



# Vidnyanvahini Annual Report 2012-2013



संवाद आणि कृतिगट



## THE YEAR IN PICTURES



**Takali Bhima (Daund) :** Lab under the trees



**Kamathadi (Bhor) :** Lab in a temple



**Wakrul (Pen) :** Biology experiment



**Khamagaon (Mawal):** Physics experiment



**Al Heera school (Bhusaval) :** Chemistry experiment



**Pen :** Watching anti-superstition video in the bus

Front cover (clockwise from top) : The new bus ; Physics experiment at Khamagaon (Mawal);  
Vidnyanvahini stall at science fair in Khodad

# Vidnyanvahini

## Members of Dialogue & Action group

### President

Pushpa Deshpande

### Secretary

Sharad Godse

Aparna Ambekar

Asavari Adke

Rohini Atre

Mukund Bhadbhade

Narendra Bhide

Dr Madhukar Deshpande

Dr Pradnya Deshpande

Malti Deulgaonkar

Dattatray Dewal

Vinayak Dixit

Jayant Dixit

Dr Manohar Dixit

Vivek Erande

Govind Gadgil

Umesh Godbole

Snehal Godse

Shailaja Joshi

Dr. Suvarnalata Kandalgaonkar

Sushma Kelkar

Meghana Mhaskar

Nalini Mungel

Pushpa Palkar

Urmila Parchure

Shubhangi Parkar

Jayant Phalke

Dr Kiran Phatak

Ashok Prabhu

Nirmal Rege

Ashok Rupner

Achyut Sapre

Nirmal Sathe

Atik Sheikh

Shreenivas Tataka

Ulhas Vaishampayan

**VIDNYANVAHINI, PUNE**  
Public Trust Registration No E 2024, Pune  
Donations tax exempt under section 80G  
[www.vidnyanvahini.org](http://www.vidnyanvahini.org)

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# VIDNYANVAHINI

MOBILE SCIENCE LABORATORY

**Annual Report for the period April 2012 to March 2013**

## About Vidnyanvahini

While urban India has made impressive progress to meet the challenges of the twenty-first century, rural school education in India has never quite made it out of the nineteenth. This is especially true with respect to science education due to the lack of adequate laboratories in the schools. Vidnyanvahini's vision is to reduce this gap as much as possible at the educational level by offering rural school children in the state of Maharashtra a means of learning science through laboratory experiments.

The flagship project of Vidnyanvahini is the Mobile Science Laboratory (MSL): a minibus imaginatively designed to accommodate storage for lab apparatus, audio-visual equipment, laptops, an uninterruptible power supply powered by the engine battery, a generator, portable lab tables, an overhead water tank and a small wash room.

The backbone of Vidnyanvahini is its team of volunteers consisting of retired scientists, engineers, and teachers collectively called the Dialogue and Action Group (DAG). The MSL carries a team of six members of DAG to the selected school on a given day. Priority is given to small rural high schools, which lack a science laboratory and do not enjoy state grants. During a tightly organised full-day session, students perform some science experiments themselves in groups of 4 to 6 and observe demonstration of others. The theoretical principles underlying the experiments are also explained to them, often with the aid of educational audio-visual material. Students are also provided guidance on issues faced during adolescence.

In addition to school visits, a number of teacher-training workshops are held to enhance science-teaching skills among rural school teachers. An annual student camp seeks to expose rural students to a wide variety of science and technology related topics through presentations from subject experts and visits to factories, and laboratories. Several book-bags are circulated among schools to act as mobile libraries.

Vidnyanvahini is a not-for-profit organization constituted as a public trust, which does not charge schools for its visits and operates solely on public donations. In January 2013 Vidnyanvahini completed 18 years of service. During this period the Mobile Science Laboratory travelled about 2,52,000 kms while making 2440 visits and touching the lives of 2,64,000 rural students spread over 24 districts of Maharashtra.

