SHRIRAM Foundation

chalk board

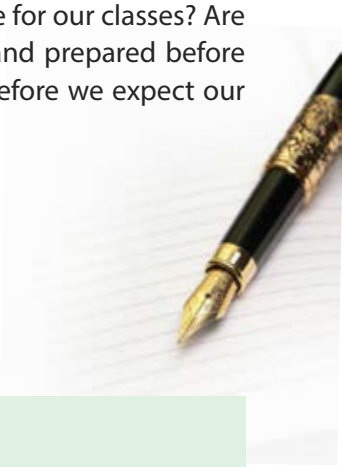
Monthly newsletter for teachers – February 2017

A Letter to Teachers

Dear Teachers,

Greetings from Shriram Foundation!

February is a short, rushed month. There is a lot to do and very little time to do it. This is perhaps the best time to reflect on the need for time management. Have we scheduled our lessons well? Do we prepare for our classes? Are our lessons planned? Do we keep worksheets, questions and answers, materials etc. ready and prepared before we enter our classes? Preparedness and planning are the two pillars of time management. Before we expect our children to learn to do things on time, we must ourselves learn to value work time.



At Shriram Foundation, we look forward to hearing from you about your experiences.
Write to us at m100.shriramfdn@gmail.com.

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.

"Don't see others doing better than you. Beat your own records every day, because success is a fight between you and yourself."

— Chandrashekhar Azad

"The best way to predict your future is to create it."

— Abraham Lincoln

Learn Through Games — Mental Maths

Here is a fun activity with basic mathematical operations for lower primary children!

Stand Up/Sit Down

The rules of the game are simple:

If the teacher calls out the number 10, the students stand up. For all other numbers, they sit down. For example, you can say, "7+3", "5x2", "14-5" and so on. You can also "trick" the students by standing up or sitting down when they should be doing the opposite! You can also introduce variations to the game like:

- Stand when the number is larger than 5; sit if it is 5 or below.
- Stand when the number is even; sit when it is odd.
- Stand if the number called out is a multiple of 5 or 3 or 2 etc.

Story of the Month — Savitribai Phule

The story of Savitribai Phule is a story of extraordinary courage and strength. It's the story of a life lived fighting against social evils and serving the needy. She was a pioneer in women's education. Why not inspire your students by narrating the story of her life?

In a small village called Naigaon in Satara district on January 3, 1831, in a family of farmers, Savitribai's story began. At the age of 9, she was married to Jyotirao Phule. Jyotirao strongly believed in education for all and he himself taught Savitribai to read and write - at a time when no girl was allowed to go to school.

Together the couple started a school for girls in Bhidewada in Pune in 1848. Savitribai taught at this school and was its Headmistress. Not only was this the first school for girls, but also, it was one of the very few schools where children from different castes studied together. Many people were against this idea. Every day on her way to school, people would throw stones and cow dung at Savitribai. But nothing stopped Savitribai from doing what she set out to do. To address the issue of student drop–outs from schools, they started an Adult Literacy Centre in their house.

The Phules slowly began to extend their work beyond education. They started a shelter for pregnant widows in their home. Savitribai would take care of the widows and assist with the delivery of the babies.

Jyotirao set up the Satyashodak Samaj (The Truthseekers' Society) in 1873 to fight for the equality of all people. Savitribai started the practice of Satyashodak marriages – marriages conducted without any Brahmin priests. The Satyashodak marriage required the bridegroom to take an oath of giving education and equal rights to women. After Jyotirao's death, Savitribai led the Satyashodak Samaj. In 1896, there was a famine in Maharashtra and in 1897, there was an outbreak of plague in Pune. Savitribai was involved in relief work during these two years. While carrying one of the plague-affected children to the hospital, Savitribai herself contracted the disease and died of it. Thus, she lived and breathed her last in the service of others.

As a tribute to her courage and pioneering efforts in the field of education, the Maharashtra government renamed Pune University as Savitribai Phule University.

India Post released a stamp in honour of Savitribai on March 10, 1998.

On her birth anniversary, this January, Google also dedicated a doodle for her.

