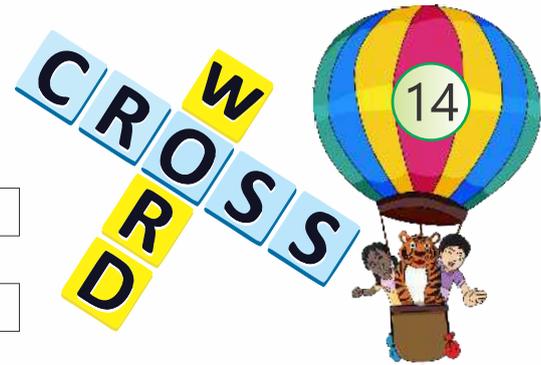
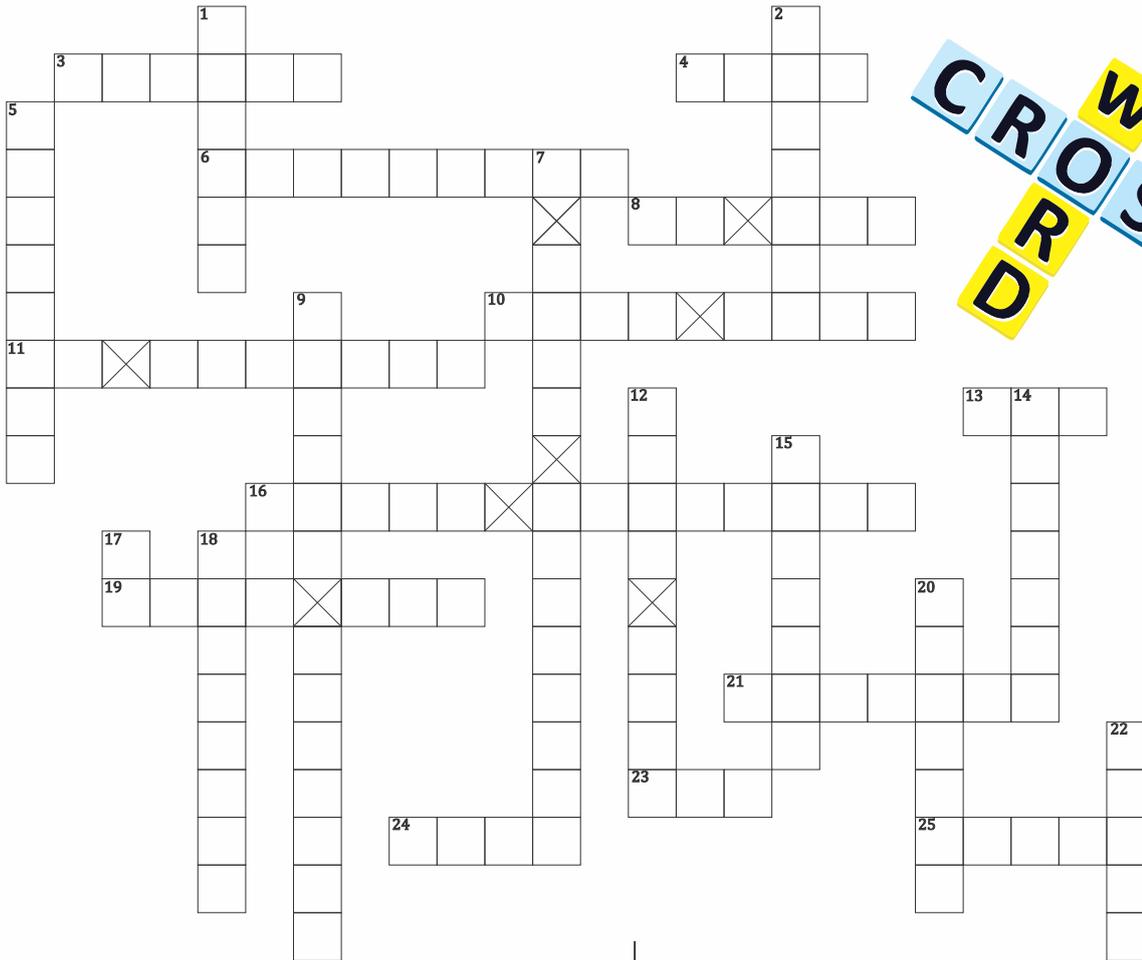
**5.** Be an active bystander – Cyberbullies will continue bullying if bystanders support them or do nothing to stop them. Here are some tips for you.

- a.** If you witness cyberbullying, do not join in nor stand by idly. Of course, you will feel peer pressure, but try to stand up for yourself and speak out against bullying.
- b.** Document cyberbullying and report it.
- c.** Don't forward hurtful messages or laugh at inappropriate jokes.
- d.** Share about bullying incidents with an adult you trust.

