



## VIKRAM SARABHAI SPACE CENTRE

THIRUVANANTHAPURAM

Thiruvananthapuram  
September 11, 2013

Respected Principal/Head of Institution,

**Vikram Sarabhai Space Centre** is celebrating World Space Week during October 4 -10, 2013 as in previous years. World Space Week is an international celebration aimed at improving public awareness on the use of space science and technology for the betterment of mankind. The theme for World Space Week 2013 is '**Exploring Mars, Discovering Earth**'. You are requested to participate in the celebrations and organize WSW events at your school in a grand manner.

This year VSSC is organizing the following events for school students

### 1. All Kerala Essay Competition for High School Students

The theme for the essay is '**Exploring Mars, Discovering Earth**' OR मंगल ग्रह के समन्वेषण द्वारा पृथ्वी की खोज OR ചൊല്ലാ പര്യവേഷണത്തിലൂടെ ഭൂമിയെ കണ്ടെത്തൽ. The competition is open for students of Class VIII to X. Essays can be in English, Hindi or Malayalam, **handwritten** on one side of A4 size paper and should not exceed 2000 words. Participant's name, class, age, full name of the school, complete postal address and telephone number (with STD code) of home and school and e-mail ID, if available, should be written in the front page. A certificate from the Headmaster or Principal should be enclosed with the entry. The Best Essay will win the GSLV Gold Medal. The essays should reach VSSC on or before **30<sup>th</sup> September, 2013**.

### 2. Regional Quiz Competitions

Students of X, XI and XII standards can participate. Only one team, consisting of two students, is allowed to represent a school. Last date for registration is **27<sup>th</sup> September, 2013**. Please send e-mail to [ws@vssc.gov.in](mailto:ws@vssc.gov.in) or send application by post to the address given below with full address and contact phone number for registration. Further details regarding date, time and venue of the programme will be communicated later.

### 3. Space Week Celebrations at School

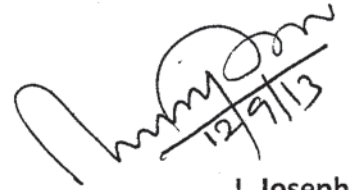
Celebrate WSW at your school and Win a Prize. You may constitute a WSW-2013 Celebration Team in your school involving teachers, students, parents and academicians/experts in your locality and organize various events during 4-10 October 2013. Overall, the theme should be '**Exploring Mars, Discovering Earth**'. Some of the typical events are essay writing, quiz, debates, elocution, painting, model making, poster making, collecting space literature, science projects on the theme, invited lectures etc. Please send the summary report of the school-level celebrations (including the list of winners in each event) so as to reach VSSC on or before **21<sup>th</sup> October 2013**. Prize will be given to the best school in each revenue district. Certificates to the winners of school-level competitions will be sent to the Principal/Head of the School from VSSC.

### 4. Lecture Programme at Schools

Lecture programmes will be conducted in High Schools, Higher Secondary Schools and Teachers' Training institutions in Kerala during 4-10 October 2013. Resource persons from VSSC will come to selected institutions and deliver lectures on World Space Week and Indian Space Programme. Those institutions interested in conducting this event may please send request to [s\\_ratheesh@vssc.gov.in](mailto:s_ratheesh@vssc.gov.in) (mobile No. 9497713175) on or before **25<sup>th</sup> September, 2013**.

Please send entries for the Essay Competition and the summary report of school level celebrations to the following address: "The Convener, WSW-2013, TTDG, VSSC, Thiruvananthapuram-695 022". For further information please visit the website [www.vssc.gov.in](http://www.vssc.gov.in) or send e-mail to [wsw@vssc.gov.in](mailto:wsw@vssc.gov.in) or call 0471 2565695. Handbook on World Space Week celebrations at schools and basic resource material will be available in the above website soon.

*With Best Regards*

A handwritten signature in black ink, appearing to read 'J. Joseph', with a date '12/9/13' written below it.

