



PUBLIC TRANSPORT
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THINK THROUGH IT ...

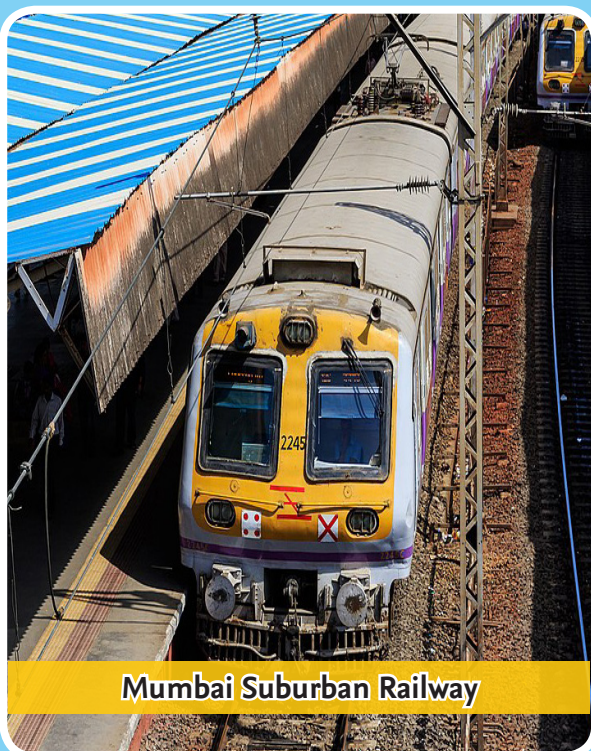
"If you were to design the ultimate system, you would have mass transit be free and charge an enormous amount for cars .

— Michael Bloomberg



Public Transport in India – Some Interesting Facts

- Buses take over 90% of public transport across the cities in India.
- Chennai, is the home of Asia's largest bus terminus, namely, the Chennai Mofussil Bus Terminus also known as CMBT.
- Mumbai, was the first metropolitan city in the country to introduce air conditioned buses (1998).
- Tamil Nadu State Transport Corporation Limited (TNSTC) is the largest bus corporation in the world.
- Indian Railways is the third largest network of rail transport in the world after the United States of America and Russian Federation with 116,000 km (length) of rail lines.
- Gorakhpur in Uttar Pradesh, has the longest railway platform in the world (1366.33 m in length).
- Kolkata is the only city that has trams as part of the public transportation system.



Mumbai Suburban Railway



Delhi Metro



Tram in Kolkata



Ferry service in Goa



Boat service in Kerala



Bus in Mumbai



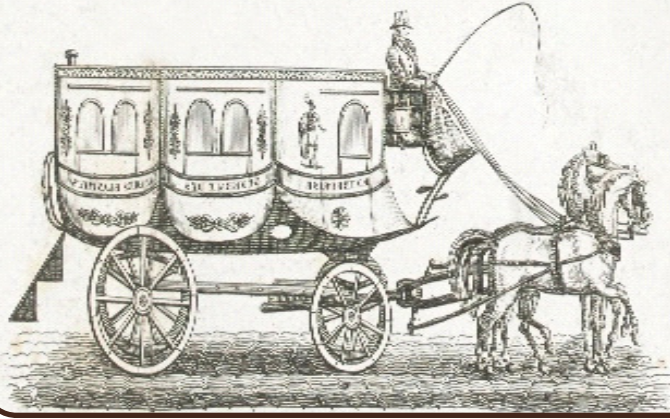
Bus in Delhi



Bus in Chennai



Tram in Kolkata



The horse-drawn omnibus was one of the earliest precursors to public transport as we know today. It was first used in France in 1828 and could accommodate as many as 25 or 50 people to share a ride.

Public transport is not the most comfortable way to travel. Yet for the larger good and common welfare, public transport is the most viable mode of transport. Let us check out some of the reasons in favour of using public transport.

Reduction of Air Pollution

Modes of transport have a direct impact on our immediate environment. The use of motor vehicles is a leading cause of air pollution. The most common form of vehicular pollution is smog. The term smog was initially coined as a combination of smoke and fog.

The major pollutants that are associated with smog are:

Ozone – ozone created by vehicular pollution at the ground level can irritate the respiratory system, causing coughing, choking, and reduced lung capacity.

Nitrogen oxides – Nitrogen oxides are vehicular pollutants that generate the fine particles of PM. They can cause lung irritation and weaken the body's defenses against respiratory infections such as pneumonia and influenza.

Sulphur dioxide – Motor vehicles create this pollutant by burning sulfur-containing fuels, especially diesel. It can react in the atmosphere to form fine particles and can pose a health risk to young children and asthmatics.

Particulate Matter (PM) – Particulate Matter or PM refers to the particles of soot, metals, and pollen. It is this particulate matter that gives smog its smoky color. This can penetrate deep into lungs leading to serious health concerns.