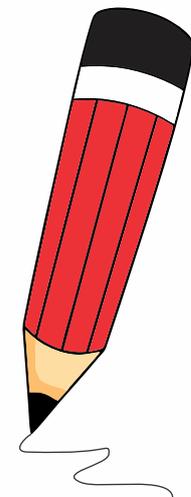
To handle cyberbullying and cybercrimes, you must know the following terms.

**Blog:** An online journal with photos and videos. | **CD:** Compact Disc. | **Chat room:** A website that allows people to send instant messages to each other. | **Cookie:** An invisible file placed on a computer when a website is visited. | **Cyber:** Relating to information technology/the Internet and **virtual** reality. | **Dark Web:** Portion of the Internet intentionally hidden through masked **IP addresses**. | **E-Mail Spoofing:** Sending fake or malicious e-mails that look genuine and from a trusted e-mail ID. | **Fake News:** False stories that appear to be news. | **Hacking:** Using a computer to steal private information. | **Happy Slapping:** Using a mobile phone or camera to record an incident where a person is bullied and then circulating the recording on social media. | **IP Address:** A

unique string of numbers separated by full stops that identify each computer using the Internet Protocol to communicate over a network. | **ISP:** A short form for Internet Service Provider, a company that provides users access to the Internet. | **IT Act:** The Information Technology (Amendment) Act, 2008. It is the primary law in India dealing with cybercrime and electronic commerce. | **Keylogger:** A software program or hardware that records all keystrokes on a keyboard. | **Malware:** Software like spyware or other virus, worms or Trojans that infect and intend to damage or take control over an electronic device like computer and mobile phone | **MMS:** Multimedia Messaging Service. | **Phishing:** A fake e-mail or message to a person to authenticate an account that leads to the disclosure of personal information such as passwords and credit card numbers. | **Privacy:** The state of being free from unwanted intrusion, public scrutiny, secret surveillance or unauthorised disclosure of one's personal data or information. | **Rumour:** Circulating gossip through e-mail, text messages, pictures or other means. | **Sexting:** The sending of sexually explicit content from one person to another. | **Spam:** Junk mail sent to many people at once. | **Trojan Malware:** A type of malware often disguised as legitimate software. Trojans can be employed by cyber thieves and hackers trying to access users' systems. | **Trolling:** Cyberbullying a person online by making repeated and persistent harassing comments or intimidating remarks. | **Virtual:** It means something that does not exist physically. | **Virus:** A harmful computer program that damages computers. Viruses can be sent to users through e-mail or downloaded from websites.



CROSS  
DROSS



**Across**

- 3. Circulating gossip.
- 4. Junk mail sent to many people at once.
- 6. A software program or hardware that records all keystrokes on a keyboard.
- 8. It is the primary law in India dealing with cybercrime and electronic commerce.
- 10. False stories that appear to be news.
- 11. A unique string of numbers that identify each computer using the Internet Protocol to communicate over a network.
- 13. A short form for Internet Service Provider
- 16. Using a mobile phone or camera to record an incident where a person is bullied and then circulating the recording on social media.
- 19. Portion of the Internet intentionally hidden through masked IP addresses.
- 21. Using a computer to steal private information.
- 23. Multimedia Messaging Service.
- 24. An online journal with photos and videos.
- 25. Relating to information technology/the Internet and virtual reality.

**Down**

- 1. An invisible file placed on a computer when a website is visited.
- 2. Software like spyware or other virus, worms or Trojans that infect and intend to damage or take control over an electronic device.
- 5. A fake e-mail or message to a person to authenticate an account that leads to disclosure of personal information.
- 7. Sending fake or malicious e-mails that look genuine and from a trusted e-mail ID.
- 9. A type of malware often disguised as legitimate software.
- 12. A website that allows people to send instant messages to each other.
- 14. The sending of sexually explicit content from one person to another.
- 15. Something that does not exist physically.
- 17. Compact Disc.
- 18. Cyberbullying a person online.
- 20. The state of being free from unwanted intrusion, public scrutiny, secret surveillance.
- 22. A harmful computer program that damages computers.

Answer key on page 59.

## Artificial Intelligence

We cannot live without electricity; the same has become true for the Internet. We have been writing software programmes, codes and algorithms for computers for quite some time. As users, we have also been storing individual information, experiences, human collective experiences and wisdom on the Internet. All the content of all the world's libraries already exists on the Internet. Moreover, the Internet stores our likes and dislikes on almost everything. It also knows about the places we visit, the content we view, our friends, and much more. For the first time in human history, someone other than us knows so much about us. The more we browse the Internet, the more it knows about us. Where will all this finally lead us? Nobody can tell for sure.

*Artificial intelligence (AI)* is the simulation of human intelligence in computers or machines programmed to think like humans and mimic human actions. Most computer scientists believe that by 2050 machines will start writing software programmes on their own and will require no human intervention. They will have human-like or better learning and problem-solving capabilities. Will they then surpass all human brain and mental abilities? What do you think?