**J. Joseph**  
Convener, World Space Week-2013



Indian Space Research Organisation  
**Vikram Sarabhai Space Centre**  
Thiruvananthapuram

## **WORLD SPACE WEEK**

October 4 - 10, 2013

# Exploring Mars Discovering Earth

Humanity is quickly conquering the next frontier : the planet Mars  
Learning about mars also help us to learn more about ourselves and give us an opportunity to define from scratch what world we want to live in

**Handbook**  
For Teachers & Educators  
to celebrate WSW 2013





## **WSW 2013 at a Glance**

**Programmes for Students & Public**

**Essay Competition**

**Inter School Quiz Competition**

**Painting Competition**

**Water Rocket Launching Competition**

**School Level WSW Competitions**

**Best WSW School Competition**

**Interaction with Space Scientists for Talented Children**

**Lectures at Selected Schools in Kerala**

**Open House Programme**

**Rohini Sounding Rocket Launches**

## What is World Space Week?

World Space Week (WSW) is the largest public space event on earth, being celebrated by more than 65 nations during October 4-10 every year, since 1999 under the declaration of United Nations. It is an international celebration of the contribution of space science and technology to the betterment of mankind. It provides an excellent opportunity to educate general public about space and is *an ideal time for teachers to excite students about space and space related activities*. The celebrations in each year are centered on a particular theme related to space. The theme for World Space Week 2013 is *Exploring Mars, Discovering Earth*

## When is World Space Week?

The start and end dates of World Space Week each year commemorate the launch of the first human made Earth satellite, *Sputnik 1* (October 4, 1957) and the international space treaty Outer *Space Treaty* by United Nations (October, 10 1967)

## Exploring Mars, Discovering Earth

The theme for 2013 is "**Exploring Mars, Discovering Earth**". Mars the fourth planet from the sun was once more habitable than today! The Astronomers have seen Mars very bright even before telescope. Later Mars Space

Missions gave us better insight into its atmosphere, the volcanic crust, water ice caps on the poles and its seasons.

Mars can be compared with earth in many ways. Both planets have north and south polar ice caps. Volcanoes, rocks, flood plains, wind and weather. There have been many stories on life found in Mars. Exploring Mars helps us understand Earth.

Scientists believe that billions of years ago, Mars experienced the largest known floods in the solar system. This water may even have pooled into lakes or shallow oceans. But where did the ancient floodwater come from; how long did it last; and where did it go?

At present, Mars is too cold and its atmosphere is too thin to allow liquid water to exist at the surface for long. There's water ice close to the surface and more water frozen in the polar ice caps, but the quantity of water required to carve Mars's great channels and flood plains is not evident on-or near-the surface today. Spacecraft images from mars suggest that underground reserves of water might break through the surface as springs. The answers may lie deep beneath Mars's red soil.

### World Space Week in Kerala

In Kerala, as in the previous years, WSW is being celebrated in a grand way under the auspices of *Vikram*

***Sarabhai Space Centre*** (VSSC), Thiruvananthapuram. As part of the celebrations, VSSC is organizing various events for school students such as All Kerala Essay Open house Competition, Regional Quiz Competition, and interaction of eminent space scientists with selected school children. One of the important activities associated with the celebrations is ***World Space Week at schools*** where VSSC welcomes all schools across Kerala to celebrate World Space Week at their own schools which will help both the teachers and students to know more about space science and technology and related activities.

### About this booklet

This booklet provides information regarding the programmes planned for students and public. It gives brief guidelines to help teachers across the schools in Kerala to successfully conduct World Space Week celebrations in their schools. It will explain how the activities should be conducted and evaluated at schools with examples of some of the common activities. Please note that the activities listed in this booklet are for guideline only. Any creative idea, which will motivate students on space and human space programmes, can be implemented. However, all the activities should be centered on this year's theme of ***Exploring Mars, Discovering Earth***.

A brief outline of programmes/competitions planned and their guidelines are given in the following sections.

ALL KERALA  
Essay Competition

FOR HIGH SCHOOL STUDENTS

Theme:

मंगलग्रह के समन्वेषण द्वारा पृथ्वी की खोज

Exploring Mars, Discovering Earth

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- Essays can be in Malayalam, Hindi or English
- Best of best essay will win GSLV Gold Medal
- Handwritten essays should reach VSSC by September 30, 2013
- Should not exceed 2000 words
- Should be accompanied by a certificate from the Head of the Institution and a covering letter containing Name, Full Address and Phone Number(s) with STD code
- Should be addressed to:

Convener, WSW 2013,  
TTDG, MSA, VSSC, ISRO (PO)  
Thiruvananthapuram 695 022



ALL KERALA  
Space Quiz Competition

Register with  
WSW Office

on or before September 27, 2013

- Competition for school students of classes 10, 11 & 12.
- Conducted in three zones viz. North, Central & South
- **A team shall consist of two students**
- **Only one team shall represent a school**
- Students can register through e-mail or phone or by sending the application through post in the address given below.
- Identity certificate duly attested by head of institution is mandatory for participation
- Venue and time will be intimated to the registered participants through e-mail or phone

