



SAY NO TO PLASTIC BAGS.

# MACVISTA

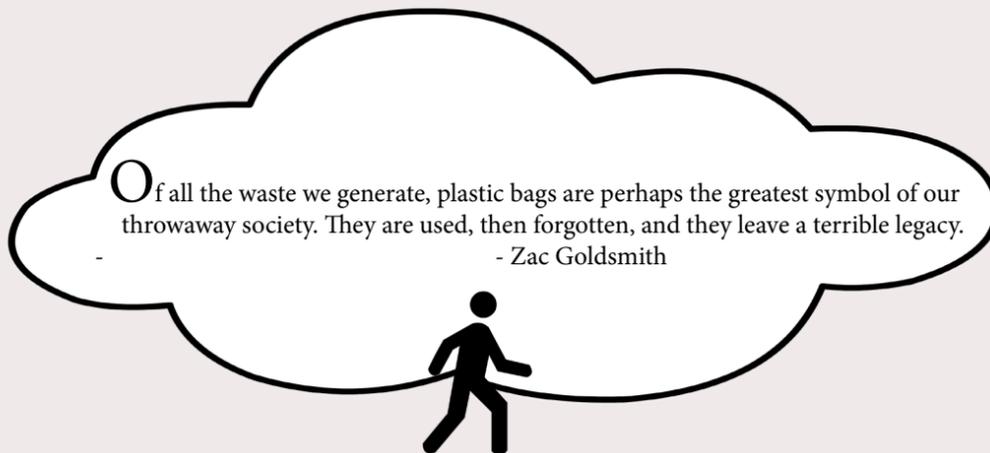
- Let's get to know Plastic 01 ▶
- A Green Way Out TechNews 02 ▶
- ACTIVITY SHEET 03 ▶
- WorldView 04 ▶
- Lighten Up Riddles 05 ▶
- Crossword Puzzle 06 ▶
- Comic Strip 07 ▶
- Current Events Updates 08 ▶

READ MORE ...

Macmillan Publishers India Pvt. Ltd.

April-June 2017 | gk.macmillaneducation.in

## THINK THROUGH IT ...



## Let's get to know Plastic

### • What does the word 'Plastic' mean?

The word 'Plastic' is derived from the Greek word plastikos, which means to mold or form. It is generally used to describe anything particularly adaptable or flexible.

### • How was Plastic first created?

The very first plastics were (and still are) made by plants through their very own internal chemical synthesis. A good example of this is rubber from a rubber tree.

One of the first synthetic plastics was made from cellulose, a substance made by plants and trees. Today, this plastic is termed as bioplastic. It is called so as its primary raw materials (feedstocks) originate from living or recently living and renewable bio-organisms.



### • What is human-made or synthetic Plastic?

Human-made plastic or synthetic plastic or Plastic, as commonly understood, is any synthetic or semi-synthetic organic polymer. Most industrial plastic is made from petrochemicals. Thermoplastics and thermosetting polymers are the two types of plastic.

The polymer used to make a plastic is almost always mixed with additives. These additives include colorants, plasticizers, stabilizers, fillers, and reinforcements. These additives affect the chemical composition, chemical properties, and mechanical properties of a plastic and also affect its cost.



### • When was the first synthetic Plastic created?

The first synthetic plastic was made in 1907 by Leo Baekeland, an American chemist.



Leo Baekeland

### • What is e-waste?

The term e-waste refers to electronic equipment that has ceased to be useful. Since most electronic equipment uses plastic, e-waste is often non-biodegradable.



- What does the triangular symbol on the bottom of a plastic container mean?

The triangular symbol was created in 1988 to identify the type of plastic used. It is called a Resin Identification Code (RIC).

The number in the triangle indicates the type of plastic that is used to make the item. These numbers help consumers to know if the plastic can be recycled. It also indicates how to recycle the plastic used in that product.