This report summarises the activities of the organisation for the period April 2012 to March 2013.

"There is always a fear of complexity of science subjects in the minds of students. Therefore, an inferiority complex develops and they avoid learning that subject. Demonstrations and hands-on activity during Vidnyanvahini's visit created interest in the subject. Your efforts in doing so are really remarkable and exemplary"  
Mrs Sawant, Head Mistress,  
Utkarsha Madhyamik Vidyalaya,  
Waghalwadi.



## Vidnyanvahini activities at-a-glance

The following table provides a summary of the major activities of Vidnyanvahini during the year 2012-13.

Number of Mobile Science Laboratory (MSL) visits to rural schools	141
Number of schools visited*	121
Number of schools visited once in the year	101
Number of schools visited twice in the year	20
Number of visits to unaided or partly aided schools	20
Number of students who benefited by the MSL visits	19700
Number of outstation visits (each lasting 5 days)	8
Number of Kms logged by the MSL	12100
Number of science teachers' workshop days	6
Number of student camp days	5
Number of schools using mobile library	4

These activities are described in detail in the following paragraphs.

### School visits

During the year 141 visits were made to rural schools with the Mobile Science Laboratory (MSL).

Apart from visits to schools in Pune district (which are usually covered during a single day) Vidnyanvahini also undertook 8 outstation visits- typically lasting five days each- to the following places : Patan (Satara District), Khodad (Pune District), Bhusaval (Jalgaon District), Pen (Raigad District), Shevgaon (Ahmednagar District), Dapoli (Ratnagiri District), Radhanagari (Kolhapur District) and Dhamanand (Ratnagiri District). These visits were sponsored by organisations/ schools in those places and were used to cover rural schools in the surrounding areas.

**'Oh, that's so simple! We can do this too!'**

A spontaneous exclamation by a group of girl students while performing an experiment in a school in Islampur

Vidnyanvahini has a single vehicle at its disposal, which is used as a MSL. This limits the number of schools that can be visited in a year since, barring exceptions, only one school can be covered in a single visit. An attempt was made to overcome this limitation on a trial basis by taking another smaller vehicle - an SUV - on hire and carrying a spare set of lab apparatus to select schools. This enabled us to cover fourteen more schools.

\* Some schools are visited twice in the year. Hence the number of school visits is less than the number of MSL visits

## Teacher workshops

Vidnyanvahini conducted three teacher workshops lasting two days each at Rajapur (Ratnagiri district), Burambi (Ratnagiri District) and Patan (Satara District). In all 128 science teachers attended the three workshops. The subjects covered included atomic structure, radioactivity, chemical bonds, periodic table, electricity and light. The participants uniformly gave a high rating to the quality of the workshop.

"The participating science teachers felt that teaching science subjects and guiding the students during practicals is now much simpler."

Sudhendra Ambegaonkar,  
President Sangameshwar Taluka  
Science Group, Ratnagiri District

## Student camp

Vidnyanvahini conducted its annual *Vidyarthi Shibir* (student camp) in Pune from 13 to 17 June, 2012. The intention of the camp was to expose the rural students to a diverse range of knowledge-gathering activities. This was attended by 33 students (16 girls, 17 boys) and 7 teachers selected from schools visited by Vidnyanvahini. The highlights of the camp were the following presentations/ activities:

- Demonstration of archery, rifle shooting and fencing by Shri Ranjit Chamle,
- 'Biotechnology - Stem cells' by Ms Soumya Koppikar,
- 'Mathematics simplified' by Shri Laxman Gogawale,
- 'Manufacture of medicines and their quality control' by Sudhir Pandya,
- 'Solar energy' by Shri Jayapal Mane,
- 'The Earth and the moon' by Shri Rajiv Vartak,
- 'Manufacture of Plastic' by Shri K V Borkar,
- 'English conversation' by Shri Sandeep Hengle,
- 'Science in daily life' by Prof Milind Gambhir,
- 'Building toys from scrap' Shri Kamalakar Potdar,
- 'Personality Development' Smt Rekha Joshi,
- 'Vinayak Damodar Savarkar - freedom fighter' by Shri Milind Joshi and,
- 'Trekking in the Gobi desert' by Smt Sucheta Kadethankar.

