

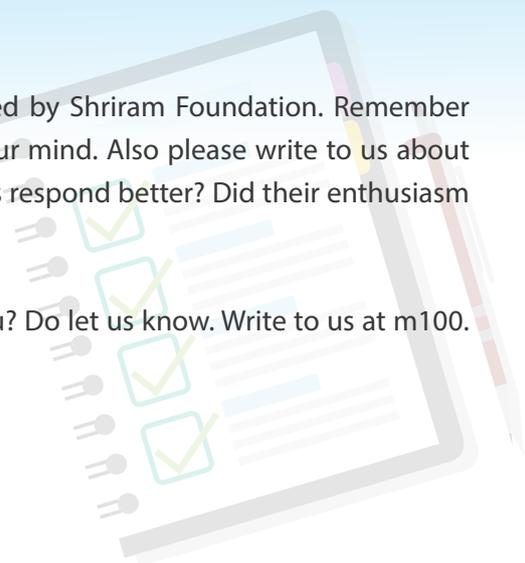
A LETTER TO TEACHERS

Dear teachers,

You must have attended the teacher training sessions for Term 1 organised by Shriram Foundation. Remember to incorporate your learning in your lesson plans when it is still fresh in your mind. Also please write to us about your experiences in class when you use these new inputs. Did your students respond better? Did their enthusiasm motivate you? Do you feel more confident?

What more can we incorporate in our training to make it more useful to you? Do let us know. Write to us at m100.shriramfdn@gmail.com, we look forward to hearing from you.

Warm regards
Editor



WISE WORDS

Here are some proverbs, sayings and quotations from all over the world to inspire you. You may write or display them on your blackboards or notice boards, explain and discuss them with your students.

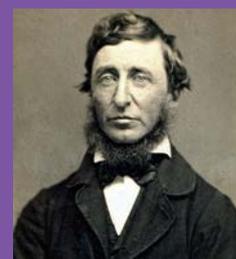


"When the whole world is silent, even one voice becomes powerful."

- Malala Yousafzai

"A single gentle rain makes the grass many shades greener."

- Henry David Thoreau



TEACHER TIP

Emotional Support

Carefully observing your children is important for a teacher. As a class teacher, it is important to observe the moods of each child, and get to know each child well. This will help establish a relationship with them so that they feel comfortable confiding in their teacher, as they know that their teacher is interested and invested in them.

Children have their own ways of expressing discomfort. A teacher, by noticing if a lively child is quiet, or a normally interested child is distracted can know if something is wrong. Instead of directly asking the child what is wrong, a teacher can ask questions as follows:

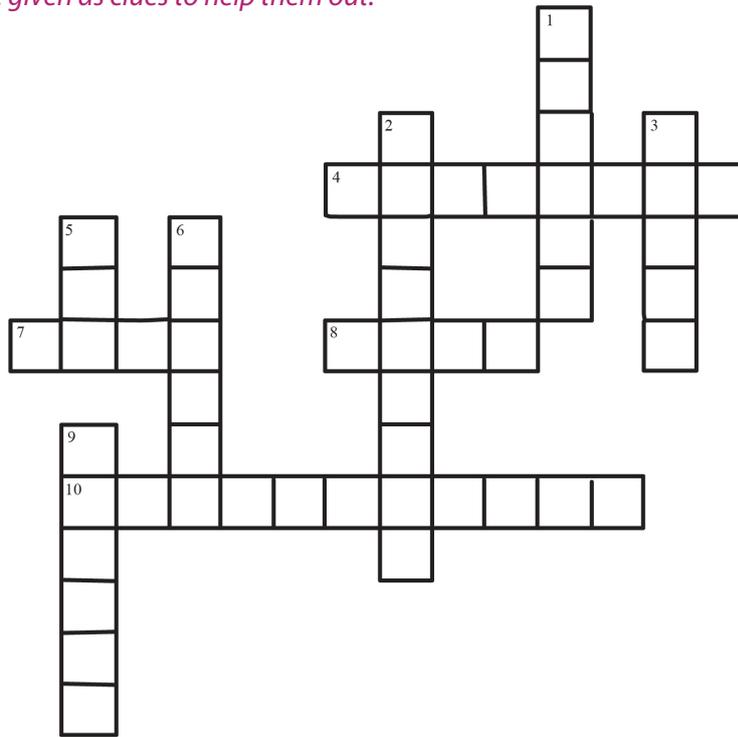
- i. Has the child had breakfast that morning?
- ii. When did the child go to bed? (Sometimes lack of enough sleep contributes to the child's mood and mindset.)