Carbon monoxide – Cars and trucks are the source of nearly two-thirds of carbon monoxide. When inhaled, CO blocks the transport of oxygen to the brain, heart and other vital organs in the human body.



Use of public transport reduces air pollution and ozone levels.

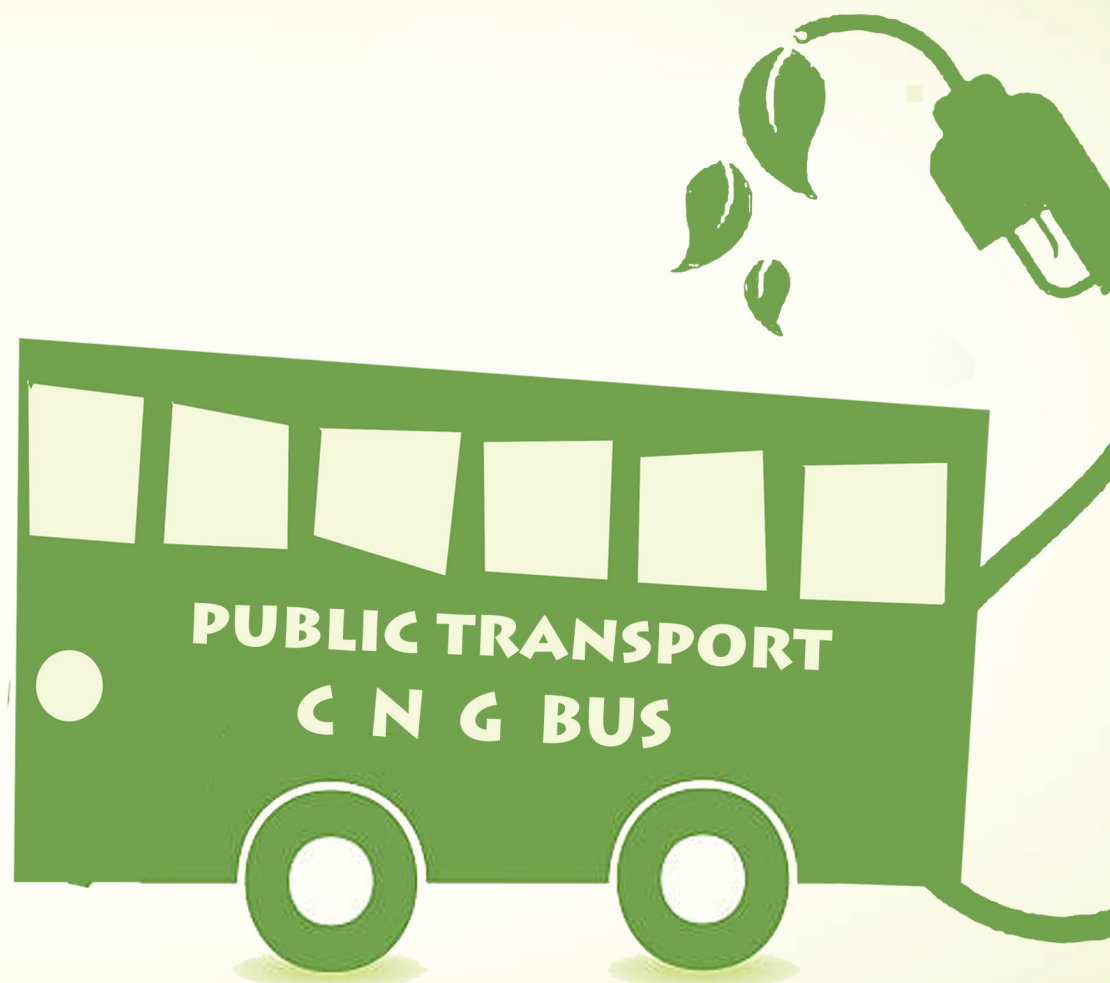
According to studies, buses emit only 10% as many hydrocarbons per passenger mile as a single-occupant auto. Buses emit only 75% as many nitrogen oxides per passenger mile as a single-occupant auto. Trains emit only 25% as many nitrogen oxides per passenger mile as a single-occupant auto, and nearly 100% less hydrocarbons and carbon monoxides.

Conservation of natural non-renewable resources

The fuel used in vehicles such as petrol, diesel, liquefied petroleum, compressed natural gas come under the category of natural non-renewable resources.

These resources took billions of years to form and cannot be replenished easily. Indiscriminate use of such resources will deplete them without any way of replacing them.

Use of public transport helps in conservation of natural non-renewable resources.



Check the statements below –

- The fuel efficiency of a fully occupied bus is six times greater than that of the average single-occupant auto.
- The fuel efficiency of a fully-occupied train car is fifteen times greater than that of the average commuter's single-occupant auto.