The participants were also taken for visits to the Armament Research and Development Establishment and Tata Motors factory in Pune as well as Bharat Petroleum refinery in Mumbai.

## Exhibits on chemical bonds and valency

As mentioned in earlier reports, a permanent science exhibition comprising models explaining the concepts of chemical bonds and valency has been set up at Vidnyanvahini's office (*Prayogika*) at Dhayari in Pune. Shri Jayant Phalke, Trustee and Treasurer of Vidnyanvahini, visited seven schools with a subset of the exhibits to take sessions on the above subjects.



## Participation in exhibitions

Vidnyanvahini was invited to participate in the annual science exhibition at Khodad, a village 70 kms from Pune (which is also the site where GMRT - Giant Meterwave Radio Telescope - is located). Seven resource persons from Vidnyanvahini attended the exhibition, which was held on 28<sup>th</sup> February and 1<sup>st</sup> March 2013. Six tables were set up for displaying various scientific exhibits relating to biology, chemistry and physics. The exhibition was well attended by the rural population in the surrounding area. As in the past, Vidnyanvahini's stall drew large crowds.

Vidnyanvahini was also invited to participate in '*Dene Samajache*' a three-day exhibition dedicated to NGOs active in the social sphere.

## Mobile library

To encourage the habit of reading among students, Vidnyanvahini has been circulating book bags among schools. The bag contains about forty books on science and related subjects and is kept in a school for a semester. A teacher is given the responsibility of circulating the books among students. During 2012-13 this 'Mobile Library' was used by four schools.

## Meetings of the Dialogue and Action Group

The Dialogue and Action Group (DAG), comprising volunteers who work with Vidnyanvahini, meets periodically to review performance and discuss changes. During 2012-13 these meetings were held 5 times.

The 17<sup>th</sup> annual meeting of DAG was held on 9 and 10 March 2013 at Rashtra Sewa Dal Hall, Sane Guruji Vidyalaya, Sinhagad Road, Pune. This meeting was utilized to review the activities of the previous year, make plans for the activities of next year, make changes to the list of schools and outstation visits, decide on changes to curricula and experiments etc.

## Surodi

Vidnyanvahini has been involved in a watershed development project at Surodi, a village in Ahmednagar district about 120 kms from Pune, with financial support by Association for India's Development (AID), USA. As described in the previous annual reports this project has been highly successful with the village showing significant increase in the household incomes as a result of the increased availability of water for farming. In particular, the village sold onions worth Rs 50 lakh this year. Some farmers have also diversified into other crops like sugarcane, pomegranate and lemon. Surodi also produces 1200 litres of milk a day now.

Awareness of the importance of water conservation has increased in the village. A number of farm-based percolation tanks have

**Vidnyanvahini has helped in transforming our lives.**  
- Bhaskar Wagaskar, resident of Surodi

been constructed. All these efforts have resulted in the village not requiring tanker-based supply of water last year notwithstanding a severe drought over large parts of Maharashtra.

The science activity centre in the village school continued to be used extensively by the students. The school has also won prize for cleanliness at the district level.

## **Anadur Grameen Vidnyan Kendra**

The *Vidnyan Kendra* at Anadur in Osmanabad district, jointly operated by Vidnyanvahini with Halo Medical Foundation, is running satisfactorily. During the 1<sup>st</sup> term the centre was attended by 500 students from 30 schools . During the 2<sup>nd</sup> term 600 students from 40 schools attended the science centre. The operational costs were borne by Durgadevi Charitable Trust, Pune.