It is important to be very patient with each child. Bad behaviour and aggression can be symptoms of physical or emotional distress. By observing the behaviour of each child, a teacher can prevent the situation from escalating.

CROSSWORD PUZZLE

Monsoon

To commemorate the monsoon season that starts in June, here is a crossword puzzle for your students to do. The jumbled words can be given as clues to help them out.



Across

- 4. The monsoon is not annual but is ____ in nature. (EAOLSNSA)
- 7. The monsoon winds always blow from a cold region to a ____ region. (RAWM)
- 8. The monsoon ____ can be strong enough to uproot trees. (NWID)
- 10. The monsoon benefits those who are in _____. (ELGCRAURTUI)

Down

- 1. The monsoon is very beneficial, but it can cause dangerous ____ when there is too much rainfall. (SOLFOD)
- 2. Many ____ are celebrated all over India during the monsoon season. (SEASVFTIL)
- 3. The monsoon increases the country's ____ supply. (TWAER)
- 5. The monsoon is a large ____ breeze. (ASE)
- 6. The ____ monsoon begins in India in June. (MSMURE)
- 9. If the monsoons fail to occur, it could result in widespread _____. (AFNIME)

STORY OF THE MONTH

Rosalind Elise Franklin



Rosalind Elise Franklin was a famous chemist in Britain, known for the role she played in the discovery of DNA. She was born on the 25th of July, 1920. In those days it was difficult for women to become respected scientists. But she decided when she was 15 years old that she wanted to be a scientist.

She studied Chemistry in Newham College, Cambridge, and then went to work in the British Coal Utilisation Research Association as an assistant research officer, where she studied the porosity of coal. She is most famous for the role she played in the discovery of the structure of DNA.



In 1951, she worked as a research associate in the Biophysics unit at the King's College London. Her research was an important contribution in identifying the structure of DNA. She died of cancer at the age of 37.



DNA stands for Deoxyribonucleic acid, which is a vitally important molecule required for life. Our cells know how to function only because of DNA, which acts like a computer program and tells the cells what to do.

BRAIN TEASERS

Math Riddles

Math puzzles and brain teasers help students develop inductive and deductive thinking skills. Please share this puzzle with your upper primary students.

1. Find the odd one out in each group.

24	42	15	72	18
10	21	18	61	25
35	63	49	16	56

2. Here is a list of the names of some months and a number corresponding to each:

January: 7110	April: 541	July: 4710
February: 826	May: 3513	August: 681
March: 5313	June: 4610	Crack the logic and find the number for September

THEME OF THE MONTH

World Tiger Day

World Tiger Day falls on July 29 and it is a day to celebrate our majestic national animal. While the tiger was once an endangered species in India, our country now has the highest number of tigers in the world and it is slowly increasing. For a while, it had seemed that we would lose the tiger forever, as their numbers had been brought down drastically due to poaching for the use of their pelts, flesh for meat, body parts for medicine, and habitat loss due to forest destruction for logging and industrial development.



It was only due to the concentrated efforts of NGOs and the government that the tiger population gradually started increasing. Estimates based on data collected by the World Wildlife Fund and the Global Tiger Forum say there are around 3890 tigers now in India.

