

A LETTER TO TEACHERS

Dear teachers,

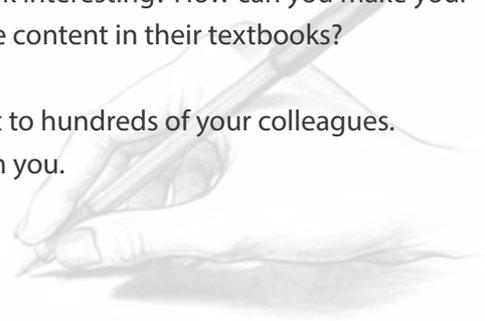
Greetings from Shriram Foundation!

Another new academic year has arrived and brought with it new aspirations, new hopes and ideas. This year resolve to transform your teaching with activities, fresh ideas and experiences for your students. All it needs is a little bit more planning and preparation on your part. Study your lessons carefully before you enter the classroom for teaching. Make notes on how you will teach each lesson. How will you open the lesson, introduce the concept, engage your student, periodically check for understanding? How can you make homework interesting? How can you make your students take on the responsibility of learning more about the topic than the content in their textbooks?

Share your thoughts and ideas with us. This is a platform for you to reach out to hundreds of your colleagues. 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 black boards or notice boards, explain and discuss them with your students.



"THERE IS NO USE GETTING ANGRY AT SOMETHING THAT HAS ALREADY HAPPENED. ALL YOU CAN DO IS YOUR BEST TO CHECK IT DOESN'T HAPPEN AGAIN."

– SRI SRI RAVI SHANKAR

(He is a spiritual leader, the founder of the Art of Living Foundation and also a Padma Vibhushan recipient.)



"BELIEVE YOU CAN AND YOU'RE HALFWAY THERE."

– THEODORE ROOSEVELT

(He was an American statesman and writer who served as the 26th President of the United States.)



MATH PUZZLE

1. Which is the smallest number that is divisible (i.e. remainder = 0) by each of the numbers from 1 to 10?
2. Divide 500 by half. Add ten to it. What is the answer?
3. What is the value of $1/2$ of $2/3$ of $3/4$ of $4/5$ of $5/6$ of $6/7$ of $7/8$ of $8/9$ of $9/10$ of 1000?



IN THE NEWS

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!

Smaat, India's Water ATM

Here is a brilliant native technological advancement that will redefine India's growth. In 2015, Karunakara M. Reddy started a social enterprise called Smaat India Pvt Ltd., which aims to provide clean drinking water in rural areas at an extremely affordable rate.

Working for big corporates, Karunakara realised the importance of providing safe drinking water for rural India. He quit his job and started extensively researching technologies that could give life to his idea. He finally designed a water 'ATM' that can produce 3,000 litres of clean drinking water in one day at just 20 paise per litre!

Smaat has since then constructed over 2,800 water ATMs so far in 11 Indian states, benefitting over 75,00,000 people. It also provides the clean water facility to government schools for free. Karunakara's technology has helped a lot of people get access to clean water, and if technology can improve lives, then this is a perfect example.



Left: Karunakara M Reddy And his Water ATM filtration benefitting the people

THEME FOR THE MONTH

World Music Day

The Fête de la Musique, or World Music Day, is a music celebration that takes place annually on June 21. On World Music Day, people of the many cities and countries that have adopted this celebration are encouraged to play music outdoors, sometimes in their neighbourhoods, or in public places. Amateur and professional musicians alike perform on the streets. Free concerts are also organised, where the musicians do not accept payment, but play out of love for music. This way, the public gets to experience different genres of music free of charge.

World Music Day was first celebrated in Paris in 1982, and is now celebrated on the same day in more than 700 cities in 120 countries, including India.

Activities:

1. Organise a concert in school in honour of World Music Day.
2. If anyone in the school can play an instrument, or sing, ask them to put up a performance for the rest of the school.
3. Invite musicians to play in the school for the students. As musicians are meant to perform for free on World Music Day, a fee may not be required.
4. School can organize a special assembly, where the students could sing songs together; songs that they are already familiar with, and perhaps new songs that they could learn together.