## Plastic file

- Over the last ten years we have produced more plastic than during the whole of the last century.
- Fifty percent of the plastic we use, we use just once and throw away.
- Enough plastic is thrown away each year to circle the earth four times.
- Plastic constitutes approximately 90 percent of all trash floating on the ocean's surface, with 46,000 pieces of plastic per square mile.
- Virtually every piece of plastic that was ever made still exists in some shape or form (with the exception of the small amount that has been incinerated).
- More than 15,000 tonnes of plastic waste are generated in India everyday, of which 6,000 tonnes remain uncollected and littered.
- According to ASSOCHAM, India generates nearly 1.7 to three million tonne of e-waste annually and approximately 90% of it is processed in the informal sector.

## A GREEN WAY OUT

Scientists have discovered a caterpillar that can quickly break down polythene bags and may help get rid of the plastic waste accumulating in landfill sites and oceans.

Researchers exposed around a hundred wax worms to a plastic bag. It was found that after 12 hours there was a reduction in plastic mass of 92 milligramme (mg) from the bag.



TechNews

In an effort to curtail e-waste, researchers in the United States have created a flexible, organic and biodegradable electronic circuit that degrades just with the addition of vinegar. When the electronic device is no longer needed, the entire device can degrade into non-toxic components.

# ACTIVITY SHEET

## Gobar Gyan

It is a proven fact today that most plastic bags are the prime cause of environmental breakdown which impacts plant and animal life in both the land and the sea. And while the statistics are incomplete, some conservationists estimate that at least 100,000 mammals and birds die from them each year, felled by the estimated 500 billion and more plastic bags that are produced and consumed around the world. The number of fishes killed by them are unknown, but they are sure tonumber in millions! Plastic bags of less than 25 microns are a great nuisance.



Not only can they not be recycled but they have a shorter life span and hence are disposed of quickly, sometimes clogging drains and leading to floods!

## Activity 1

It is true that plastics are a major part of our daily life. Can we think of a day without plastics? Well if we are adamant we can do without plastics. Let's start with a small survey in your school. Check whether your school has a NON-POLY BAG ZONE?

(A) Find out whether your school is a non-polybag zone. YES/NO

(i) If your answer is 'Yes'

(B) Find out how many students and school staff members actually contribute to this initiative?

Students \_\_\_\_\_

Teaching Staff \_\_\_\_\_

Non-teaching Staff \_\_\_\_\_

Visitors \_\_\_\_\_

(C) Write in detail the ways in which you are contributing to this initiative by not carrying plastic bags to your school?

\_\_\_\_\_  
 \_\_\_\_\_

(ii) If your answer is 'No'

Share the idea with your classmates. Then speak to your teachers and Principal about the importance to make your school a 'non-polybag zone'.

Students' opinion: \_\_\_\_\_

Principal's and Teachers' opinion: \_\_\_\_\_

(B) Start an awareness campaign in your school with the management's permission. Make posters, charts and signs for the zcampaign. Put them up around the school, so that everyone makes an effort to stop using the plastic bags. Request your school Principal to announce your institute as a non-polybag zone in the school assembly.

## Activity 2

### PLASTIC AUDIT

Plastic bags are easily accessible. So, we usually don't carry our own bags for shopping. Ultimately each plastic bag we take from the shopkeeper, adds to the ever growing pile of plastic grocery bags. To reduce the use of plastic bags we first need some information, such us, how many plastic bags we use everyday, how many times do we reuse plastic bags and so on. What better than doing a Plastic Audit at home?