Once Artificial Intelligence (AI) comes to the forefront, *Intelligent Quotient (IQ)* or Science, Technology, Engineering and Mathematics (STEM) based careers like writing software programmes, algorithms, coding, and more, will take a back seat. Life skills and many other soft skills will be at the forefront. People will then focus on things that machines or computers cannot do and are exclusive to human intelligence.



*CAPTCHA* stands for Completely Automated Public Turing Test. Computers conduct this test on humans to tell computers and humans apart. In the test, the computer asks us to decode or match jumbled words or pictures that even a kindergarten child with limited thinking capabilities can do. However, this simple task for us is challenging for computers to perform. So, what is simple for us to perform can be difficult for computers. People are still determining what thinking skills will be at the forefront of jobs 30 to 50 years later. However, many social and emotional skills, like empathy, interpersonal relationships, and coping with emotions and stress, will climb the ladder.

**Point to ponder:** Do you remember Asimov's three laws of robotics from the previous class?

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
2. A robot must obey orders given by a human being unless it conflicts with the First Law.
3. A robot must protect its existence as long as such protection won't conflict with the First or Second Law.

Keeping these three laws in mind, imagine a situation where you travel in a driverless car using Artificial Intelligence (AI). Suddenly a child comes in front of the car. The AI has to choose between your and the child's life. There is no other option available for AI.

**A. Do you think AI can take this decision?**



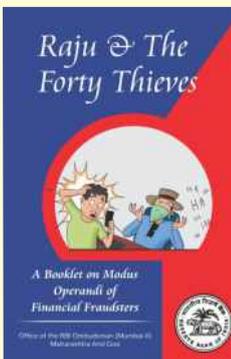
Technology is a useful servant  
but a dangerous master.



**B. Discuss the above picture with your classmates.**

**Safety tips for the virtual world.**

- a. People you meet on the Internet are strangers. They are not classified as friends unless you know them in 'real life'.
- b. Never agree to meet an online friend in person. If you want, talk to your parents about it.
- c. Never lie about your age to surf an adult-only forum or site.
- d. Never do anything that may cost money without your parents' permission. Never give out credit card information.
- e. If you are upset or angry about something, do not use the Internet to vent your feelings.
- f. Passwords must be kept secret from everyone but your parents.
- g. Don't let anybody else use your password; get a new one every six months.
- h. Do not use the same password for multiple accounts.
- i. Always select 'never' when your internet browser asks for your permission to remember your passwords.



*Raju and the 40 thieves* is a booklet by the Reserve Bank of India (RBI) on the modus operandi of financial fraudsters.



**C. Questions are given below to determine how active you are on the Internet.**

**i. Have you ever browsed a website? If yes, what was the purpose?**

---



---

**ii. Do you own a password? If yes, which device/website/portal/app does it gives access to?**

---



---

**iii. Have you ever purchased anything online? If yes, what was it?**

---



---

**iv. Have you ever used an OTP?**

---



---

**v. Are you a member of any social media platform? If yes, then which one(s)?**

---



---

**vi. Have you ever uploaded anything on the Internet? If yes, what is it?**

---



---

**vii. Have you ever downloaded anything from the Internet? If yes, what was it?**

---



---

**viii. Have you ever played an online game? If yes, what was it?**

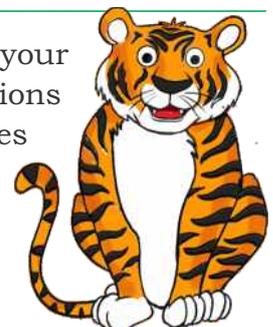
---



---

**ix. Do you have an online friend?**

Sooner or later in your life, your answer to the above questions will be a yes. So, learn the rules for your safety in the virtual world by heart. You will need them at all times.



## Good Friends Are for Keeps, but...



Friendship is one of the most beautiful bonds anyone can ever wish for. Getting out of a bad friendship can be hard, especially if it has lasted long. Below are some **signs** that tell you it is time to leave a friendship.

- If you try to bring up an issue that concerns you, they start to belittle it.
- If it seems that it is always about their problems and they rarely listen to you.
- If they threaten to harm themselves if you ever leave.
- If they are jealous of your friends, telling you they are bad people for no real reason and pressure you not to be with them.
- If they call you names during arguments.
- If they never apologise or follow up their apology with a defensive “but.”
- If they refuse to compromise on certain issues, give you ultimatums or fight with you when you try to place a boundary.
- If they neglect your feelings about people you care for.
- If they accuse you of cheating with no real evidence or reason.
- If they expect 24/7 contact when you’re apart and get mad at you if you don’t reply promptly.
- If they try to make you feel guilty for setting boundaries.
- If they show no respect or understanding towards your value system.

- If they act violently towards objects when angry with you.
- If you don’t tell your family and friends about the reality of your relationship because you’re afraid of what they will think or you feel as though you’re somehow at fault.