Contain Global Warming

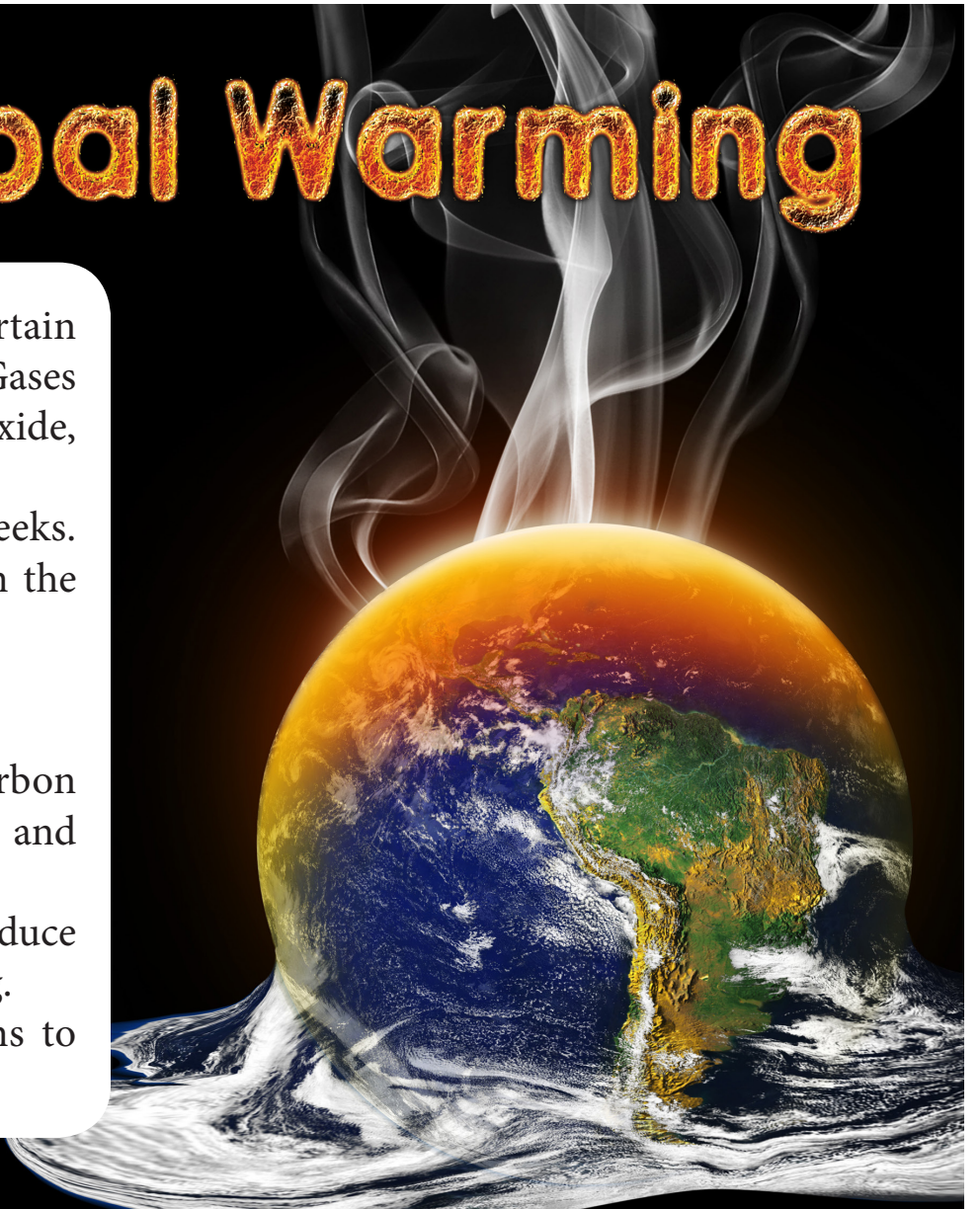
Global warming is warming of the Earth when certain gases in the atmosphere block heat from escaping. Gases that contribute to global warming include nitrous oxide, methane and carbon dioxide.

The blockage is not a matter of few days or weeks. These pollutants can last for years to centuries in the atmosphere and cause the planet to get hotter.

Globally, about 15 percent of human-made carbon dioxide comes from cars, trucks, airplanes, ships and other vehicles.

This makes it crucial to undertake measures to reduce transportation emissions to combat global warming.

Public transportation is a viable and effective means to reduce the effects of global warming.



Health costs

Traffic congestion forces one to sit through the polluted air. Being stuck in a traffic jam is literally allowing pollutants to invade our body that that can cause a range of lifestyle diseases.