(A) Count the number of plastic bags at home. \_\_\_\_\_

(B) How many plastic bags are being reused? \_\_\_\_\_

(C) How many plastic bags are just lying about? \_\_\_\_\_

(D) What do you do with the bags after you have used them? \_\_\_\_\_

(1) Send them for recycling \_\_ YES/NO \_\_\_\_\_ If yes, how many? \_\_\_\_\_

(2) Reuse them \_\_ YES/NO \_\_\_\_\_ If yes, how many times? \_\_\_\_\_

(3) Throw them away \_\_ YES/NO \_\_\_\_\_ If yes where do you throw them? \_\_\_\_\_

(E) How many members in your family use plastic bags regularly? \_\_\_\_\_

(F) In a week, how many plastic bags do you and your family

a. Acquire \_\_\_\_\_

b. Reuse \_\_\_\_\_

c. Throw away \_\_\_\_\_

You may wish to extend this survey to your neighbourhood. Find out how many people take their own bags to the grocery store and how many ask the shopkeeper to provide them with plastic bags every time. Share the result of the survey with your neighbours. Also interview the grocery store owner and ask him/her the number of plastic bags he/she uses in a day.



### Activity 3

Discuss with your friends and classmates the alternatives which can be used instead of plastic bags? Write down the alternatives.

---



---



---

When you buy vegetables or may be clothes, plastic bags are usually given free of cost. Calculate the cost of the alternative bags, which can replace plastic bags. Also discuss, if these alternative bags can be made available at a cheaper price or can be made at home.

---



---



---

Discuss in your class the harmful effects of plastic bags, and in what ways can your class help to stop the usage of plastic bags?

---



---



---

Try your hand in stitching up a cloth bag yourself: [www.gobartimes.org/20100815/gobar\\_scope.asp](http://www.gobartimes.org/20100815/gobar_scope.asp)

Source: Activity Sheet, November 2010  
[www.cseindia.org](http://www.cseindia.org)



Rwanda, a land-locked East African developing nation, still recovering from the genocide of 1990s, decided to prioritise environment in its country's policies. Debunking the view that concern for the environment is a luxury of the rich countries, Rwanda is one of the first countries of the world to ban plastic bags. Rwandans plant millions of trees every year to protect the country's forests, rivers and wetlands. This is part of the efforts to make Rwanda a developed, climate-resilient and low-carbon economy by 2050.




# RIDDLES

Q: What is at the end of a rainbow?



Q: What gets wetter and wetter the more it dries?

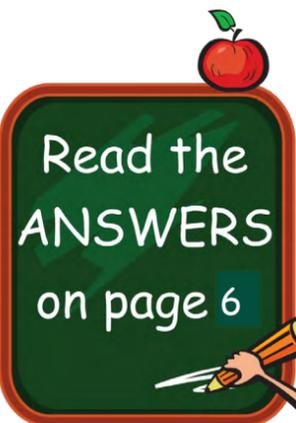
A C D

Q: What starts with the letter "t", is filled with "t" and ends in "t"?



Q: I'm full of keys but I can't open any door. What am I?

Q: Which is heavier, a pound of bricks or a pound of feathers?