## **Vidnyan Prasarini, Gulbarga**

Vidnyan Prasarini, one of the offshoots of Vidnyanvahini, has been visiting rural schools with its own Mobile Science Lab in Northern Karnataka for the last 8 to 10 years. The project is at present being operated by Nutan Vidyalaya Education Society, Gulbarga quite successfully. Vidnyanvahini resource persons continue to provide technical assistance and help identify donors for supporting this project. Ashray Foundation has supported the activities of school visits including teacher and student workshops.

## **Publications**

The two publications sponsored by Vidnyanvahini on topics relating to atomic structure (*'Anuche Antarang'* by Shri Jayant Phalke) and adolescent girls (*'Umalatya Kalya'* by Smt Pushpa Palkar) continued to sell well. An English translation of *'Anuche Antarang'* was published this year. A book on issues of interest to adolescent boys written by Smt Pushpa Palkar was also released this year.

During the year a short video film on how to conduct electricity experiments relating to Ohm's Law and series/ parallel resistances was produced by Dr (Mrs) Kiran Phatak, a member of Vidnyanvahini, with the assistance of the Photography Department of Ferguson College, Pune. This film, in the form of a DVD, will be made available to schools at concessional rates. More such video films are planned in future.

A redesigned version of Vidnyanvahini's website [www.vidnyanvahini.org](http://www.vidnyanvahini.org) was launched during the year.



## Vidnyanvahini in the media

Articles on Vidnyanvahini appeared in a number of news papers/ magazines. These include the following:

1. Life 365, Pune 7 July 2012.
2. *Lokmat* and *Sakal*, Bhusaval edition 6 Sep 2012
3. DNA daily, Pune 15 Oct 2012
4. *Lokprabha* 1 March 2013

## New vehicle

As reported last year, Ms Cognizant Foundation have sponsored a new vehicle to be used as mobile science laboratory by Vidnyanvahini through a generous donation totalling Rs. 15,89,869/-. The donation also covered related equipment such as LCD TV and DVD player used in the bus for audio-visual material, a generator and a laptop. Cognizant Foundation spearheads the corporate social responsibility (CSR) initiative of the leading IT company, Cognizant Technology Solutions. The new vehicle entered service during August 2012.

## Benefactors

Numerous donors and well-wishers have been helping Vidnyanvahini through contributions in cash and kind. We are grateful for their generous gestures and the trust they have reposed in Vidnyanvahini. Some of these benefactors are mentioned below.

- M/s Cognizant Foundation have donated a mobile science laboratory vehicle and related equipment as mentioned above.
- M/s Bharat Petroleum Corporation Limited (BPCL) have sponsored the *Vidyarthi Shibir*.
- Shri Ramesh Rahalkar, Chartered Accountant, has been preparing the financial accounts and audit reports of Vidnyanvahini for many years at no cost to the organisation.
- The Vidyarthi Sahayyak Samiti, Pune has helped by providing lodging facility at their hostel at concessional charges for Vidnyanvahini's *Vidyarthi Shibir* year after year.
- Shri Namadeo Salunkhe of Sahyadri Chemicals has been supplying the chemicals required for Chemistry experiments free of cost.

- M/s Johnson and Johnson have supported permanent exhibits at Dhayri on chemical bonds and valency with a supplementary grant.
- M/s Shree J Printers Pvt. Ltd. have undertaken printing of the annual report at a discounted cost since 2009.
- Shri Vasant Nehate of Corona Systems, has been supplying equipment required for some Physics experiments free of cost.
- The Photography Department of Ferguson College, Pune provided their technical expertise free of cost in the creation of a short film on Ohm's Law.
- A number of industries/ establishments around Pune have readily opened their doors to the participants of *Vidyarthi Shibir* enabling a rare understanding of how they function. Prominent among these are Tata Motors, Bharat Petroleum, Armament Research and Defence Establishment (ARDE) and Defence Institute of Advanced Technology (DIAT).