1. Tiger Mask: The students can make tiger face masks out of paper plates, using paper, paints, glue, scissors and string. They can hang these masks on their walls.



2. Discussion Topics: They can discuss reasons for the loss of habitat of tigers as well as reasons for deforestation.

3. Tiger Reserves: Here is a list of 5 tiger reserves in India that were set up to protect the species

- Corbett Tiger Reserve – Uttarakhand
- Ranthambore Tiger Reserve – Rajasthan
- Bandipur Tiger Reserve – Karnataka
- Sundarbans Tiger Reserve – West Bengal
- Kanha Tiger Reserve – Madhya Pradesh

You can show the students a map of India and ask them to point out where each of these reserves is located. There are over 40 Tiger Reserves in India that they can identify and research.



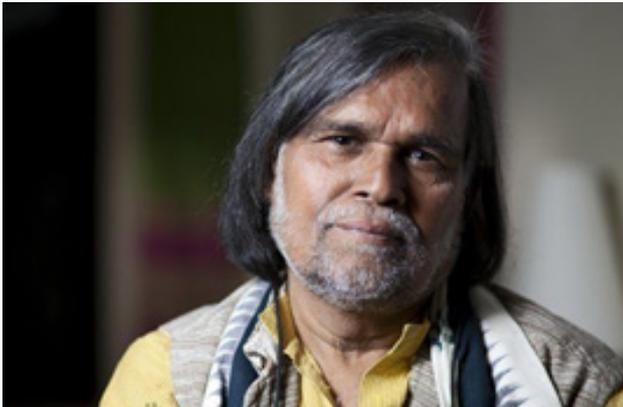
4. Categorization: Various animals are in danger of becoming extinct just like the tiger. You can explain the differences between threatened, endangered and extinct animals and then ask your students to guess which animal belongs to which category in the picture given below. You can later share the answers with them.



IN THE NEWS

Prafulla Samantra

It is important for children to know what's happening in the world around them. You may think of conducting a "News Discussion time" in your classrooms once a week! To start with, you can use this small snippet!



Indian activist Prafulla Samantra has won the Goldman Environment Prize, one of the world's most important environment awards. He won the award for his action in stopping a large company from taking over tribal land for mining in the Niyamgiri Hills of Odisha.

The Niyamgiri Hills is a heavily forested area. It is a home to many different types of plants. The thick forestlands are home to the endangered Bengal tiger and a migration corridor for elephants. More than 100 streams flow down from the peaks, providing a critical water source for millions of people before emptying out into the Bay of Bengal.

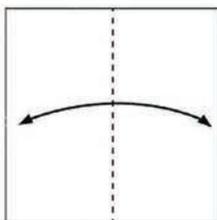
Samantra is the sixth Indian to win the Goldman prize. This year, six people from all over the world have been awarded the prize, one from each of the six continents.

CREATIVE CORNER

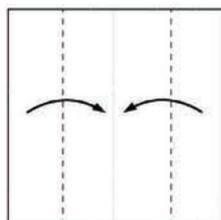
Twin Boats

Let your kids enjoy the monsoon to its fullest. Make paper twin boats and float them in the puddles left behind by the rains.

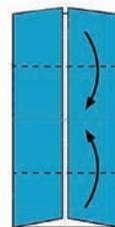
Things needed: Square shaped colour papers



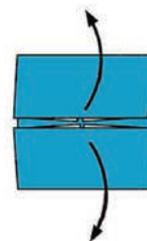
1. Fold the square piece of paper in half and crease.



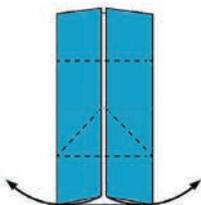
2. Open and bring in the side edges to the crease line.



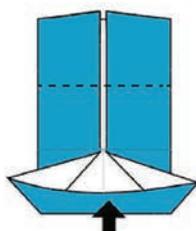
3. Fold the top and bottom edges to the centre.