# CROSSWORD

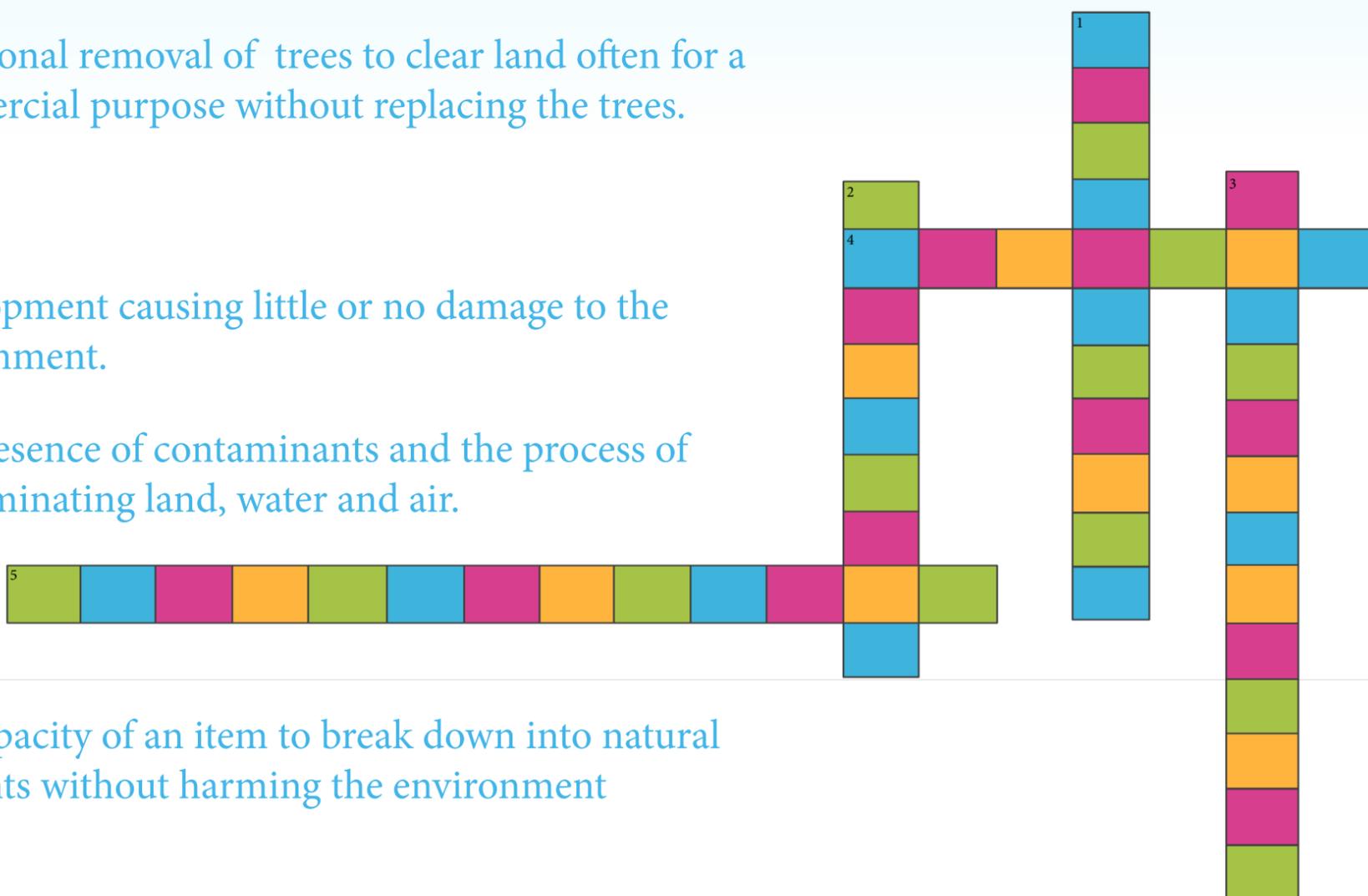


## ACROSS

- Food or farming methods that are free from chemical fertilizers and pesticides.
- Intentional removal of trees to clear land often for a commercial purpose without replacing the trees.

## DOWN

- Development causing little or no damage to the environment.
- The presence of contaminants and the process of contaminating land, water and air.



- The capacity of an item to break down into natural elements without harming the environment

3. BIODEGRADABLE

2. POLLUTION

1. SUSTAINABLE

Down

4. ORGANIC

5. DEFORESTATION

Across

Answers -

## ANSWERS FOR RIDDLES

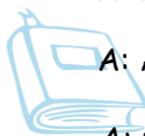
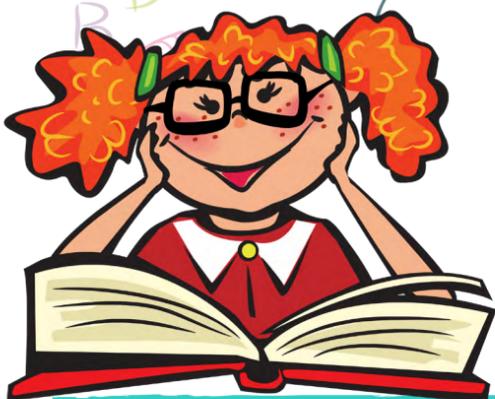
A: The letter W.