Did you know that studies have shown that people who use public transportation regularly tend to be healthier than people who do not, because of the exercise they get walking to and from bus stops, subway stations and their homes and offices.



Estonia's capital, Tallinn, became the world's first city to introduce free public transport for all of its residents since 2013. All that's required is a transit pass showing you're a registered Tallinner – and the city's buses, streetcars and trams are yours for free.

Prevent Traffic Congestion


Apart from the overwhelming reason of working towards a cleaner environment, use of public transport helps to avoid traffic congestion.

Congestion begins when more vehicles try to use a road than the road can accommodate. This can occur when vehicles cannot exit quickly enough to make way for others.



Economic costs

Traffic congestion is not just an irritant that wastes time. Time is money. Losing precious time in traffic jams can lead to economic loss at several levels. Think of all the instances you would have heard when one was late for an exam, missed a flight or a train, could not reach in time for a job interview – all because of traffic congestion. Each miss is not just a loss to the person stuck in the traffic jam but also leads to economic losses at several other levels.



In 2012, an IIM-Transport Corporation of India study revealed that India loses Rs. 60,000 crore a year due to traffic congestion.

Emergency services

Traffic congestions also hampers the speed of emergency vehicles such as ambulances, police vans and fire engines.



Safety

The Ministry of Road Transport & Highways (MoRTH), Government of India has released a Report on Road Accidents in India 2016 prepared by Transport Research Wing (TRW). According to this report, the accidents by buses accounted for 7.8 % as against 33.8% for two-wheelers and 23.6 % for cars, jeeps and taxis. The report suggests that the government should make investment in rail and bus transport to increase the share of public transport. Public transport will help to reduce the number of road accidents.



TechNews



Maglev trains

The Japanese SCMaglev (superconducting maglev) train, presently undergoing trials, holds the world record in speed. It takes you a mile in 10 seconds.

The SCMaglev train doesn't use tracks. It uses powerful magnets that make it float 4 inches above its guideways. This allows for frictionless movement.

Smooth ... isn't it?



The Air (Prevention and Control of Pollution) Act was enacted in 1981 and amended in 1987 to provide for the prevention, control and abatement of air pollution in India.

ACTIVITY SHEET

Why talk about PublicTransport?

Public transport (public transit or mass transit) includes passenger transportation services available for use by the general public, as opposed to private automobiles or vehicles for hire. Public transportation can consist of subways, commuter trains, buses, van pool services, ferries and monorails.

Public transport allows cost effective transport vis-a-vis private transport. Through stimulating public transport it is possible to reduce the total transport cost for the public. The transport sector is by far the most voracious oil guzzler. By 2035 in India, cars and onroad vehicles are expected to consume six times more fuel than they do now. The annual growth rate for cars in India is 16 percent. Cars consume six times more energy than buses, and two-wheelers, 2.5 times the energy. To move the same number of people, cars occupy 38 times the road space than a bus, and two-wheelers occupy 54 times the space.

Activity 1

Do you use public transport regularly?

Yes

☐

No

☐

If yes, then which mode of public transport do you use?

Bus

☐

Tram

☐

Metro

☐

Ferry

☐

Train

☐

Why do you use public transport regularly?

If you don't use it regularly, then why?

Nearly all forms of public transport pose less of a cost to the traveler. The cost of owning a car goes much higher because of the petrol cost which itself is very high in India.



Activity 2

Do you travel to school using use public transport ?

Yes

☐

No

☐

If you travel to school using the school bus, then what is the bus fee?

If you travel by your own vehicle then find out its monthly expense.

- Distance between your house and the school: _____

Number of times the car goes from your house to the school: 4 times per day

- Total time taken to cover this distance (4 times): _____
- Number of working days in the school in 1 month: _____

Then we calculate the total distance

- Total distance= Distance x 4 trips x Number of working days = _____

Find the amount of fuel required by your car to travel the distance between your house and your school.

- Find out the mileage of your car : _____
- Total fuel consumption = $\frac{\text{distance between house and your school}}{\text{Mileage of your car}}$

Calculate it here: _____

- The monthly cost of the fuel required = Cost of fuel x number of litres per month.

Calculate = _____

Which mode of transport is more expensive, public or private?

How much money would you save in a month's time if you made a switch from private to public transport?

How much money would your family/group of friends save if all of you decided to use public transport instead of using your private vehicle?

Maybe you could use all that money to buy something you've wanted for a long time!

Source: Activity Sheet. June 2009
www.cseindia.org



Lighten Up

- Why did the kid study in the airplane?
Because he wanted a higher education!

- What's the difference between a bus driver and a cold?
A bus driver knows the stops, and a cold stops the nose.

- Why did the bat miss the bus?
Because he hung around for too long.

- Why are the railroad tracks angry?
Because people are always crossing them.

- How do you find a missing train?
Follow the tracks

- How do eels get around the seabed?
They go by octobus.