In addition to the above, donor agencies based in USA (such as India Development Service and Foundation Beyond Belief), Indian corporates, charitable trusts as well as many individual donors have made financial donations to Vidnyanvahini. A list of donors who have contributed amounts of Rs. 5,000/- and above is enclosed at annexure 1.

## Financial statements

Copies of the audited balance sheet and income and expenditure account for the year ended 31 March 2013 are enclosed.



## Annexure 1

### List of donors (Rs. 5,000/- and above)

1	Foundation Beyond Belief	4,14,552.00
2	India Development Service, USA	1,11,260.00
3	Mr Jagadish Pendse	2,00,000.00
4	Mr Anil Achalkar	1,00,000.00
5	Mr P.H.Ravikumar	30,000.00
6	Mr P R Patankar	15,000.00
7	Dr Suruchi Bhutkar	10,000.00
8	Mritunjaya Sahakari Gruharachana Maryadit, Kothrud , Pune	10,000.00
9	Ms Rama Kulkarni	10,000.00
10	Mr Vijay Deshpande	7,169.00
11	Mr A G Khandekar	7,000.00
12	Ms Gauri Ghorpade	5,720.00
13	Ms Meera Phaltankar	5,260.00
14	Dr Shubhangi Sevekari	5,000.00
15	Mr S S Gurjar	5,000.00
16	Mr Sanjay Soman	5,000.00
17	Ms Jayashri Kulkarni	5,000.00
18	Ms Smitha Marathe	5,000.00
19	Rotary Club Bhusaval	5,000.00

THE BOMBAY PUBLIC TRUSTS ACT, 1950

SCHEDULE VIII

Name of the Trust : Vidnyan Vahini

Registration Number: E - 2024/Pune

Balance Sheet as at 31st March 2013

Funds and Liabilities	Amount(Rs)	Fixed Assets	Amount(Rs)
<b>Trusts Funds or Corpus</b>	<b>9,619,970</b>	<b>Immovable Properties - (at cost)</b>	<b>1,035,600</b>
<b>Schedule 11</b>			
Bal. as per last Balance Sheet	7,508,341	(Suitable classified giving mode of valuation)	-
Add: During the year	<u>2,111,629</u>	during the year	
<b>Other Earmarked Funds (Schdule 6)</b>	<b>234,700</b>	<b>(Refer Fixed Assets Schedul 7)</b>	
(Created under the provisions of the Trust deed or scheme or out of the Income)		<b>Investments</b>	
Opening Balance		<b>Schedule 8</b>	
ADD:During the Year	234,700	HDFC and RBI Bonds	1,800,000
Less:Transfer	<u>-</u>	Bank fixed Deposites	<u>3,726,222</u>
<b>Loans (Secured or Unsecured)</b>		<b>Furniture and Fixtures</b>	
From Trustees		Bal. as per last Balance Sheet	420,653
From Others		Additions during the year	1,961,344
Add : During the year	<u>-</u>	Less : Sales during the year	
		Less : Depreciation upto date	<u>805,066</u>
			1,576,930
<b>Liabilities</b>		<b>Loans (Secured or Unsecured) :</b>	
For Expenses	-	Loan Scholarships	-
For Advances		Other Loans	<u>-</u>
For Rent and other deposits			
For Sundry Credit Balance		<b>Advances Schedule 10</b>	
		To TDS	160,804
		To Trustees	-
		To Employees	-
		To Contractors	-
		To Lawyers	-
		To Others (Deposites)	<u>1,100,000</u>
			1,260,804
<b>Income and Expenditure Account</b>		<b>Income Outstanding</b>	
Bal. as per last Balance Sheet	19,679	Rent	-
Less : Appropriation if any		Interest	-
Add : Surplus	128,677	Other Income	<u>190,000</u>
Less : Deficit	<u>148,355</u>		190,000
		<b>Cash &amp; Bank Balances</b>	
		(a) In Current / Saving account	392,184
		<b>( Schedule 3)</b>	
		(b) With the trustee	-
		(c) With the Manager	-
		(d) Cash Balance	<u>21,286</u>
			413,469
		<b>Income and Expenditure Account</b>	
		Bal. as per last Balance Sheet	-
		Less : Surplus	-
		Add : Deficit	<u>-</u>
			-
<b>Total (Rs.)</b>	<b><u>10,003,026</u></b>	<b>Total (Rs.)</b>	<b><u>10,003,026</u></b>