A: A teapot.

A: A Towel.

A: piano.

A: The same - a pound is a pound!

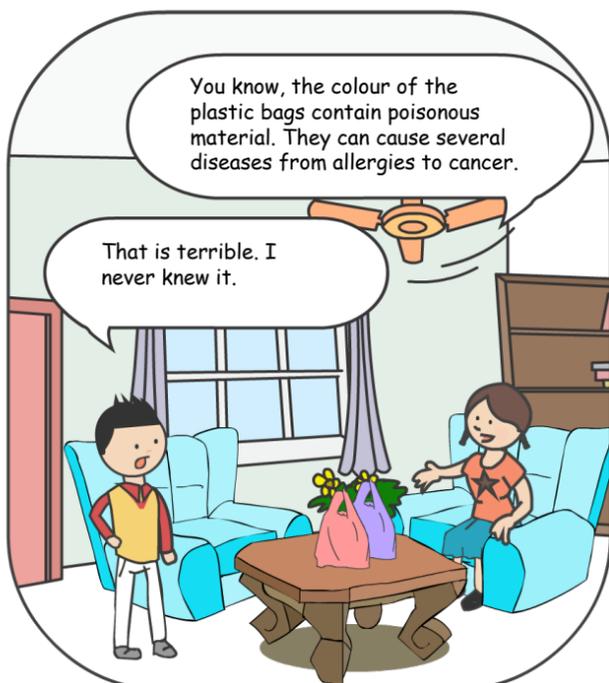
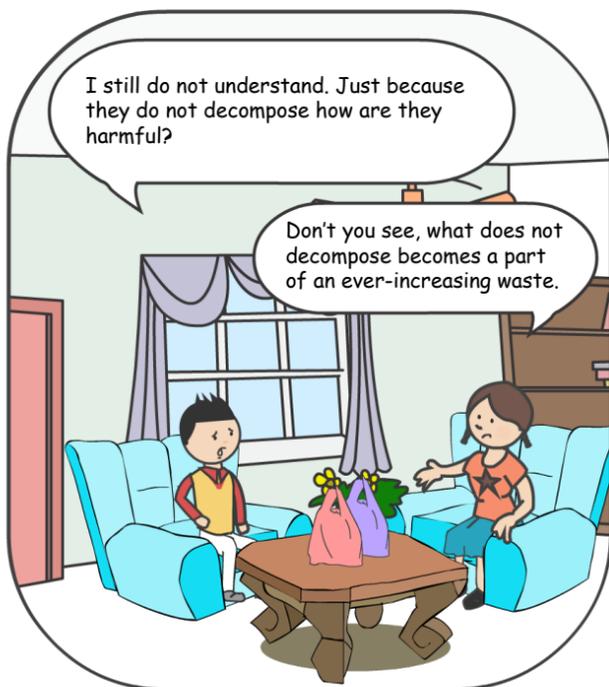
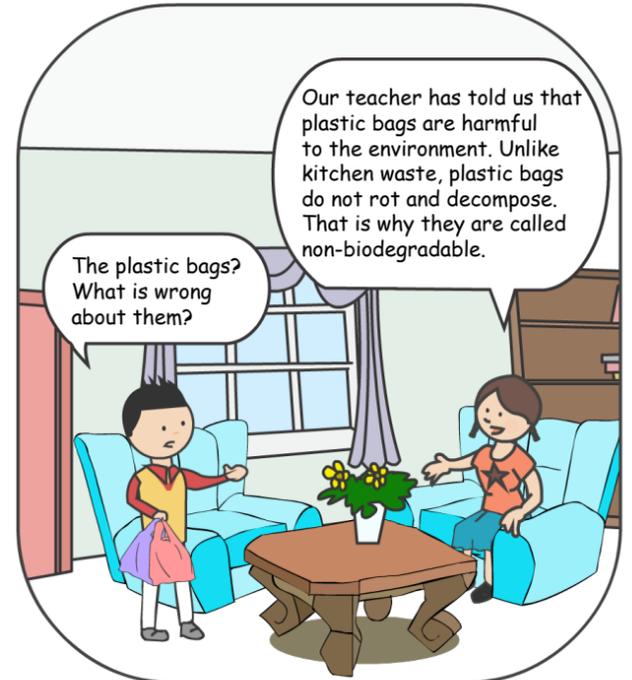
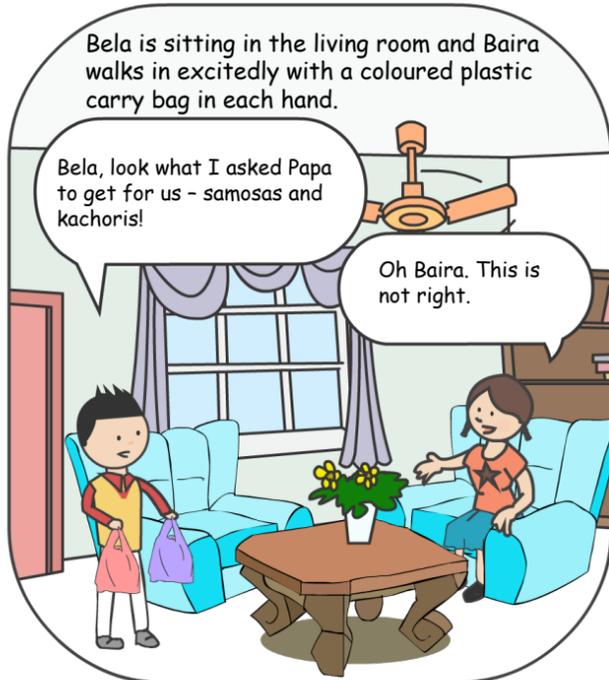