Teacher Tip — Circle Time

Children hear a lot about democracy, but what if the classroom itself was an example of a democracy? Imagine a class where students come up with solutions to problems, where students and teachers are equal participants in the learning process.

Circle times or class meetings are a great way to encourage leadership and problem-solving skills in students. They help to develop the classroom as a safe space to share thoughts and ideas. Circle time is an exercise for both students and teachers to voice opinions in a quiet, respectful atmosphere.

A range of activities can be done during circle times, including setting up class procedures, discussing current affairs, games to get to know each other etc. Students might even surprise you with their ideas of dealing with discipline issues! For the initial few meetings the teacher can decide on the topic and the agenda, but let students gradually take over the responsibility of the meeting.

Before you start, make sure the following rules are set in your circle time:

Every student waits for their turn. Everyone listens when someone is talking. It is fine to disagree, but no one should be put down or laughed at. No statement or answer is wrong.

Some ideas for to start with:

Ask students to complete the following sentences:

1. *I work best when .....*
2. *I feel happy when .....*
3. *I feel angry when .....*
4. *My best friend makes me feel .....*
5. *I sometimes argue with my brother/sister because.....*

Puzzle

Algebra

Here's a fun Math puzzle for your middle-school students!

There are four cows, eight hens, a fish, a crow, a girl and a boy in a garden. Outside the garden there is one dog, a peacock and some cats. The number of legs of all those inside the garden equals that of all those outside the garden. The number of cats is _____.

Find the category

Here's yet another interesting activity that can make children develop the skill of categorizing and sorting! This is for primary children.

Eg. Apple – Banana – Mango = FRUITS

1. *Daffodil – Poppy – Hibiscus = _ _ _ _ _ _ _*
2. *Index – Ring – Little = _ _ _ _ _ _ _*
3. *Burrow – Kennel – Sty = ANIMAL _ _ _ _ _ _ _ _*
4. *Winter – Autumn – Summer = _ _ _ _ _ _ _*
5. *Ninja Hattori – Doremon – Motu Patlu = _ _ _ _ _ _ _ _*
6. *Neem – Gulmohar – Banyan = _ _ _ _*
7. *Ramzan – Ugadi – Onam = _ _ _ _ _ _ _ _*
8. *Cobbler – Magician – Carpenter = _ _ _ _ _ _ _ _ _ _*
9. *Gold – Copper – Silver = _ _ _ _ _ _*
10. *Chess – Hockey – Badminton = _ _ _ _ _*

Most children are fascinated by the marvels of the night sky and the wonders of the universe. Here's a quiz on Space Sciences to quench their thirst for knowledge!

1. Which planet is famous for the beautiful rings that surround it?
2. What are comets made up of?
3. The largest volcano of the solar system is called Olympus Mons. Where is it?
4. What is the sun mainly made up of?
5. Where is the asteroid belt?

6. Which is the planet that has a great red spot?
7. Which was the first living thing to be sent into space and what was it called?
8. What is a constellation?
9. What is the name given to the event that formed the Universe?
10. Expand ISRO. Where is the headquarters?
11. What was India's first mission to the moon called? When was it launched?
12. In which year was Mangalyaan - the mission to Mars launched?
13. In 2004, India launched its first educational satellite. What was it called?
14. True or False: You become taller in Space than on the earth.
15. True or false: Venus and not Mercury is the hottest planet in the Solar system.

Theme for the Month

Celebrate the month of February with these awareness activities and some love!

Every year, February 4 is celebrated as World Cancer Day. Here are some ideas of how you can observe the day at school :

- Most students are familiar with the word cancer and know that it is a disease. Here are some questions about cancer that you can address:

  How is cancer caused?

  Just like we make mistakes while writing, our cells sometimes make mistakes while dividing. This mistake can cause them to continue to divide endlessly causing harm to our body.

  Can cancer spread from one person to another?

  No, cancer doesn't spread except in case of organ transplantation.

  Can injuries cause cancer?

  No, injuries do not cause cancer, but it often happens that cancer is detected when a person is being treated for an injury. Hence people have this wrong idea.

- Have the children make a Poster and write a Slogan on the topic 'Cancer Is Curable'.
- Ask children if they know of anyone who has had cancer. If they wish to share it with the class they could do so.