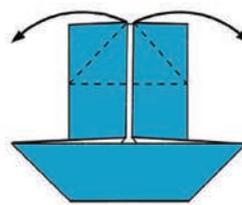
4. Crease all edges well and open the top and bottom flap.



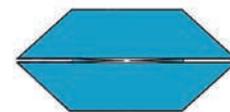
5. Pull out the bottom corners.



6. Press the paper down into a boat shape.

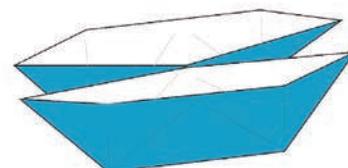


7. Repeat the same process on the top edge.



8. Fold both halves outward to form your boat.

YOUR TWIN BOAT IS READY!



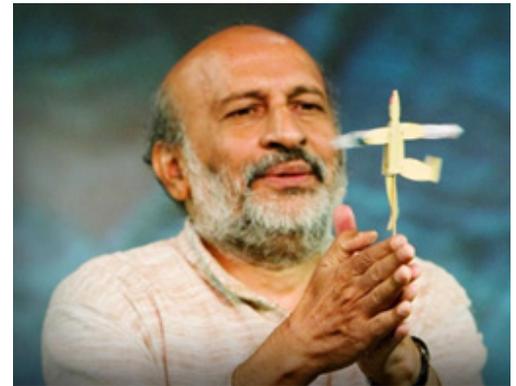
EDUCATIONAL WEBSITE REVIEW

Arvind Gupta Toys

It is important for children to see that you don't need fancy materials to learn science. Arvind Gupta has created the perfect platform for anyone to enjoy learning.

www.arvindguptatoys.com

For almost 30 years now, Arvind Gupta has been taking his love for science and learning to the children of India. He's the dream teacher we look for. He has travelled to over 3000 schools, demonstrating captivating science experiments to eager children. What makes these experiments more interesting is that they are made from items that you would usually throw away. His website hosts over 700 science projects with videos, pictures and instructions. Teachers can access different experiments explaining various topics in science.



He has made hundreds of toys to simplify the complex concepts of gravity, magnetic field, friction, electricity, Newtonian laws among several other things. The Website also houses thousands of books on science that are free to download. There are books in over a dozen regional languages too.

ANSWERS

CROSSWORD PUZZLE - Monsoon

BRAIN TEASERS - Math Riddles

1. Odd one out

2. Find the Number

September: 9919
 Logic: If you look at January: 7110, 7 indicates the number of alphabets are there in January, 1 indicates that it is the 1st month and 10 indicates the starting letter 'J' which is the 10th alphabet.

SPECIAL FEATURE- Simple Machines

1. Wedge
2. Lever
3. Screw
4. Wheel and Axle
5. Pulley
6. Inclined Plane

*You cannot teach a man anything;
you can only help him find it
within himself.*

Galileo Galilei



In the classroom: Jal Tarang

The concept of sound is abstract and difficult for children. Last time, we learnt how to teach sound to children through a story. This time, why not make it more interesting and fun by making a simple musical instrument 'Jal Tarang'?



All you need is 5 or more drinking glasses or glass bowls, two pencils and some water.

Line the glasses up next to each other and fill them with different amounts of water. The first should have just a little water while the last should be almost full, the ones in between should have slightly more than the last.

Use a pencil to strike the glass with the least amount of water and observe the sound. Then strike the glass with the most water, and observe the difference in sound. Strike the other glasses to find out what sound they make. Try to get a tune going by hitting the glasses in a certain order.



You will observe that each of the glasses has a different tone when hit with the pencil. The glass with the most water will have the lowest tone while the glass with the least water will have the highest.

Striking the glasses causes the air in them to produce small vibrations. The shorter the air column above the water level, the faster the air vibrates - producing a higher pitch. As the height of air column increases the pitch of the sound decreases.