STORY OF THE MONTH

World Oceans Day

World Oceans Day is celebrated annually on June 8. The oceans are home to a majority of the world's plant and animal species, from microscopic single-celled organisms to the blue whale, the largest living creature in the world. There are five different oceans in the world- the Indian Ocean, the Atlantic Ocean, the Pacific Ocean, the Arctic Ocean and the Southern Ocean- all of which are connected to form one giant body of water. We depend on the ocean in countless different ways. It is a source of food and income, a medium of travel, a regulator of climate, and an object of endless fascination. The ocean and its inhabitants still manage to surprise and amaze us. Here is an incident to support it.



This happened in 1971. Yvonne Vladislavich, a young woman sailing in a boat in the Indian Ocean, was forced to swim to shore after her boat was shipwrecked. Her leg was wounded, and in the distance she could see sharks approaching. She survived because a small group of dolphins swam up to her, and guarded her from the sharks, and helped her swim when her strength faltered. She was eventually rescued. There are countless other instances where dolphins have come to humans' aid, as well as other animals'.

Activities:

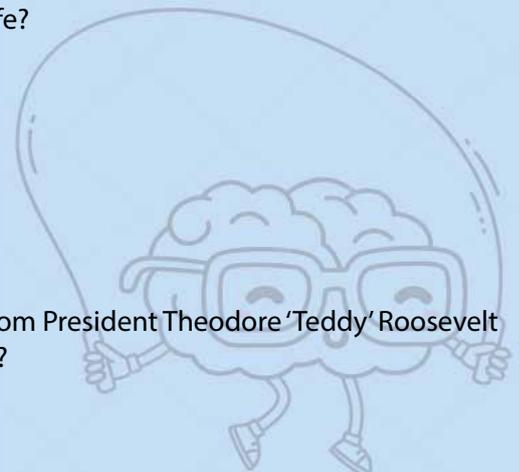
1. Have the students celebrate World Oceans Day by doing research and giving presentations on the ocean and marine animals.
2. They could hang posters and charts in class, or even do a special assembly in school.
3. Most importantly, have them research and understand the many ways human activities impact the ocean, and how deeply ocean life is affected by the harm we do to it.
4. Approach people who are involved in conservation work relating to the ocean, and request them to give talks in school about their work and their experiences, and, if possible, arrange for the class to take part in a beach/riverbank clean-up.

QUIZ

General Knowledge

Knowledge of the country, past and present, is very important for young minds. It does not always come from textbooks. Making students familiar with these quiz questions and answers is a fun and easy way to build general knowledge. Share a general quiz with your Upper Primary children.

1. What was the occupation of the famous people Leonardo da Vinci, Pablo Picasso, and Vincent Van Gogh?
2. How many consonants are there in the English alphabet?
3. Arrange these shapes in order of number of sides they have: hexagon, triangle, octagon, and square? (from the fewer number upwards)
4. Which two parts of the body continue to grow throughout your life?
5. Which country's national anthem is the shortest?
6. In which ocean did the famous Titanic ship sink in 1912?
7. What constitutes approximately 80% of our brain's volume?
8. During which year did World War I begin?
9. Which hunts most – male or female lion?
10. A teddy bear is a soft toy in the form of a bear. The name comes from President Theodore 'Teddy' Roosevelt who once refused to shoot a bear cub and set it free. True or False?
11. Which instrument is used to measure the speed of wind?
12. What is another word for a 'lexicon'?





“Concentrate all your thoughts upon the work at hand.

The sun’s rays do not burn until brought to a focus.”

– Alexander Graham Bell

(Alexander Graham Bell was a scientist and engineer.

He is credited with the invention of the telephone.)

Dear Science Teachers,

Welcome to the June edition of Science at School – the monthly magazine specially for you! In this edition, we bring to you, ideas for your classroom, the story behind an everyday object, puzzles and much more!

Story of everyday things: Toothbrush

Some things around us are so common that we hardly stop to think about them. Why not share the story of these everyday things with your students and make them wonder about them too?

Did you know that the toothbrushes in the form we use now, weren’t invented till 1938? It is known that ancient civilizations used twigs to clean their teeth. The bristle toothbrush, similar to what we have now, was invented in 1498 in China. Here’s a quick peek into how toothbrushes are made:

1. Plastic pellets are molded into the shape of a toothbrush under high pressure. This is done using a machine called the injection mold machine.
2. The head of the brushes have upto 56 holes for the bristles.
3. Blue (or any other colour) rubber pellets are then melted and pressed on to the brushes. This forms the rubber grip of the handle.
4. The bristles are made of nylon fibres. These are fed into the head of the brush using an automated machine, which works at the speed of filling 900 holes per minute! Each hole in the brush contains between 22-24 bristles.
5. The next step is to make sure that the bristles are held in place. This is done by using metal staples or a wire.
6. Next the bristles are trimmed to the shape and size required, by passing them through a trimming machine.
7. The last step is a random check for the strength of the brushes. The machine picks a brush and checks if the bristles are held strongly to the brush. Once, this is done, the brushes are cleared for sale. They are packed into cardboard boxes with the product information and are out in the market!