**A. Tick mark the signs if you do this to someone and put a cross if someone does it to you. This will help you analyse whether you are causing trouble or it lies at the other end.**



**B. Find more about the following historical friendships.**

### Queen Victoria and Abdul Karim



Mohammed Abdul Karim was an Indian attendant of Queen Victoria of England. A strong friendship between two people who were so different, one white, the other brown, one royal, the other a servant, one old, the other young, one Christian, and the other a Muslim.



### Srinivasa Ramanujan and Godfrey H Hardy

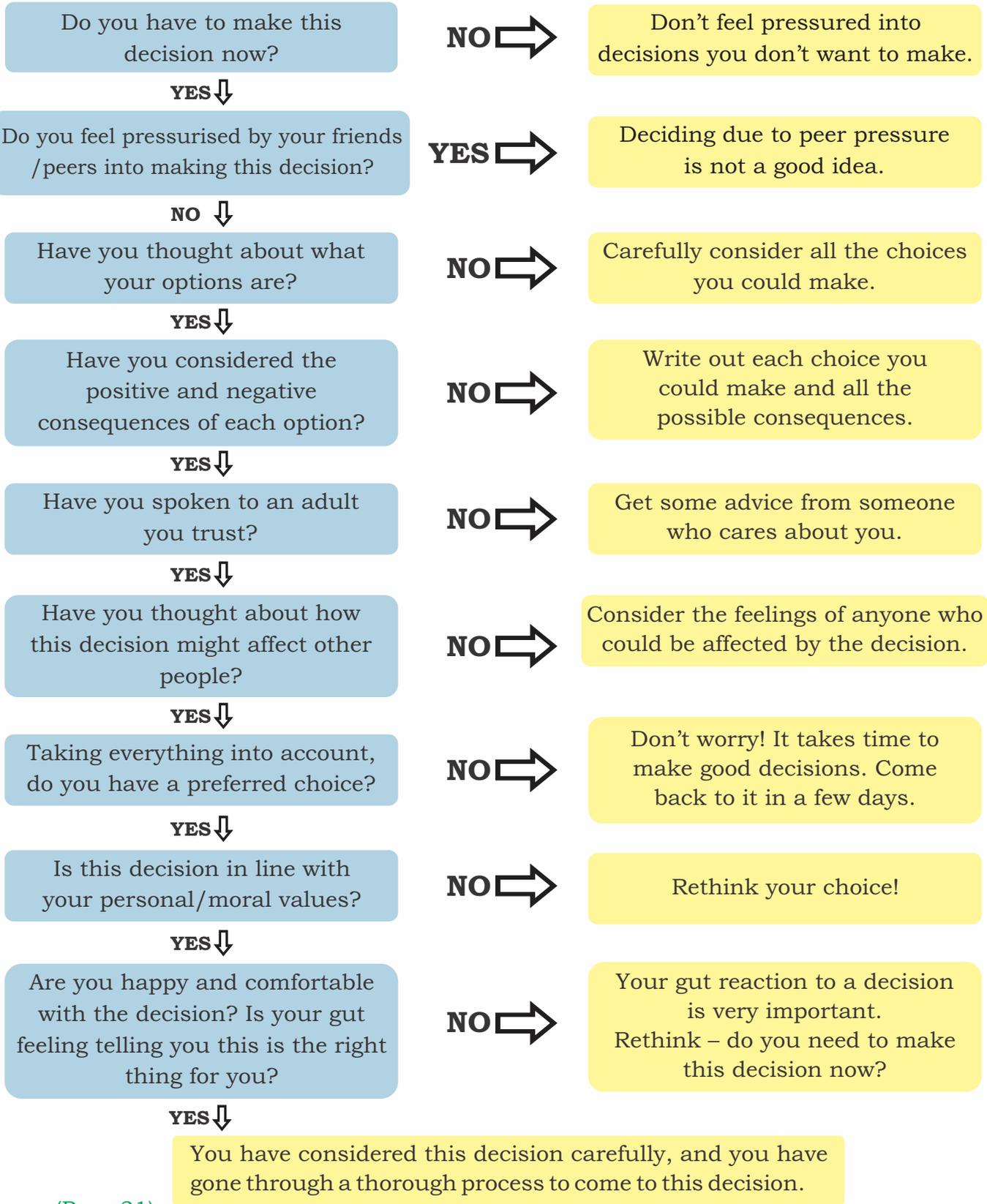
Both were great Mathematicians. Harold Hardy recognized Ramanujan’s genius, brought him to Cambridge University, and was his friend and mentor for many years.

### George Harrison and Ravi Shankar



George Harrison, one of the world’s biggest rock stars from England, met Ravi Shankar, a legendary sitar player and one of India’s most esteemed classical musicians, and they became friends for life. Ravi Shankar taught George Harrison to play the sitar.

**Here is a flowchart that will help you in making better decisions.**



Answer (Page 21)

# Moral Compass

It was the debate period in school. Children, including the three musketeers, from houses - South, North, West and East - were seated in the assembly hall in small roundtable discussion groups. The budding scholars were debating and putting across their points of view on various issues under the able guidance of their learned teachers. Here are snippets from various roundtable discussion groups for you to ponder.