For Registration & Enquiry, Contact:

E-mail: [wsw@vssc.gov.in](mailto:wsw@vssc.gov.in) Phone: **0471-2565695**

Convener, WSW 2013, TTDG, MSA, VSSC  
ISRO (PO), Thiruvananthapuram 695 022

# Painting Competition

FOR SCHOOL STUDENTS

- Will be held in Trivandrum on 06.10.2013
- Venue and time will be announced in vssc web site [www.vssc.gov.in](http://www.vssc.gov.in)

# Water Rocket Launching

FOR SCHOOL STUDENTS

- Competition for making launching a water rocket model
- To be held at Kozhikode only
- Venue, Date and time will be announced in vssc web site [www.vssc.gov.in](http://www.vssc.gov.in)

# Lectures at Schools

IN HIGHER SECONDARY/HIGH SCHOOL & TTIs ONLY

- In all districts of Kerala during October 4 to 10
- Resource persons from VSSC will deliver the lectures
- Should register at [www](http://www) before 27.09.2013

# Students Workshop

FOR TALENTED CHILDREN

- The workshop will be conducted in VSSC
- Students will get an opportunity to interact with senior space scientists
- Interesting and informative sessions, visit to space museum and witnessing sounding rocket launch
- Selection of students by DPI, Kerala

# Celebrating Space Week at Schools

Largest space outreach programme for school students

Children are always curious about space. World Space week is an excellent opportunity for schools to take up space activities to generate interest and curiosity among school children. Schools (primary to higher secondary) are solicited to celebrate World Space Week during October 4 to 10 by organizing various events or competitions based on the theme ***Exploring Mars, Discovering Earth***. The events can be anything novel and innovative, conforming to this year's theme. Schools are requested to prepare a report on the activities conducted in their school (including the list of winners in each event) and send to WSW Office at VSSC along with the feedback form attached at the end of this booklet. ***VSSC will issue certificates to the winners of school level competitions, through the Head of the Institution. An attractive rocket model is awaiting the school which organizes the event in the most effective manner*** in each revenue district of Kerala. The general guidelines for the preparation of the events and report are given in this booklet.

## Getting Started

1. Form a WSW-2013 organizing committee under the chair of Principal/Head of the institution comprising of teachers, student representatives, parents and educational activists available in the locality. Select a WSW Coordinator Teacher for the overall coordination of WSW.
2. Plan WSW celebrations for one week. Give announcements and encourage students to participate. Ensure maximum participation. Use posters, banners and science rallies.
3. More details about space week are available in the following links:

<http://www.worldspaceweek.org/>

(This site will provide WSW activities)

<http://www.vssc.gov.in>

Following downloadable information is available in the above website under the link **World Space Week**.

- a. **Resource material** on “*Exploring Mars, Discovering Earth*” in PDF format
- b. **Feedback form** to be sent along with the report on the WSW activities at schools

- c. The **logo** of WSW and **poster** for WSW 2013 theme.

## The Joy of Learning

WSW is a collective effort of educators and learners. Plenty of space based activities are available in the libraries and web resources to enthuse, encourage and inspire students. Select items and draw an effective plan for the conduct of the activity which enthralls the students while expanding their knowledge horizon.

Try to conduct competitions like Science *Essay* writing, Science *Fiction* writing, Space Science *Quiz*, *Elocution* on mars, *Painting* and *Poster* making *model* making of rockets and satellites. Plan these competitions as an opportunity to guide students to the new vistas of space science and technology. There are activities like Invited *Science Talks, Debates, Space Camps*, Space & Universe *CD shows, Collection of Space* literature and creation of theme based *wall magazines, Science Exhibitions*, workshop for *Telescope making* and *water rocket launch*. The list is never ending. It is up to your imagination to organize exciting events centered around the theme, *Exploring Mars, Discovering Earth*.

Conduct the activities in a span of one week. Start with an inaugural function on October 4<sup>th</sup> and end with a valediction ceremony on 10<sup>th</sup> evening. Invite eminent

personalities of your locality for the functions (if possible, every day). Announce the prize winners and inform them that the Merit Certificates will be given shortly you will get it from VSSC.

Innovative and informative activities are more effective and well appreciated. Ultimately, an effort towards a *Students Space Club (SSC)* in your school should be accomplished.

### Document the Activities

Document all your activities in written form with supporting audio visuals, photos and collections in timeline. Ensure maximum involvement of students in the documentation. Follow the instruction given in the next section to make a final report and send it to VSSC for *Best WSW School* Selection. A consolidation sheet for certificates is given at the end of this booklet.