For **Ramesh Rahalkar & Co**



Proprietor  
Mr. Ramesh R. Rahalkar  
Place : Pune  
Date : 28th Sepetember , 2013.  
Membership No. 031672



For **Vidnyan Vahini**



Place :Pune  
Trustee  
Date : 28th Sepetember , 2013.

Place :Pune  
Trustee  
Date : 28th Sepetember , 2013.

**THE BOMBAY PUBLIC TRUSTS ACT, 1950**

**SCHEDULE IX**

**Name of the Trust : Vidnyan Vahini**

**Registration Number: E-2024/Pune**

**Income and Expenditure Account for the year ended on 31st March 2013**

Particulars	Amount(Rs)	Particulars	Amount(Rs)
To Expenditure in respect of properties:-	409,254	By Rent [accrued]	Nil
Rates, Taxes, Cess	-	By Interest [accrued]	483,566
Repairs and Maintenance	30,151	On Securities	162,000
Salaries	-	On Bank Fds	291,512
Insurance	-	On Loans	-
Depreciation [by way of provision or adjustment]	379,103	On Bank Account (Saving Bank )	16,171
To Eastablistment Expenses	-	On FCRA Saving	13,883
To Remuneration to Trustees	-	By Dividend	Nil
To Remuneration [in case of a math] to the head of the math including his household expenditure, if any	-	By Donations is cash or kind ( Separate Schedule )	511,605
To Legal Expenses	-	By Income from other Sources [in details as far as possible]	-
To Audit Fees	-	By Sale of Books	9,761
To Contribution and Fees	-	By Misc Income	60,251
To Amount written off	-	By Profit on Sale of Vehicle	288,964
(a) Bad Debts	-	By Transfers from Reserve	-
(b) Loan Scholarships	-	By Deficit carried over to Balance Sheet	-
(c) Irrecoverable Items	-		
(d) Other items	-		
To Miscellaneous Expenses ( Bank Charges )	2,163		
To Depreciation	-		
To Expenditure on objects of the trust	814,053		
(a) Religious	-		
(b) Educational	814,053		
(c) Medical Relief	-		
(d) Relief of poverty	-		
(e) Other Charitable objects	-		
To Surplus carried to Balance Sheet	128,677		
<b>Total (Rs.)</b>	<b>1,354,147</b>	<b>Total (Rs.)</b>	<b>1,354,147</b>

For **Ramesh Rahalkar & Co.**

*Ramesh R. Rahalkar*

Prop.  
Mr. Ramesh R. Rahalkar  
Place : Pune  
Date : 28th Sepetember , 2013.  
Membership No. 031672



For **Vidnyan Vahini**

*Ramesh R. Rahalkar*  
Trustee

Place: Pune  
Date : 28th Sepetember , 2013.

*Ramesh R. Rahalkar*  
Trustee

Place: Pune  
Date : 28th Sepetember , 2013.