The month of February can also be an occasion to celebrate love! Here's how:

- **Handmade "love" greeting cards :**
  Encourage your students to make greeting cards for their friends, family members or somebody to whom they would like to show their gratitude or affection. Ask the children to express in words or through drawings why that person is special to them.

- **Love the Earth :**
  We can also show our love for others, just by caring for the environment. Considering the whole world as a family and the Earth as our home, we can teach children to care about the environment. Little activities like collecting trash on the school/street, gathering up recyclable items in the school campus, or even some gardening can show our love for our surroundings.

In the News

It is important for children to know what's happening in the world around them. Why not have a morning "News Discussion time" in your classrooms once a week! To start with, you can use these small snippets!

Donald Trump sworn in as US President

In the United States Presidential elections held in November 2016, American politician and businessman, Donald John Trump was elected to be the next President of the United States. He took office as the 45th US President on January 20, 2017.

Classroom Activity: Let students learn that elections are fun. Have a class election to select a class leader. Let children nominate and campaign for themselves!

Help the students find out about other American Presidents and make a chart on them.

When the air was filled with smoke

A few days after the Diwali festival, the city of Delhi was enveloped in so much smoke that it was said that breathing this air was like smoking 40 cigarettes. Schools were closed for a few days and children were asked to stay indoors or wear anti-pollution masks when they had to go out. The Union Ministry of Environment, Forest and Climate Change has now come up with a Graded Response Action Plan to fight the air pollution. This involves measuring the air pollution in a given area and taking steps accordingly. Some of the suggested steps include odd-even car rationing scheme, ban on construction activities, increase in parking fees and banning diesel generators

Classroom Activity: Ask children to come up with solutions for the problem of air pollution. For children in upper primary and secondary, ask them to imagine that he /she is the Chief Minister of Delhi. Tell them to think about what actions they would take.

Did you know?

Classroom Activity: Here are some interesting facts about various countries across the world which you can share with the class! Let students find out about more such geographical epithets as a homework project!

Japan is called the Land of the Rising Sun!

Why: The sunrise here is earlier than elsewhere on the Earth. This has led to the Japanese people calling their country "Nippon" or "Nihon," which means "source of the sun."

Finland is called the Land of a Thousand Lakes!

Why: The lakes and rivers of Finland account for around 10 percent of the country's land. Infact, there are more than a lakh lakes in Finland!

Bhutan is called the Land of the Thunder Dragon!

Why: It is called so because of the violent thunderstorms experienced in this country. The people of Bhutan believe that the sparkling light of thunderbolts symbolize the red fire of a dragon. The Thunder dragon, Druk is a revered national symbol in this country and even appears on its national flag!

Myanmar is called the Land of Golden Pagodas!

Why: Pagodas are tower-like, multistorey, solid or hollow structures made of stone, brick or wood. The country of Myanmar or Burma is dotted with a large number of pagodas. Most of them are covered with gold leaves, or gold paint. Tourists say that in Myanmar one would see golden things or gold-covered monuments in every direction one turns!

Creative Corner — Finger Puppets

Children enjoy making their own toys! Teach children to make their own finger puppets as follows:

Things needed:

1. *Cardboard and colour papers*
2. *Safety scissors*
3. *Markers*
4. *Crayons*
5. *Bhindhi (Optional)*

1. *On the cardboard, draw your own puppet or a simple shape. Remember it should be the front view of the puppet! You can draw yourself too if you want to! Trace the puppet on the colour paper too.*
2. *Once the drawing is complete, draw two holes for two legs in both the cardboard and the colour pape*
3. *Now, cut out the shapes and the finger holes in both and stick the colour paper on the cardboard.*
4. *Give the outline using the black marker and decorate it using crayons.*
5. *Now your finger puppet is ready and you are all set to narrate an interesting story with it !*

Answers

Quiz

1. *Saturn*
2. *Rock, dust, ice and frozen gases*
3. *On Mars*
4. *Hydrogen and Helium*
5. *Between Mars and Jupiter*
6. *Jupiter*
7. *A dog called Laika*
8. *A group of stars forming a recognizable pattern in the night sky*
9. *Big Bang*
10. *Indian Space Research Organization, Bengaluru*
11. *Chandrayaan, launched in October 2008*
12. *2013*
13. *EDUSAT/ GSAT-3*
14. *True, because in the absence of gravity, there is a slight elongation of the spine.*
15. *True, because Mercury lacks an atmosphere that can trap the heat.*

Algebra

Let the total no. of cats be 'c'.