**Moral Compass - Roundtable – 1:** Unlike other animals like the insect praying mantis, we humans do not eat each other. Had we practised cannibalism, we would not have survived. A baby deer, just after a few minutes of its birth, not only stands up but also starts to run. Otherwise, the baby deer will be too easy prey for predators like lions and tigers. In contrast, humans are born half-baked. Human babies, as you know, are fragile and cannot take care of themselves until a particular age. We, as a society, all have protected and taken care of children. Otherwise, they would not have survived at all. The human story is a story of collaboration, trust and responsibility. That is why we say no person is an island and humans are social beings. That is how we have evolved. We are not predators but prey. We were often killed and devoured by predators. Don't worry; in the modern world governed by science and technology, predators are no threat to us. Instead, it is the other way round. At the core of our moral compass, humanism, and religion lies the fact that we are prey and not predators. In the equation of morality, we always feel for the weaker side or the underdog. The needle of our support, emotions and feelings is tilted towards the weaker side.

**A. Who do you feel is on the weaker side in the following situations? Write none if you feel none.**

- a. **i.** A healthy person or **ii.** someone suffering from a deadly disease? \_\_\_\_\_
- b. **i.** A refugee or **ii.** a citizen? \_\_\_\_\_
- c. **i.** An orphan or **ii.** someone with a family and proper home? \_\_\_\_\_
- d. **i.** Poor or **ii.** rich? \_\_\_\_\_
- e. **i.** Young or **ii.** old \_\_\_\_\_
- f. **i.** The bully or **ii.** the one being bullied. \_\_\_\_\_



Remember, at times, it becomes pretty challenging to figure out who is on the weaker side or maybe both the parts of the equations are equally weak. Such situations are called **dilemmas**.

**The morality of reward and punishment - Roundtable – 2:** You all have been rewarded for doing the right things and punished for doing the wrong things. That is how you grew up, correct? Everyone likes rewards but not punishments.

**B. Share an experience for which you were rewarded and an experience for which you were punished by your loved ones in the last 12 months.**

---

---

---

---

---

---

---

Like you, when the three musketeers were in kindergarten, the only way for them to tell right from wrong was through the rewards and punishments they received for what they did. For example, when they kept themselves neat and clean, they were allowed to watch their favourite cartoon shows. When they did not,

If people are good only because they fear punishment, and hope for reward, then we are a sorry lot indeed.

they were not allowed to do so. But now they, just like you, are pretty grown up and have a fair idea of right and wrong behaviours, actions and attitudes. They know the importance of hygiene and do not need any reward for being hygienic because it is the right thing for them to do.

Your understanding of various subjects in your school has improved over the years. Likewise, your knowledge of right and wrong or moral and immoral has also improved. Still, you keep on working to improve your academics. So, you must keep working on understanding the right thing to do in a given situation.

**C. What are the 2 things you think are right to do irrespective of punishment or reward?**

---

---

---

---

---

---

---

---

---

---

Acting on moral principles in various situations and relationships is the challenge you will face throughout your existence in the universe. But why do you need moral principles in the first place? Who made them?

**Family, the birthplace of morals – Roundtable – 3:** Humans, as you know, are social animals and cannot live in isolation. Human society lives in small units called a family. Families are connected through various direct or indirect relationships, forming a web called society. Individuals, their families and society exist on an agreement or contract. These are based on promises, adjustments and rules between two individuals like husband

and wife or among the members of a society to cooperate so that everyone can live a happy, healthy and safe life.

**D. Do you think family members (spouses and children) can co-exist as a single unit if there is no trust, responsibility, sincerity, commitment, and truthfulness among them? Why do you think so?**

---

---

---

---

---

---

---

---

---

---

**E. What other moral principles would you like to have in a family/society?**

---

---

---

---

The primary source of law in India is the Constitution. The laws are based on constitutional values like *sovereignty, socialism, secularism, democracy, the republican character of the Indian State, justice, liberty, equality, fraternity, human dignity and the unity and integrity of the Nation.*

**Punishment as a deterrent - Roundtable – 4:** Punishment as a deterrent - Roundtable – 4: Depending upon the nature or gravity, the criminal justice system (*criminal jurisprudence*) categorises crimes in the following terms.

Petty crime - like pickpocketing, Serious crime - like robbing a bank by threatening the life of people, and Heinous crime - like murder.

Accordingly, the system awards the quantum of punishment. Higher the gravity of a crime, the higher the term for punishment. Even the death penalty is awarded in some of the most heinous cases that are *rarest of rare*. So a pickpocket is awarded lesser punishment than a robber. This *jurisprudence* seems fair because if the punishments for both crimes are the same, then a pickpocket would prefer to rob a bank. Thus punishment as a deterrent would lose its very purpose.