You can also watch the video of the process here: <https://www.youtube.com/watch?v=CK5npQc3Oow>

Classroom Activity: Encourage the students to find out more stories of everyday objects and share them in the class.



Curious questions, Simple answers: Why do we yawn?

What happens when you feel bored or sleepy? You become restless and start yawning. Before you know it, many others in the room are also yawning. Have you ever wondered why we yawn and is it contagious?

Earlier it was thought that we yawn to take in more oxygen into our lungs, when we are tired. Recent research has proved that this is not true. It turns out that when we are exhausted or haven’t slept enough, our brain gets heated up, just like the computer or the television at your home heats up. When we yawn, we take in cool air from the surroundings. It also increases the blood flow and heart rate which helps cool the brain.



When we see another person yawn, we too copy the same. This happens more with a person we already know. This is probably our way of telling them, that we empathize or understand what’s happening to them.

Have you seen animals yawn too? Why do you think they yawn? Do explore the answer and write to us at m100.shriramfdn@gmail.com. We will feature your questions and the answers in the next edition of Chalkboard.

"However difficult life may seem, there is always something you can do and succeed at."

– Stephen Hawking

(Hawking was a physicist known for his path-breaking work on the origin and the evolution of the universe.)



Science Newsletter for teachers

In the Classroom: Setting up structures

The beginning of the academic year is a wonderful time to set up some classroom structures in your Science class. Why not decorate your classroom with these?

• Question corner

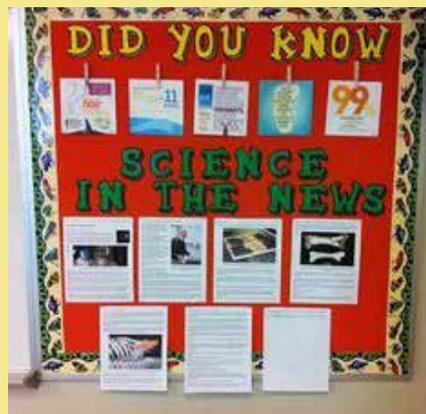
There is no limit to a child's curiosity. Once you start a question corner, you will be surprised by the questions posed by them! This works in primary as well as middle school classrooms.

• Science Bulletin Board

You can put up a chart in the class as a space to discuss interesting things in science. These could be recent happenings or even what the children have watched on TV. Encourage the children to come up with their own articles!

• Science word wall

This is a great way to help students remember the difficult terminologies they learn. Most often children understand the concept but find it difficult to express it. Putting up new words on a chart with a little picture for reference would help the students recall. You can also try colour coding the words, using different colours for Biology, Physics and Chemistry!



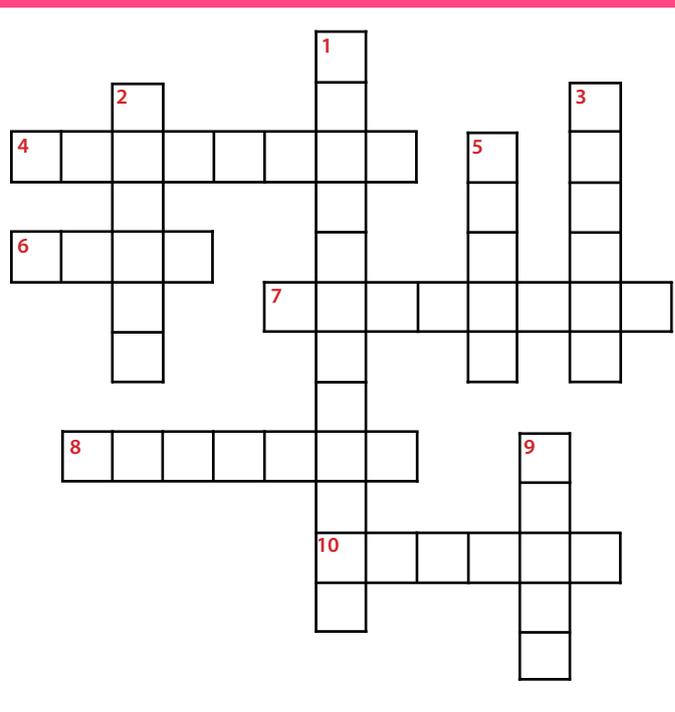
Crossword: Everyday Science

Across

- The wire inside an electric bulb is known as.....
- Your ears are important to stay balanced. True or False
- These rays are used by TV remote control.
- Water in the overhead tank flows to the tap because of
- Water is made up of hydrogen and