Inside the garden,

No. of legs for 4 cows: 4 x 4 = 16
No. of legs for 8 hens: 8 x 2 = 16
No. of legs for 1 fish: 1 x 0 = 0
No. of legs for 1 crow: 1 x 2 = 2
No. of legs for 1 girl: 1 x 2 = 2
No. of legs for 1 boy: 1 x 2 = 2

Total no. of legs = 38

Outside the garden,

No. of legs for 1 dog: 1 x 4 = 4
No. of legs for 1 peacock: 1 x 2 = 2
No. of legs for 'c' cats: c x 4 = 4c

Total no. of legs = 4c + 6

As per the given condition, the number of legs inside the garden equals the number of legs outside the garden.

Hence,

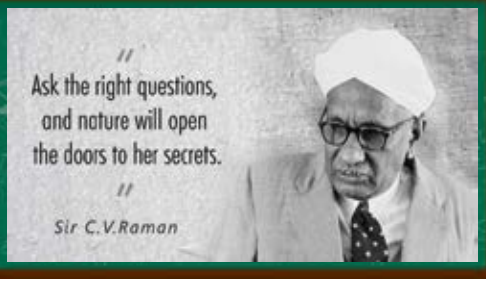
$4c + 6 = 38$

On solving, we get 'c' i.e. no. of cats = 8.

Find the Category

1. *Flowers*
2. *Fingers*
3. *Animal shelters*
4. *Seasons*
5. *Cartoons*
6. *Trees*
7. *Festivals*
8. *Occupations*
9. *Metals*
10. *Sports*

Science At School
Science Newsletter for Teachers



Dear Science teachers,

Welcome to the February edition of Science at School – the monthly magazine specially for you! We wish you a curiosity-filled, fun Science Day at your school!
In this edition, we bring to you recent events in science, experiments, science stories and much more!

Discovery of the Month:

Sometimes the greatest discoveries come from observing and questioning simple day-to-day phenomena around us. Did you know that Sir C.V.Raman's greatest discovery was inspired by just observing the sea during a journey in a ship?

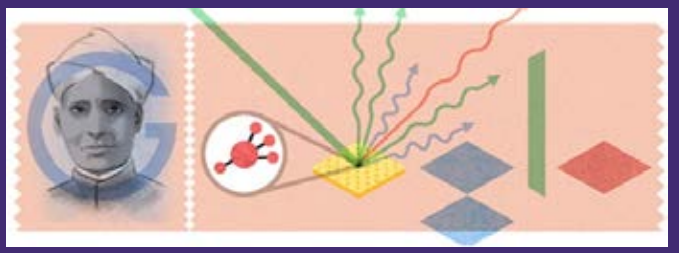
Sir C.V.Raman provezd that one does not require costly equipment to do experiment to pursue Science. No instrument can match the inquisitiveness of the human mind ! Born in the small town of Trichy, he did his graduation in Physics, but could not go abroad since he looked very puny. Even though he spent his days with balance sheets in the Finance Department, he did not give up his quest for Science. In the evenings, he conducted experiments in his make-shift home laboratory.

Soon he was recognized for his work and got an opportunity to go to London for a conference. During this sea voyage, he was fascinated by the blue waters of the ocean. Why did the sea look blue? Did the ocean reflect the blue sky? His mind was filled with many such questions. So, while his fellow passengers played cards, Raman conducted experiments with a pocket spectrometer to study the scattering of light.

After returning to India, Raman continued to seek answers for his question.

The Raman Effect

Finally in 1928, he established that when light of a single colour was passed through a liquid, the liquid molecules interacted with the light and caused it to scatter. The light observed after scattering is found to be of a different colour from the original light ray. This shift of the light's energy levels is known as the famous Raman Effect which later won him the Nobel Prize.