However, there is a flip side to this argument. Imagine a hardcore criminal has been awarded the death penalty for murder and the court's verdict depends upon an eyewitness's testimony. The hardcore criminal knows that she/he cannot be hanged twice, so she/he will be able to conclude that killing the witness is the only option to survive. That is why *criminal jurisprudence* also includes the concept of *reformation, rehabilitation and restorative justice*.

**Crime and punishment:** The quantum of punishments for various types of crimes is as follows.

Petty crime - 0 to 3 years of prison and/or a fine. So for a petty crime, there is a possibility that a court may let a person go free after imposing a fine.

Serious crime - 3 to 7 years of prison and liable for fine.

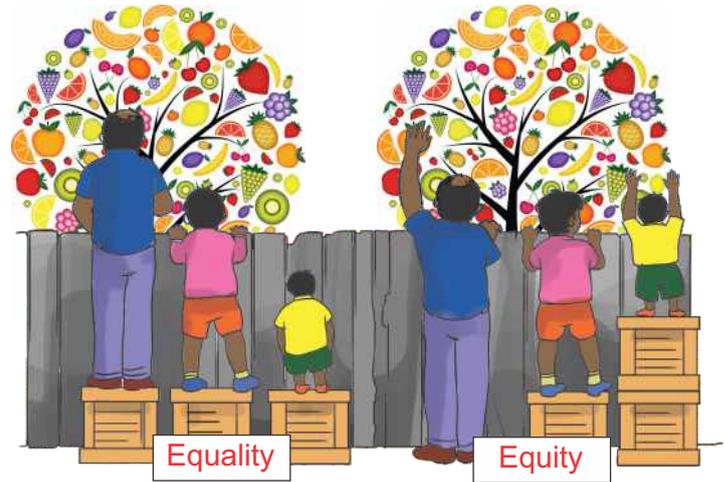
Heinous crime - more than 7 years of prison. Death penalty in rarest of rare cases and liable for fine.

The amount of fine increases from petty to heinous crimes. A child may also commit a crime, and the victim can be another child or adult. All such cases are handled under the law called JJ Act.

**F. Do you agree with the statement: The moral principles of a family and a society at large play a crucial role in the crimes committed?**

\_\_\_\_\_

**Equality and equity - Roundtable - 5:** Equality has to do with giving everyone the same support, resources or opportunities irrespective of their need. In contrast, equity involves distributing resources based on the recipients' needs.



The tallest person in the picture does not need a box, so it can be given to the person who needs it. At any point in time in any society, some people need extra support. This is not because they are less capable or sincere, but because they do not have a fair chance to prove themselves as they were born in a particular family, community or medical condition.

**G. Do you think that equity can only be ensured when someone is getting extra resources because only then can you cut down on their extra resources?**

\_\_\_\_\_

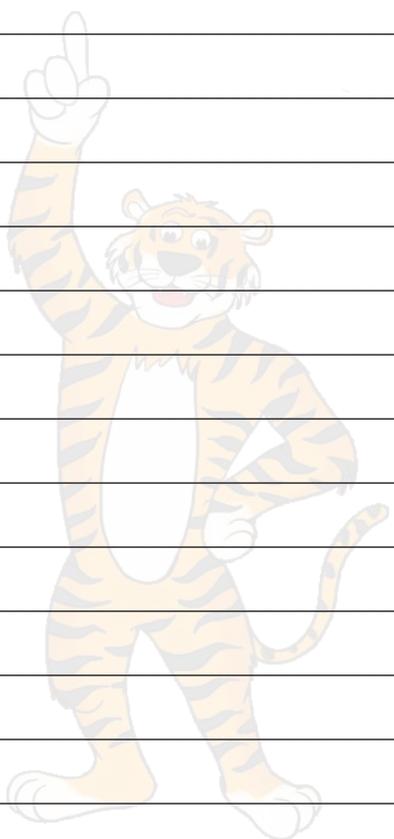
Consider a community that is economically and socially backwards. Their economic and social status has not changed over the last two thousand years because of society's discriminatory hierarchical system. Try to apply the principle of equity to this community which now lives in a recently established democracy. Consider the following two options for equity.

**Option i.** Providing children FREE access to the modern quality education system is the single most important thing for creating

support, resources or opportunities. This access is directly related to skill development, leading to job and wealth creation. But this is quite a slow process.

**Option ii.** RESERVING jobs for them by relaxing the required competency and skill levels.

**H. Which option would you choose for equity i or ii, and why would you choose so? Discuss your answer with your classmates.**



Answer key, page 41.