- What did the bus conductor say to the frog? Hop on.

- Do buses and trains run on time?
No, they don't. Buses run on wheels and trains run on the tracks.

- What 'bus' crossed the ocean?
Columbus.

- Why do you have to wait so long for a train on Halloween? They only run a skeleton service.

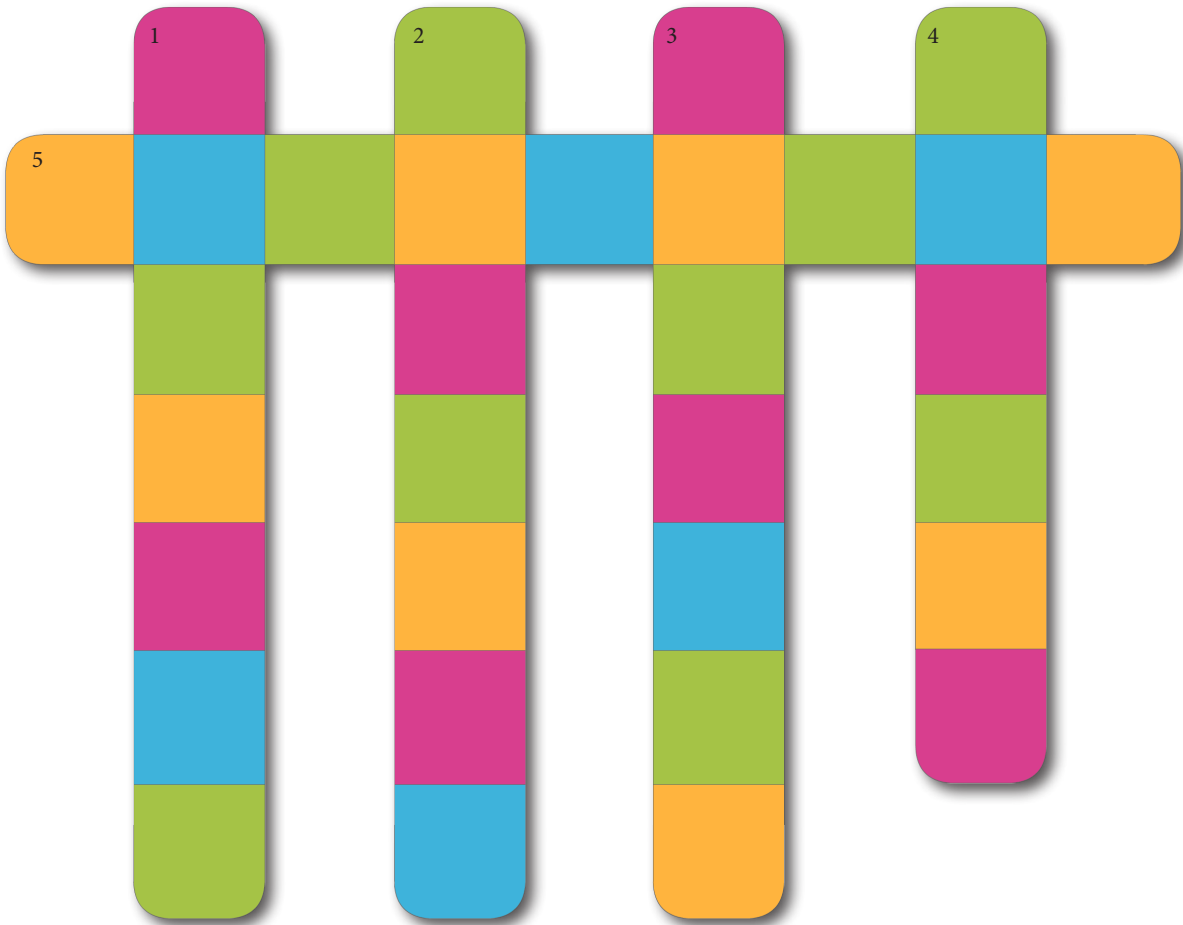
RIDDLES

- ✿ What can travel around the world while staying in a corner?
- ✿ What goes around and around the wood but never goes into the wood?
- ✿ A cowboy rides into town on Friday, stays for three days, then leaves on Friday. How did he do it?
- ✿ If an electric train is going east at 60 miles an hour and there is a strong westerly wind, which way does the smoke from the train drift?
- ✿ I fasten it and it walks. I unfasten it and it stops. What is it?

Read the
ANSWERS
on page 12



CROSSWORD PUZZLE



Across

5. The city in India that has the longest railway platform in the world.

Down

- 1. The only city in India that offers tram services.
- 2. The first city in the world to introduce free public transport for its citizens.
- 3. The city in India that is home to Asia’s largest bus terminus.
- 4. The first city in India to introduce air-conditioned buses.