Down

- The grass is wet in the morning because of c
- Nimbus, stratus, cumulus are types of
- Chewing gum can stretch since it's made of a type of
- This eclipse occurs when the moon is between Earth and the Sun.
- Which is more elastic, rubber or steel?



TEACHER TIP

Hook – Creating a strong opening

Here is something interesting that you can use before you start any lesson.

Look at the picture on the right carefully. What is it?

Yes, it is a fish gazing at its delicious feast hanging from the HOOK.

The HOOK is the opening moment that a teacher uses to capture what is interesting and engaging about the new topic/concept students will learn in today's lesson.



A Hook

- ✓ should prepare students to be introduced to the material in the 'Introduction' of your lesson.
- ✓ should be short and simple – even a 10 second hook may sometimes be enough to get students very excited about what they will learn in today's lesson.
- ✓ may not be needed for EVERY single lesson, but can be still used as a way to get students excited.

Here are some examples of a hook:

1. Show & Tell

This requires the teacher to bring an object to the class. It could be anything from a picture, a video or something real, which can capture student interest. It has to be related to the lesson or introduction you are planning.



2. Q&A or Quiz

In this you can conduct a short quiz or have a round of Q&A related to the topic, this process also helps build curiosity in the mind of the students.



3. Imagination

Through imagination, students can explore their chain of thoughts, and their creativity on a given topic and later can connect their ideas to the topic they will be learning.



4. Making Real-life Connections

Try and relate the subject to the students' daily lives, or to things that they have experienced or are familiar with. It will interest them, and make them invested in understanding the subject. For example, the concept of condensation can be connected to something as simple as our glasses fogging up.



RIDDLE ME THIS

Riddles not only provide fun, but also help children learn to think out of the box and reason. You can share these riddles with your Primary/Upper primary students and teach your children the fine art of riddling.

1. Two girls were playing chess and completed 5 games in total. Surprisingly, each of them won equal number of games without any tie in any of the games. How did that happen?
2. A boy and a nurse were fishing. The boy is the son of the nurse but nurse is not the mother of the boy. Then who is the nurse?
3. A man was driving a black truck on a long road with great speed. The lights on the truck were off. It was a new moon day. An old lady was slowly crossing the road. He correctly stopped the truck without hitting the lady. How did he stop the truck?
4. There are 20 oranges in a basket and 11 girls. How do you divide the oranges equally so that no one gets more and no one gets less?
5. If 5 peacocks lay 10 eggs in 2 days, then how many peacocks will lay 100 eggs in 24 days?

FROM OUR SCHOOLS**School Canteen**

"Tell me and I forget, teach me and I may remember, involve me and I learn." - Benjamin Franklin

The best way to teach a child is to let him experience the lesson. Karunya Public School, Munagapadu, recently provided one such opportunity to its children by organizing a "School Canteen".

Children of upper primary classes pooled in money with which the teachers and correspondents bought healthy food items and a variety of fruits. Later that week, the management set up small stalls in the school. All the upper primary children were divided into groups and each group was given the responsibility of a stall and was asked to sell the items bought with some marginal profit. The rest of the children visited the 'Canteen' and purchased items they liked during the time allotted. At the end of the day, the entire amount earned was handed over to the correspondent, who separated the profit from the children's investment. The capital invested by the children was returned to them. The profit amount was donated to old age homes.

Children were very animated and enthusiastic during the entire event. Going forward, it is also planned as a regular monthly activity. The school has decided to use the funds raised through it for charity. This innovative event integrated maths in daily life and inherently helped children learn the skills of leadership, team building, negotiation and values like sharing and caring for the needy.

**LEARNING THROUGH PLAY****Spelling Bee**

A spelling bee is generally a competition where participants are asked to spell words, of different levels of difficulty. Having originated in the United States, the contest is organized in many parts of the world nowadays. This can also be devised as a group or classroom activity that provides a fun way to practise spelling. It can be carried out competitively or noncompetitively, individually or in a team.