**Across**

- 3. Rumour
- 4. Spam
- 6. Keylogger
- 8. IT Act
- 10. Fake News
- 11. IP Address
- 13. ISP
- 16. Happy Slapping
- 19. Dark Web
- 21. Hacking
- 23. MMS
- 24. Blog
- 25. Cyber

**Down**

- 1. Cookie
- 2. Malware
- 5. Phishing
- 7. E mail Spoofing
- 9. Trojan Malware
- 12. Chat Room
- 14. Sexting
- 15. Virtual
- 17. CD
- 18. Trolling
- 20. Privacy
- 22. Virus

**Moral dilemmas** are the most difficult situations humans face, and they have no full and final solutions for them. Democracy is all about - of the people, by the people and for the people. Even a democracy with a constitution has its dilemmas. As per the constitution, every elected government (state) has to prepare and implement a plan under the directive principles of state policy (DPSP). This has to be done for people's social, political and economic upliftment. The DPSP caters to a class, category or group of weaker people. Various laws are made to implement the DPSP. However, as you know, the constitution also provides a set of fundamental rights to people (citizens). These rights apply to every individual (citizen). There is sometimes a conflict between the DPSP and fundamental rights.

For example, a road must be widened to remove a traffic jam on a busy highway. Many people travelling in their private vehicles, school buses, and even patients in ambulances suffer because of traffic jams. The government decides to widen the road, but to do so, it has to destroy a house owned by an individual. So the government decides to buy the house, but the individual refuses to sell.

**I. What do you think the government should do?**

---



---



---



---

Who should get priority when there is a conflict between the fundamental rights and the DPSP is a moral dilemma of the constitution (democratic system). Remember, the Constitution of India provides fundamental rights, and the judiciary guarantees these rights.



## The Good Samaritans



It was morning time. Sana, Arpit and Pokso got off their school bus. Suddenly, there was a loud sound. CRASH! Two boys on a motorcycle hit a boy from the junior wing. The three musketeers ran to the scene. The boy was lying unconscious on the road. They ran to the school reception and called the ambulance. Asha, the medical room nurse, came rushing. She checked the boy for pulse and breathing. The boy was breathing erratically. She performed **CPR** on him. Although still unconscious, the boy started breathing normally. *Wee woo*, the ambulance came within a few minutes. Asha madam accompanied the boy to the hospital. The boys riding the motorcycle were from the senior wing of the school. They were given first aid.

The next day, the principal madam made some important announcements at the school assembly. "The hospital informed us that although the boy from the junior wing is seriously injured, he is out of danger. Let's clap for the three musketeers for quick thinking and calling the ambulance. They have acted as *Good Samaritans*." The madam continued, "Keeping in mind the rise in such cases, we have arranged a workshop for you all in the school playground today."

The students assembled in the playground. The principal ma'am then asked Asha, the medical room nurse and a volunteer with the *Red Cross*, Vishnu, the physical education teacher and Inaya, the biology teacher, to demonstrate CPR. Here is what they taught:

**Cardiopulmonary resuscitation (CPR)** is a lifesaving technique. It aims to keep blood and oxygen flowing through the body when a person's heart and breathing have stopped. There are two types of CPR. CPR with breaths and CPR with hands. Both involve chest compressions. Remember, only well-trained adults can perform CPR with breaths. CPR is needed when a person is unconscious, not breathing normally or not breathing. Here are the CPR steps to follow for someone over five years who needs help.

**Step 1:** Seek immediate help and call an ambulance.

**Step 2:** Make sure it's safe for you to reach the person.

**Step 3:** Check the person for responsiveness. Tap their shoulder and ask loudly, "Are you OK?"

**Step 4:** Place the person on a firm, flat surface.

**Step 5:** Open the person's airway by placing one hand on their forehead, gently tilting their head back, and lifting the chin.

**Step 6:** Place the heel of one hand on the person's breastbone and at the centre of their chest.

**Step 7:** Place your other hand on top of your bottom hand and interlock your fingers.

**Step 8:** Position yourself, so your shoulders are directly above your hands.

**Step 9:** Press straight down by 2 to 2.5 inches on their chest using your body weight and not just your arms.

**Step 10:** Keeping your hands on their chest, release the pressure and allow their chest to return to its original position. This counts as one compression.

**Step 11:** Repeat these compressions 100 times per minute in a rhythmic manner. To maintain the rhythm, you may have to count your compressions. Continue with compressions until the person becomes responsive, an ambulance arrives, or as long as possible.

**The Red Cross** is an international philanthropic organization. The Red Cross Society was formed in consequence of the Geneva Convention of 1864 to care for the sick and wounded in war, secure the neutrality of nurses and hospitals, and help relieve the suffering caused by war, natural calamities and diseases.

**The golden hour:** The golden hour is the first 60 minutes following any injury or trauma. Prompt medical attention during this period can save one's life. This period is critical as the chances of survival depend on this period.

Next, Mr Sunil, head constable of the Traffic Police, spoke about the **Motor Vehicles Act (MVA)**. He explained:

“Do you know that more than a hundred thousand people die in road accidents in India every year? Many of them are children who often encounter road accidents while going to or returning from school. That is why the new stringent Motor Vehicles Act - MVA (2019) came into existence. Major causes of road accidents are overspeeding, drunk driving, poor visibility and avoiding safety gear like seat belts and helmets. Two-wheelers account for the highest share in total accidents and fatalities. The good news is that data shows road accident fatalities have declined in the last couple of years.