## THE YEAR IN PICTURES

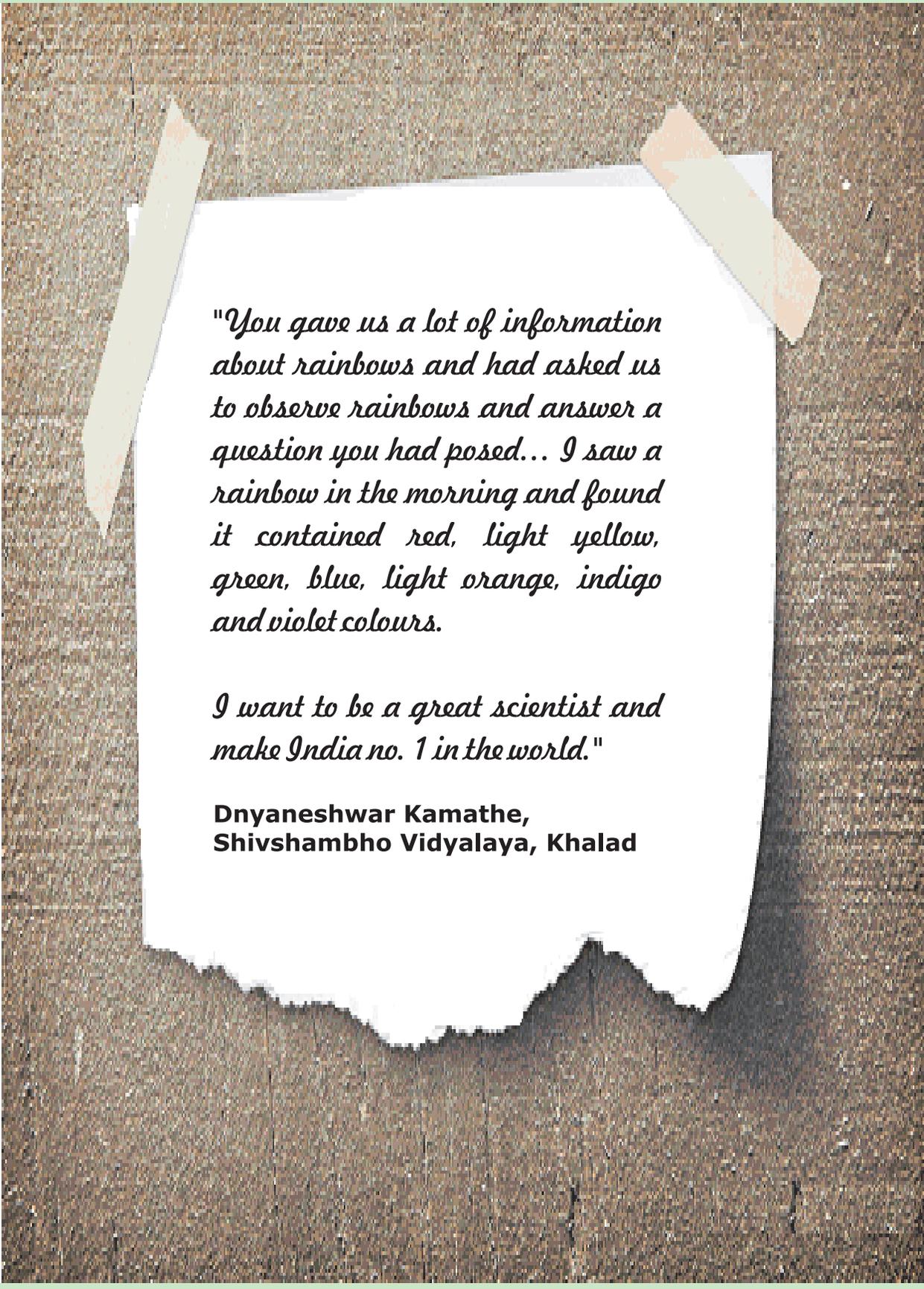
**Dadar (Pen)** : Chemistry experiment



**Surodi** : Dnyaneshwar, once a farm labourer, is now the proud owner of a farm.

**Velvand (Bhor)** : View from the school





*"You gave us a lot of information about rainbows and had asked us to observe rainbows and answer a question you had posed... I saw a rainbow in the morning and found it contained red, light yellow, green, blue, light orange, indigo and violet colours.*

*I want to be a great scientist and make India no. 1 in the world."*

**Dnyaneshwar Kamathe,  
Shivshambho Vidyalaya, Khalad**