### Merit Certificates

The organizing committee of WSW at VSSC distributes Merit Certificates every year for the winners of School level WSW competitions. These certificates will be sent to the Heads of Institutions based on their report of WSW celebrations. The following guidelines are to be adhered to Merit Certificates.

1. The Schools level WSW committee will select the winners for First, Second and Third places for each item for LP/UP/HS/HSS sections.
2. Three certificates per section per item only will be issued for all individual items. Ties should be resolved.
3. Group items should be restricted to a maximum of three member teams.
4. The minimum total number of competitors for any item should be more than 10 for group items and 5 for individual items.
5. There will not be certificates for non-competitive items. However such items are counted for Best School evaluation.
6. A brief review note by teachers covering the objective, participation, presentation, method of evaluation, standard of performance and result of each activity is well appreciated. This will add due weightage in Best School evaluation process.
7. Only required number of blank certificates with signature of the Chairman, Organizing Committee, WSW-2013 will be sent from VSSC. The Merit Certificate will be valid only Head of the School before distribution.



## Best WSW School Selection

The number of schools celebrating WSW is increasing every year. One **Best WSW School** in each revenue district of Kerala will receive an attractive rocket model. This selection is based on the evaluation of reports received by the WSW office in VSSC from the Heads of Institutions. We request you to follow the guidelines for conducting the activities and preparing the report.

1. Use the *WSW theme* and its derivatives for all activities.
2. Schools can conduct any number of events.
3. Encourage the participation of all sections of students from of your school. (LP/UP/HS/HSS)
4. For each activity, note down the date, time, number of participants (section wise), winners judges/audience comments if any, students involvement and overall performance of the activity. Use these inputs for final report generating of final report.
5. Photograph/video footages of events, materials, interview with students, parents, teachers and local people can be written in a CD and sent along with the report. Mention an index for CD items in the report. Make sure the CD will run in all windows.

6. Once you are ready with the materials mentioned in 4 & 5 you can prepare the final report for the ***Best WSW School*** evaluation.
7. The cover page of the report should have the following,
  - a. Full name of the School
  - b. Complete address for communication (including District and PIN)
  - c. School Telephone number
  - d. Name and Mobile number of WSW coordinator
  - e. Concerned AEO/DEO office and Revenue district
  - f. Total strength of the school and the participation for WSW (section wise)
  - g. Syllabus followed (State/CBSE/ICSE etc.)
  - h. School (Govt./Aided/Private)
  - i. Attestation by both WSW coordinator and Head of the Institution with seal.
8. The report should have the following sections:
  - a. Preparations: this section summarizes the tasks like formation of organizing committee, selection of events and its relevance to the theme, planning and publicity.

- b. Implementation: this section details the conduct of various activities, participation, involvement of parents, teachers, local experts, duration, arrangements etc.
  - c. Review and Evaluation: methodology for evaluating competitive items, effectiveness for competing and audience students, efforts taken to support the students to enhance their performance and a review of how WSW was advantageous to the students and teachers in the process of learning.
  - d. Suggestions and conclusion: this section concludes the report.
9. The list of winners eligible for Merit Certificate should be attached separately at the end of the report.
  10. Attach the duly filled feedback form at the end of the report.
  11. The final report tagged properly may be sent to the following address with a superscription "WSW at Schools – 2013"

**Convener**

**World Space Week -2013**

**TTDG, MSA, VSSC, ISRO (PO)**

**Thiruvananthapuram. Pin : 695 022**

12. The report should reach WSW office on or before **21<sup>st</sup> October 2013**
13. Merit Certificates will be sent to the Heads of the Institutions by the end of November 2013.
14. Announcement of Best Schools will be made by first week of December.

The following documents are available in VSSC web site [www.vssc.gov.in](http://www.vssc.gov.in) for download.

- WSW 2013 Handbook
- Resource Material for WSW 2013
- Summary sheet for School level Celebrations
- WSW 2013 poster
- ISRO logo & WSW logo

For any clarification or further information, please contact us in the phone number and email address given below:

Essay Competition

**0471 - 2565689**

Quiz Competition

**0471 - 2565695**

WSW celebrations at Schools

**0471 - 2564267, 2564736**

General Convener

**0471 - 2564271**

**0471 - 2564272**

E-mail

[wsw@vssc.gov.in](mailto:wsw@vssc.gov.in)



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**VIKRAM SARABHAI SPACE CENTRE**

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