# Comic Strip



## Baira and Bela



## Current events updates April-June 2017

April 1

Five associate banks of the State Bank of India – State Bank of Bikaner and Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala and the State Bank of Travancore besides Bharatiya Mahila Bank, merge with the State Bank of India. With this merger, the State Bank of India is one of the top fifty banks globally in terms of assets.



April 3

The annual national rankings released by the HRD ministry places the Indian Institute of Science (IISc), Bengaluru at the top. The institutes that were ranked were marked on 20 parameters under the National Institutional Ranking Framework (NIRF) that was launched in 2016.



April 10

-The United Nations Secretary-General, Antonio Guterres, appoints Nobel laureate Malala Yousafzai as a UN Messenger of Peace with a special focus on girls' education.

At the age of 19, Yousafzai is the youngest Messenger of Peace.



-Eric Eyre is named the 2017 Pulitzer Prize winner in the category of investigative reporting.



April 19

The government bans red beacons atop cars of all ministers, politicians and bureaucrats. The ban comes into effect from May 1st.

Ambulances and vehicles of the fire service, police, and army will be allowed to use blue flashing beacons to cut through traffic.

April 23

Nobel laureate, Kailash Satyarthi on 23rd April 2017 was presented the P C Chandra Puraskar for his global crusade against child slavery.



April 24

Maoists kill 25 Central Reserve Police Force (CRPF) personnel and injured seven in Sukma district of south Chhattisgarh. In retaliatory fire, 10 to 12 Maoists are shot dead.

April 25

The Supreme Court directs states and union territories to set up special courts within three months in each district to conduct trial of offences committed against disabled persons.



April 26

The Bharatiya Janata Party (BJP) wins the Municipal Corporation of Delhi elections.

April 27

-El Salvador becomes the first country in the world to ban the mining of metals. Hailed as a landmark move for environmental protection, the law bans 'prospection, exploration, exploitation, extraction or processing of metallic minerals in El Salvador'.