It became a powerful tool to study the structures of different materials.

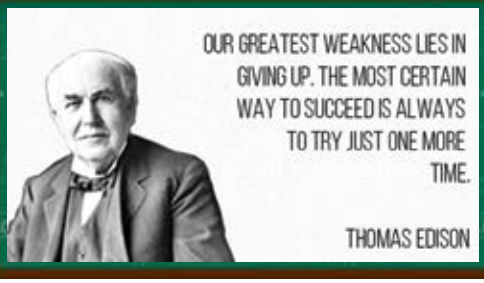
Science in the News

Indian Research team creates a biosensor cheaper than a Rupee

Biosensors are devices that can deduct a change due to a biological reaction and convert it into an electrical, thermal or light signal. In a breakthrough invention, researchers at the Indian Institute of Science, Bangalore have developed a paper biosensor to detect the quantity of the enzyme lipase in the body. High levels of this enzyme might indicate a risk of pancreatic and liver diseases.

Guess my age!

In a recent study, researchers have found that the Earth's natural satellite, the moon, is at least 4.51 billion years old. So, it must have formed no more than 60 million years after the formation of the solar system. Space enthusiasts say that knowing the precise age of the moon is important to understand events in the solar system's formative years including the Earth's evolution.



Science At School
Science Newsletter for Teachers

In the classroom- Science through stories

Are you wondering how to make an abstract concept like sound more interesting for children? Why not tell them a story?

The jackal and the drum

Once upon a time, in a jungle there lived a jackal. One day, he was very hungry. So, he went to search for food in the forest. Suddenly, he saw a big drum lying under a tree. When the wind blew, a small branch of a tree, struck the drum. This produced the sound of a drum beat. The jackal examined the drum from all sides. He beat the drum with his front paws. The drum made a sound. The jackal thought that there might be some other small animal inside the drum that was making the sound. Now, he wanted to make a meal of that animal. But he found the top of the drum too tough to tear off.

A leopard that was attracted towards the sound of the drum came near it. The jackal said to the leopard, "Your Majesty, there is some animal hiding inside the drum. Since you have sharp claws and strong teeth, you can tear off the top of the drum and catch the animal." The leopard was also hungry, so he hit the top of the drum with his heavy paw and tore it open.

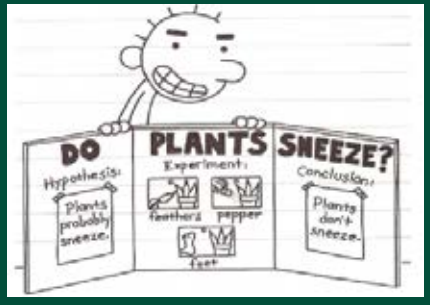
Ask the children, what they think would have happened next in the story?
Was the jackal right? How is sound produced?

Sound is produced by vibrations, that is, to and fro movements of an object. In this story, when the drum was hit by a branch or the jackal's paws, it caused the up and down movement of the top of the drum. This caused a disturbance in the air particles which were close to the top. This disturbance traveled to the jackal's eardrum, making it move too. This made bones in the middle ear to move, which was then transferred to the brain and heard as a 'sound'. And all this happened in a hundredth of a second. Isn't that amazing?

Special feature: Science Fair at your school

Every year, February 28th is celebrated as the National Science Day. It was on this date in 1928 that Sir C. V. Raman discovered the Raman Effect. Celebrate Science Day at school this year with some of these ideas!

1. Select a creative theme for the Science Day. Here are some examples- "Science in daily life", "Important inventions/discoveries in science", "Science and the Environment".
2. Ask children to look around and come up with their own question and find the answer through a systematic process of observation, experiments and documentation.
3. Challenge students to do an Activity-a-day! Each student can come up with their own activity and do a classroom demonstration.
4. Fiction or fact? Help children to use science to look at some of the traditions and superstitions in their community. They can come up with explanations and present them in the class.
5. Celebrate the Science Day/Week as the "Open House Day/ Week" for creating awareness among the public. This can be a great avenue to popularize Science in the community.
6. More fun activities could be debates around some scientific advances, Science quizzes, lectures and so on.



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