Here are a few guidelines that must be followed:

- Start with easy words so as to not intimidate children. Gradually progress to more difficult ones.
- Keep in mind the emotions and ability of the children. If they feel uncomfortable, they won't get involved in the activity again.
- Speak slowly and clearly.
- Repeat the words as necessary.

You can start by having the spelling bee as a non-competitive activity. Choose different sets of words (that are interesting, single syllable, common, subject-related etc.) and dictate them. Let the children write the words. When done, ask them to compare and discuss the correct spelling. You can write them on the board for their reference. Children can also work in groups to use the dictated words to frame sentences, a story or a short paragraph depending on their level of proficiency. A representative from each group can read out their sentences, stories or paragraphs. Later, you can recall the learnt words through a game and make it slightly competitive. Eg: Let everyone form a circle. Dictate the words to each student one by one. If s/he spells the word correctly, s/he remains standing else sits down. One who remains standing till the end is the winner!

CREATIVE CORNER

Spray Painting

With Mothers' Day already over on May 13th and Fathers' day coming up on June 17th, encourage your students to make greeting cards for their parents or somebody to whom they love. Here is a simple and fun technique to make beautiful cards.

Things needed: A rectangular chart paper, Scissors, Old toothbrushes, Paints, Plain papers/leaves, Newspaper



1. Draw and cut out shapes from plain paper and keep them ready. You can also print and cut out any printable shapes. In case of leaves, place them inside a thick book for 4-5 hours to flatten them. You can use them as stencils.
2. Arrange the shape cut-outs/leaves on a chart paper which is the greeting card base. Make sure they lie firmly flat on it. Switch off the fans if necessary.
3. Take some paint and thin down the paint with some water in your palette.



4. Dip a toothbrush in any one colour of paint. Shake off the excess paint. Start brushing your fingers across the bristles over the shapes so that the paint is sprayed around them. (Note: This step is a bit messy! So make sure to spread a newspaper on the floor)
5. Repeat using other colours of paint until all the shapes have been painted. Rinse the toothbrush in water when changing colours or you may assign one toothbrush for each colour.
6. Remove the cut-outs/leaves finally to reveal your toothbrush-painted shapes.

ANSWERS

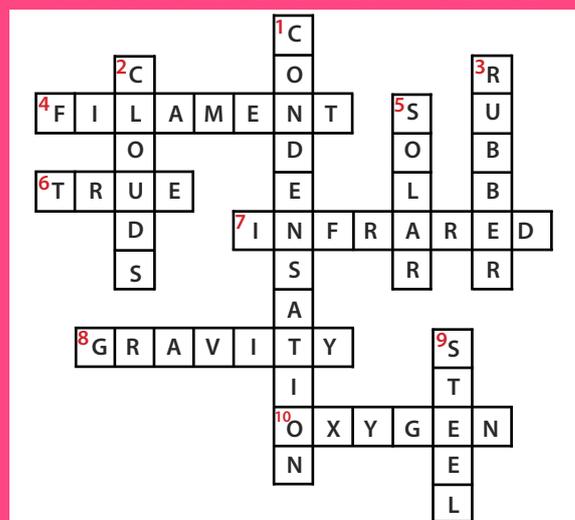
RIDDLE ME THIS

1. The two girls weren't playing against each other and they played with different competitors.
2. Nurse is the boy's father. We generally think nurse is a female occupation.
3. The driver stopped the truck immediately after seeing the old lady, as it was a bright sunny day!
4. Make it as orange juice and serve equal quantity to each of the girls.
5. Peacock does not lay eggs, only peahen lays.

QUIZ: GENERAL KNOWLEDGE

- | | |
|---------------------------------------|----------------|
| 1. Painter | 7. Water |
| 2. 21 | 8. 1914 |
| 3. Triangle, square, hexagon, octagon | 9. Female |
| 4. Nose and ears | 10. True |
| 5. Japan. It has just 4 lines! | 11. Anemometer |
| 6. North Atlantic Ocean | 12. Dictionary |

CROSSWORD: EVERYDAY SCIENCE



MATH PUZZLE

1. LCM(1,2,3,4,5,6,7,8,9,10) = 2520
2. 1010. Dividing by half is the same as multiplying by 2.
3. 100