## Current events updates April-June 2017

-**Bhubaneswar**, the capital Odisha, is selected for the Pierre Lenfa International Planning Excellence Award, 2017. The award is given out by the American Planning Association (APA) for good and advanced town planning and engaging its residents in the planning process. Bhubaneswar is the first Indian city to win this award.



-**President Pranab Mukherjee** confers the 52nd Jnanpith Award on eminent Bengali poet and literary critic, Sankha Ghosh.



-**Vinod Khanna**, the popular Bollywood actor turned politician, passes away at Sir HN Reliance Foundation Hospital in Mumbai. He was 70.



May 2

**Attorney General Mukul Rohatgi** states in front of a bench of Justices A K Sikri and Ashok Bhushan of the Supreme Court that citizens could not claim 'absolute' right over their body parts and refuse to give digital samples of their fingerprints and iris for Aadhaar enrolment.

May 3

**President Pranab Mukherjee** confers the Dada Saheb Phalke Award on Kasinadhuni Viswanath at the 64th National Films Award ceremony in New Delhi.



May 4

**Union Urban Development Minister M Venkaiah Naidu** declares Indore in Madhya Pradesh as the cleanest city in the Swachh Sarvekshan Survey, 2017.



May 5

The Supreme Court upholds the death sentence on all four convicts in the Nirbhaya gang-rape of December 2012 that led to her death and caused national outrage.

May 6

**Justice Leila Seth**, first woman judge of Delhi High Court, passes away at the age of 86.



May 14

**Emmanuel Macron** is sworn in as French President at the Elysee Palace in Paris. He becomes the youngest president in France's history at 39 years, and the youngest leader since Napoleon.



May 18

The International Court of Justice (ICJ) stays the execution of Indian national, **Kulbhushan Jadhav**. A former Indian naval officer, Jadhav, was charged with spying and sentenced to death by a military court in Pakistan.



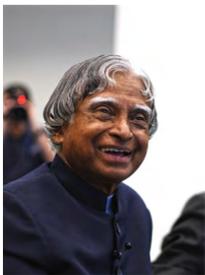
## Current events updates April-June 2017

May 21

Hassan Rouhani is re-elected as President of Iran in a landslide victory.



-NASA names a new organism discovered by them after Dr. APJ Abdul Kalam. The organism has been named Solibacillus kalamii.



May 23

The Manipur government issues a notification declaring Dailong village of Tamenglong district in the state of Manipur a Biodiversity Heritage Site of the state.



May 24

- Lenin Moreno is sworn in as the President of Ecuador. Moreno, a disability rights activist, becomes the first disabled individual to assume the office of the President of Ecuador.



-Nepal Prime Minister, Pushpa Kamal Dahal 'Prachanda', announces his resignation. The leader of his coalition partner party, Sher Bahadur Deuba, succeeds him. The decision is in line with an agreement between the two parties.



May 26

KPS Gill, former Director General of Police for the state of Punjab, passes away at the age of 82. He was popularly known as the 'Super Cop'.

May 29

Satyabrata Rout is selected for the Sangeet Natak Akademi Puraskar for the year 2016.

June 3

Terrorists attack in London leaves 7 people dead and 48 injured. Three assailants drive a van at high speed across London Bridge. Soon after, they attack people with knives around Borough Market.

June 4

Army Chief, Bipin Rawat states that the Indian army is set to open combat positions for women. Presently, while women are a part of certain wings of the Army, combat roles are still off limit.



June 7

Suicide bombers and gunmen attack Iran's Parliament and the shrine of Ayatollah Khomeini, killing 12 people and wounding dozens.

June 12

Jnanpith Award winner in 1988, Dr. C Narayana Reddy, poet-author-writer-lyricist and former Rajya Sabha member, passes away.

June 26

The Government forms a nine-member panel headed by scientist K Kasturirangan to work on the New Education Policy (NEP).



June 30

The Goods and Services Tax (GST) is launched in India at midnight at a function in the Central Hall of the Parliament.