ANSWERS FOR RIDDLES

- A stamp
- The bark on a tree.
- His horse’s name was Friday.
- There is no smoke coming from electric trains.
- Sandals

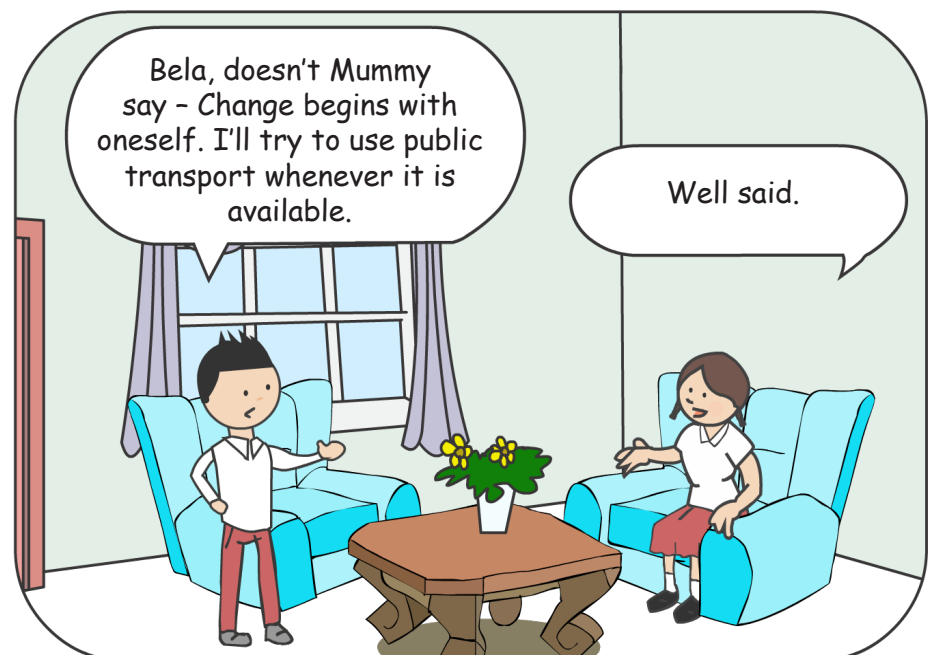