*Source: <http://www.sciencekids.co.nz/experiments/makemusic.html>

Special Feature: Simple Machines

Every child would have seen simple machines in and around in their daily life. Each simple machine has a special way to make work easier for humans. The six types of simple machines are: • **inclined plane** • **wedge** • **screw** • **lever** • **pulley** • **wheel and axle**. Share the following pictures with your upper-primary children and ask them to classify them under the correct type of simple machine.

1. An axe is used to chop wood. Which simple machine is found on the head of this axe?
2. The centre of this seesaw is used to balance the board with the seats. The seesaw is an example of which simple machine?
3. The cap on this water bottle has a spiral shape. When you place it on the bottle and twist, the cap pulls itself toward the bottle. The bottle cap is an example of which simple machine?
4. When you turn the large knob on a door, a rod on the inside releases a latch that holds the door closed. The door knob and rod make up which simple machine?
5. A wheel with a rope is used to hoist a flag up to the top of a tall flagpole. The wheel and rope make up which simple machine?
6. A ramp is used for loading this truck. A mover can pull a cart with a heavy object up the ramp. Which simple machine is on the back of this truck?



Nothing in life is to be feared,
it is only to be understood.
Now is the time to understand more,
so that we may fear less.

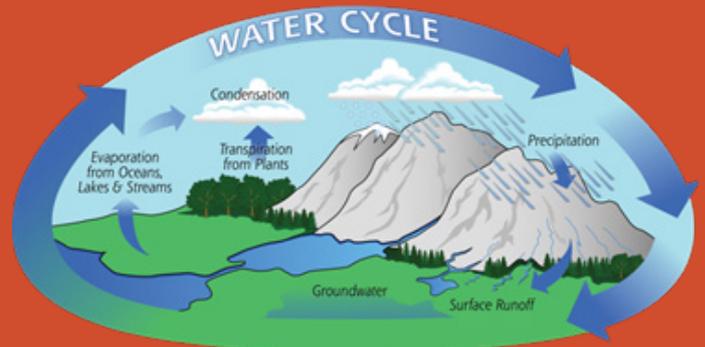
Marie Curie



Dear Science Teachers,
Welcome to the July edition of the Science at School - the monthly magazine especially for you!

Discovery of the Month: Evaporation

With the monsoons starting it would be good to talk about a key aspect of the water cycle, which is evaporation. No one knows who discovered the process of evaporation. However, Nils Wallerius, a Swedish physicist, was one of the first scientists to study and document the characteristics of evaporation through modern scientific methods.



Evaporation is one of the two forms of vapourization. It is the process whereby atoms or molecules in a liquid state gain sufficient energy to enter the gaseous state. It is the opposite process of condensation. Once water evaporates, it also helps form clouds. The clouds then release the moisture as rain or snow. The liquid water falls to Earth, waiting to be evaporated again and the cycle continues.

The process of evaporation has been known to human beings for a very long time. The earliest humans who lived

This natural process of evaporation to harvest the white crystals of salt is still used in the Rann of Kutch in India, just 10 km from the Arabian Sea. This is the land of the *Agariyas*, who have lived here for centuries, knowing just one means of livelihood – salt farming. Working under a fierce sun from October to June, they grow salt in square-shaped salt pans, harvesting 75 percent of India's total salt produce.



Did You Know?

Juno is a NASA spacecraft. It is exploring the planet Jupiter. Juno was launched from Earth in 2011 and it reached Jupiter in 2016. That was a five-year trip!

Juno is helping scientists study the largest planet in our solar system. What they learn will help us understand how Jupiter and other planets began. Juno began its trip around Jupiter on July 4, 2016. Juno is called an "orbiter". This kind of spacecraft flies around, or orbits, a planet. Juno will orbit Jupiter 37 times in all.



Juno's camera records its trip, from Jupiter's North Pole to its South Pole.