India is also a signatory to the Brasilia Declaration on Road Safety 2015, a declaration supported by the World Health Organisation (WHO). India has committed to reducing the number of road crash fatalities and severe injuries in a time-bound manner.

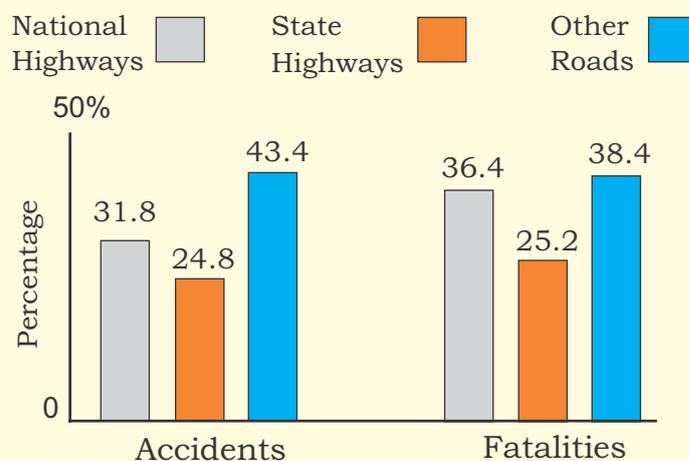
The Motor Vehicles (Amendment) Act 2019 prioritises the protection of children, pedestrians and others. Here are its salient features:

- The fines for violations like drunk driving, rash driving, driving without a licence,

overspeeding, not wearing a seatbelt or a helmet, jumping a red light, and talking on the phone while driving has been substantially increased.

- The driver licensing system is being digitalised and made uniform for the entire country.
- For deaths in hit-and-run cases, the government provides a higher compensation.
- The act has provisions for the protection of Good Samaritans. Those who come forward to help accident victims will be protected from *civil or criminal liability*. It is optional for them to disclose their identity to the police or medical personnel.
- It is mandatory to alter vehicles to make them suitable for persons with disabilities.

The following data shows that out of a total of 3,66,138 accidents recorded in 2020, 1,20,806 were fatal accidents. The rest were minor or grievous injury accidents.



**A. On which highways/roads the fatalities were maximum and minimum?**

**Max:** \_\_\_\_\_

**Min:** \_\_\_\_\_



Data source: Ministry of Road Transport and Highways, Govt. of India - 2020

Be patient on the road, or you might become a patient in the hospital.

A *driving licence* is an official document certifying that the holder is suitably qualified to drive a motor vehicle(s). No person can drive a motor vehicle in any public place unless they hold a valid driving licence issued to them by the government, authorising them to drive a vehicle of that particular category. In India, two driving licences are issued: *Learner* and *Permanent*. A *Learner's Licence* is valid for several months and a *Permanent Licence* for many years. You must have a valid Learner's Licence to obtain a Permanent Licence.

- ✓ The minimum age to apply for a permanent licence to drive a private motor vehicle is 18 years.
- ✓ The eligibility for obtaining a Learner's Licence for a private motor vehicle of 50 CC engine capacity and without any gear is 16 years (if the applicant's parents or guardians give their consent).
- ✓ In traffic violations by children or minors, the guardians or owner of the vehicle will be held responsible unless they manage to prove that the offence was committed without their knowledge or that they had tried to prevent it."

Mr Suil paused and asked, "Is everything clear so far? If anyone wants to ask any questions, kindly raise your hand." Arpit raised his hand. "Sir, what happened to those two boys who caused the accident?" he asked. The sir said, "The Juvenile Justice Board has cancelled the registration of the motorcycle. The parents were warned sternly, and the children were detained in an observation home."

Here are some more things which the students learned in the workshop:

### Why is the colour of your school bus yellow?

The wavelength and frequency of a particular colour (light) like red, yellow, blue, green, and others (VIBGYOR) define whether it will scatter more or less. The red light scatters the least and the violet the most. The less a light scatters, the more visible it is to us. Since we have already

used red for danger/stop signs, yellow is an excellent choice for your school bus."

### A safety checklist for school buses.

- ✓ Bus must have a first aid box.
- ✓ It must have a fire extinguisher.
- ✓ It must have a speed governor to limit the speed of the bus to 40 kph.
- ✓ It must have the school's name and telephone numbers written.
- ✓ There must be an attendant from the school on the bus.

On their way to the classrooms, the students discussed all the essential things they were taught that day to keep them happy, healthy and safe.



**B. Do you, your parents, teachers or friends know someone who died in a road accident?**

**C. Here is what you can do to keep everyone safe on the road.**

- a. If you go to your school by bus/van/auto-rickshaw, whether by your school's or private transport, ask your parents/guardians to check the validity of the driver's driving licence.
- b. If the driver jumps a traffic light or a railway signal or talks on a mobile phone while driving, report it to your parents/guardians/ teachers.

**D. Ask your loved ones, teachers, and non-teaching/support staff who drive to take a safe driving pledge.**