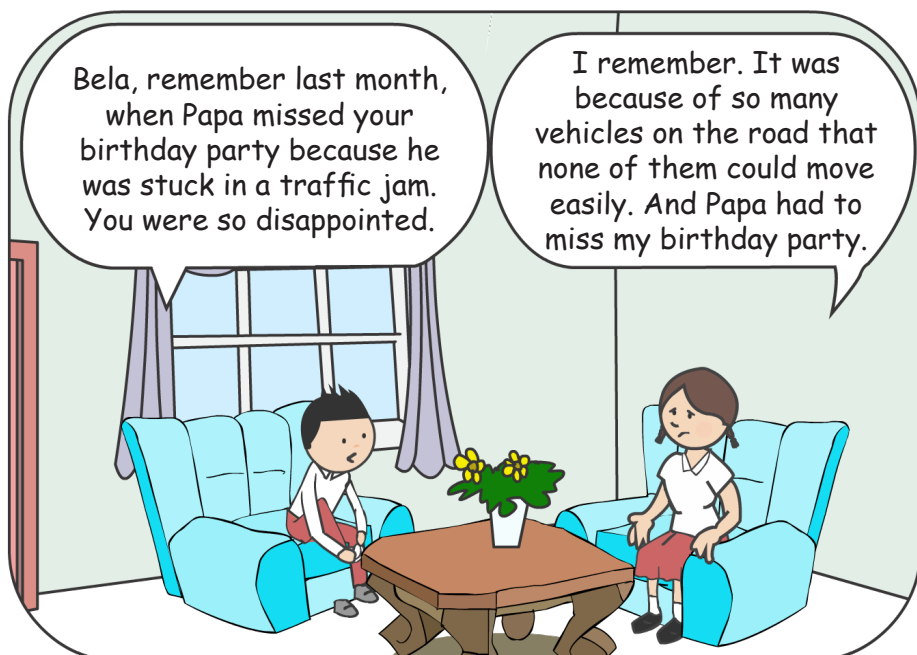
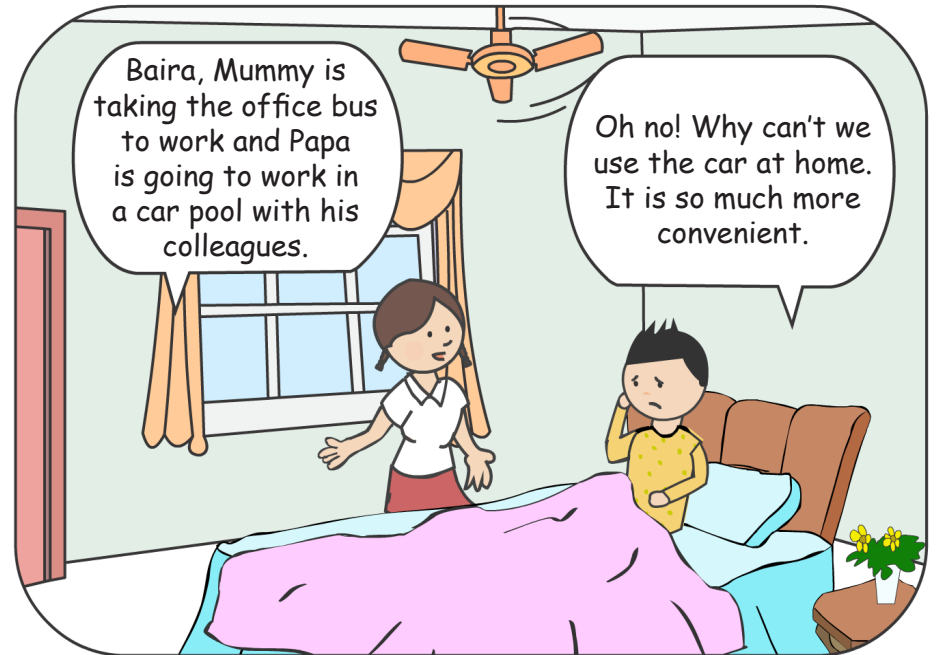
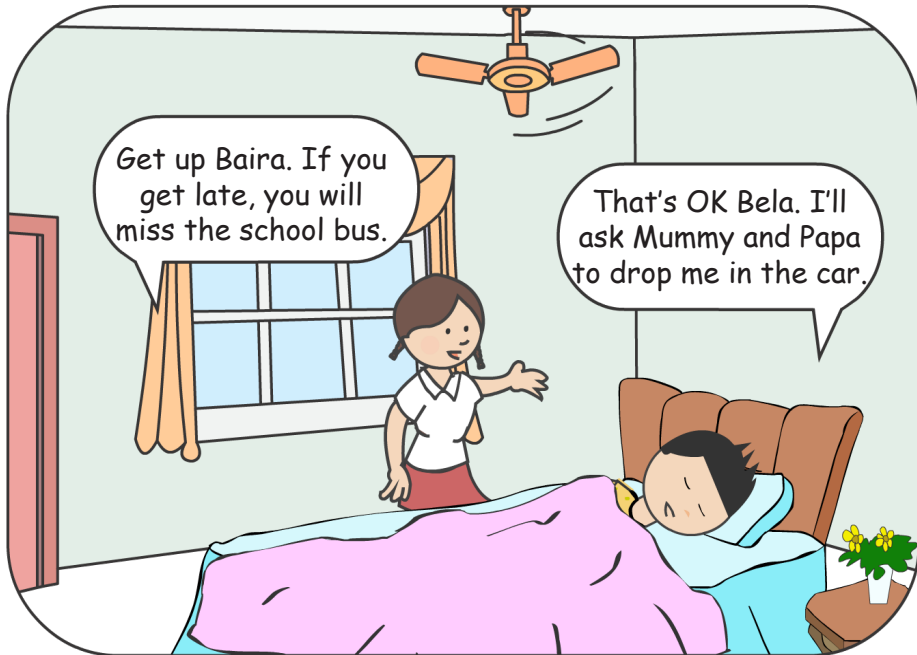
- Down**
- 1. KOLKATA
 - 2. TALINN
 - 3. CHENNAI
 - 4. MUMBAI
- Across**
- 5. GORAKHPUR

Answers



Comic Strip

BAIRA AND BELA



CURRENT EVENTS UPDATES

3 October 2017

The World Health Organisation (WHO) appoints Dr. Soumya Swaminathan as one of two deputy directors general. The position is the highest post held by an Indian in the WHO.



5 October 2017

- British author Kazuo Ishiguro, best known for his novel *The Remains of the Day*, wins the Nobel Literature Prize.



- Journalist-activist Gauri Lankesh is posthumously accorded with the prestigious Anna Politkovskaya Award, instituted by Reach All Women (RAW) in War.



- Bilat Paswan Vihangam, Congress leader, a former state minister and litterateur, passes away in Patna at the age of 77. Vihangam was awarded Padma Shri in 2005 for his contribution to literature.

9 October 2017

Yedu Krishnan becomes the first Dalit priest in Kerala to assume duties at the sanctum sanctorum of the Manappuram Lord Shiva Temple.

12 October 2017

Odisha Chief Minister Naveen Patnaik launches free Universal Eye Care programme with an expenditure of Rs 600 crore which aims to minimise the number of people with curable vision impairment in the state.



13 October 2017

- The Department of Post launches Sampurna Bima Gram (SBG) Yojana. It also expands the coverage of Postal Life Insurance to professionals, to enable affordable life insurance services and promote financial inclusion. The two initiatives were launched by Communications Minister Manoj Sinha here.
- Satish Chandra, veteran historian of medieval India and noted educational administrator, passes away in Delhi at the age of 95.



17 October 2017

The Prime Minister, Narendra Modi, inaugurates the first ever All India Institute of Ayurveda (AIIA), modelled on the lines of AIIMS in Delhi. The AIIA, which will function under the ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy or AYUSH, aims to offer quality patient care and become a research hub in generating scientific information.

24 October 2017

Eminent classical singer and Padma Vibhushan awardee Girija Devi passes away in Kolkata at the age of 88.



27 October 2017

Award-winning Malayalam writer and Sahitya Akademi award winner, Punathil Kunjabdulla, passes away in Kozhikode, Kerala at the age of 77.



31 October 2017

Karnataka gets its first woman police chief in Neelamani N Raju, a 1983 batch IPS officer.



8 November 2017

Freedom fighter Jyoti Pershad, who had taken an active part in the Quit India movement in 1942, passes away at his native Badkali village in Uttar Pradesh's Muzaffarnagar district at the age of 95.

CURRENT EVENTS UPDATES

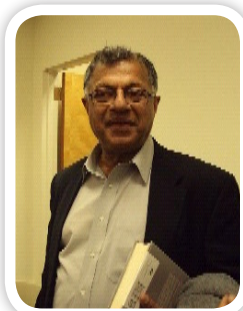
18 November 2017

India's Manushi Chhillar is crowned as Miss World 2017 at a grand event held in Sanya in China. The 20-year-old medical student from Haryana had won Femina Miss India World 2017 in May 2017.



19 November 2017

Actor-playwright Girish Karnad is conferred with Tata Literature Live! Lifetime Achievement Award 2017 for his outstanding contribution in the field of theatre.

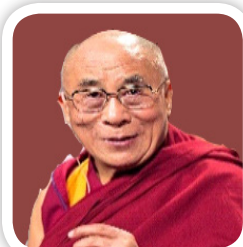


20 November 2017

Veteran Congress leader Priya Ranjan Dasmunsi, passes away in New Delhi at the age of 72.

21 November 2017

The Kalinga Institute of Social Sciences presents Humanitarian Award 2017 to the Dalai Lama. In his acceptance speech, the Dalai Lama called for making this century a century of compassion and peace.



21 November 2017

Robert Mugabe resigns as Zimbabwe's President shortly after Parliament began an impeachment process to end his nearly four decades of rule.

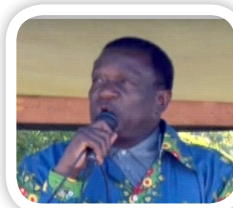


22 November 2017

- The Indian Air Force, for the first time, fires a BrahMos supersonic cruise missile from a Sukhoi-30MKI fighter aircraft. BrahMos is a joint venture between India and Russia, named after the Brahmaputra and Moskova rivers.
- Senior CPI(M) leader and the chairperson of the party's Central Control Commission, Sukomal Sen, passes away in Kolkata at the age of 83.

24 November 2017

Emmerson Mnangagwa is sworn as Zimbabwe's President.



4 December 2017

Actor, producer, director, Shashi Kapoor passes away in Mumbai at the age of 79. He was awarded the Padma Bhushan in 2011 and the Dadasaheb Phalke award in 2015.



8 December 2017

Eminent Hindi writer Mamta Kalia is honoured with literary award Vyas Samman for the year 2017 for her novel *Dukkham Sukkham*, by the K K Birla Foundation.

25 December 2017

Veteran Bengali film actor Partha Mukhopadhyay passes away in Kolkata at the age of 70.

26 December 2017

Vijay Rupani is sworn in as the 16th Chief Minister of Gujarat after the BJP's victory in the recent Assembly elections.



27 December 2017

Jairam Thakur, five-time Bhartiya Janata Party MLA, is sworn as the new Chief Minister of Himachal Pradesh.



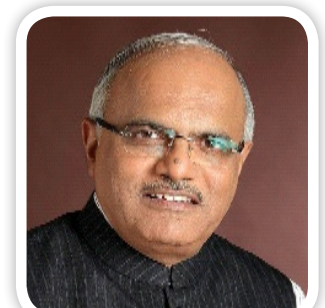
28 December 2017

The former football star George Weah wins Liberia's Presidential election. It is the country's first democratic transition since 1944 after two civil wars.



29 December 2017

President Ram Nath Kovind appoints BJP leader Vinay Sahasrabudhe as the president of the Indian Council of Cultural Relations.



DECEMBER 17