

# NAS 2017

## NATIONAL ACHIEVEMENT SURVEY

Class : 3, 5 and 8

# MIZORAM

## State Learning Report



The National Achievement Survey (NAS) was conducted throughout the country on November 13, 2017 for Classes 3, 5 and 8 in government and government aided schools. The survey tools used multiple test booklets with 45 questions in Classes III and V and 60 questions in Class VIII in Mathematics, Language, Sciences and Social Sciences. The competency based test questions developed, reflected the Learning Outcomes developed by the NCERT which were recently incorporated in the RTE Act by the Government of India. Along with the test items, questionnaires pertaining to students, teachers and schools were also used.

The learning levels of 2.2 million students from 1,10,000 schools across 701 districts in all 36 States/UTs were assessed. The findings of the survey, will help guide education policy, planning and implementation at national, state, district and classroom levels for improving learning levels of children and bringing about qualitative improvements.

# HIGHLIGHTS

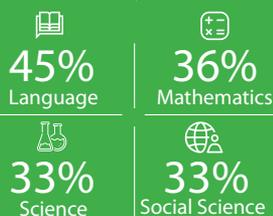
**In Class 3**, on an average, the correct responses to the subjects were as follows:



**In Class 5**, on an average, the correct responses to the subjects were as follows:



**In Class 8**, on an average, the correct responses to the subjects were as follows:



78%

Children could understand what the teacher says in the classroom.



30%

of the school buildings need significant repair.

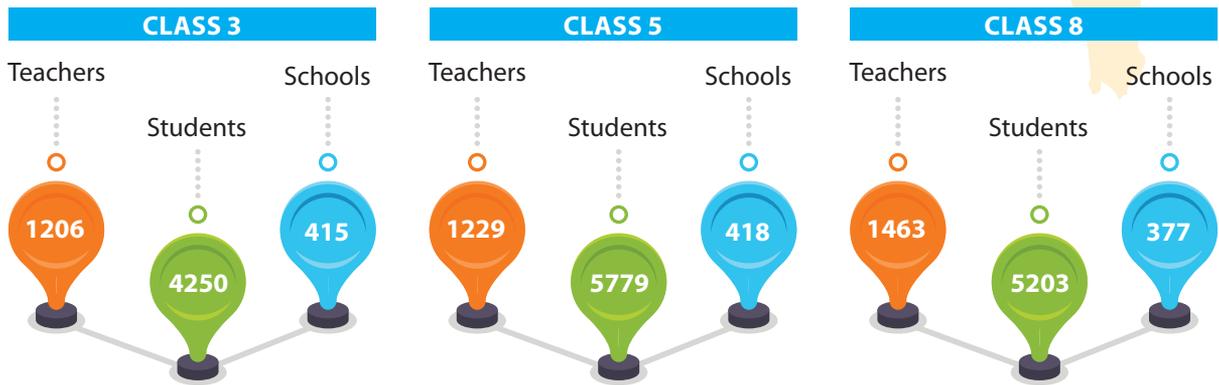
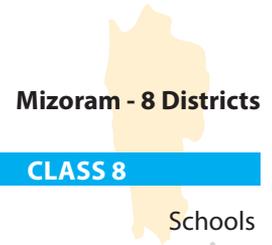
## Highest Performing Learning Outcomes

- **M317:** Reads the time correctly to the hour using a clock/watch (75)
- **E307:** Groups objects, birds, animals, features, activities according to differences/similarities using different senses. (e.g. appearance/place of living/ food/ movement/ likes-dislikes/ any other features) (76)
- **E314:** Voices opinion on good/bad touch, stereotypes for tasks/play/food in family w.r.t gender, misuse/wastage of food and water in family and school (77)
- **M319:** Records data using tally marks, represents pictorially and draws conclusions (84)
- **M309:** Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc (87)

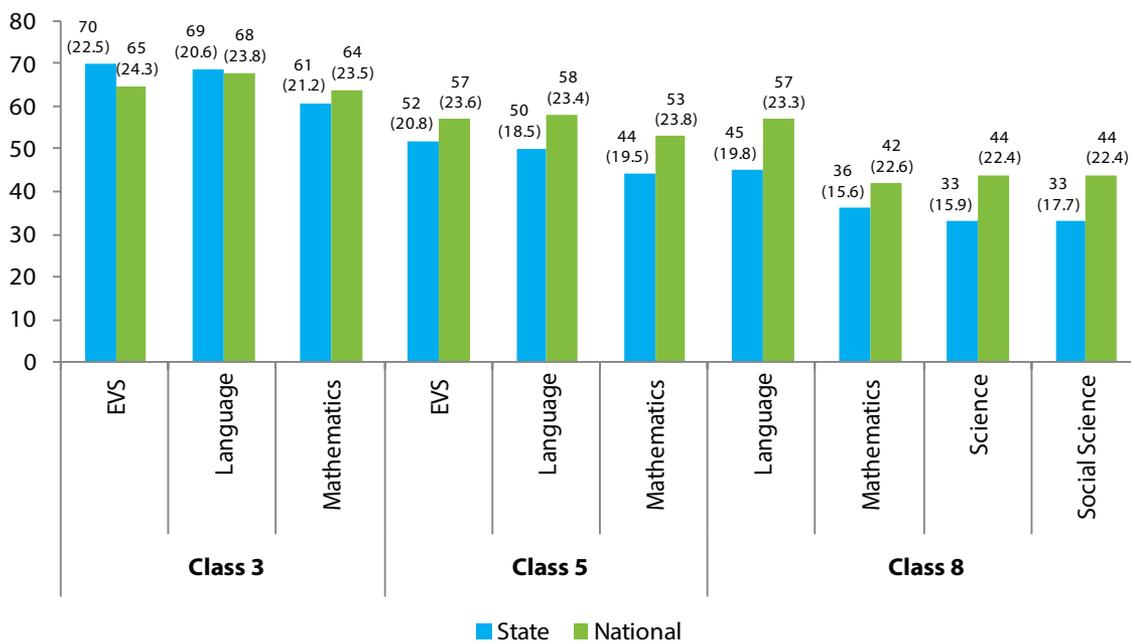
## Lowest Performing Learning Outcomes

- **SST704:** Describes formation of landforms due to various factors (15)
- **M706:** Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers (19)
- **SST816:** Analyses the decline of pre-existing urban centers and handicraft industries and the development of new urban centers and industries in India during the colonial period (20)
- **SCI710:** plots and interprets graphs (23)
- **SST625:** Describes the functioning of rural and urban local government bodies in sectors like health and education (24)

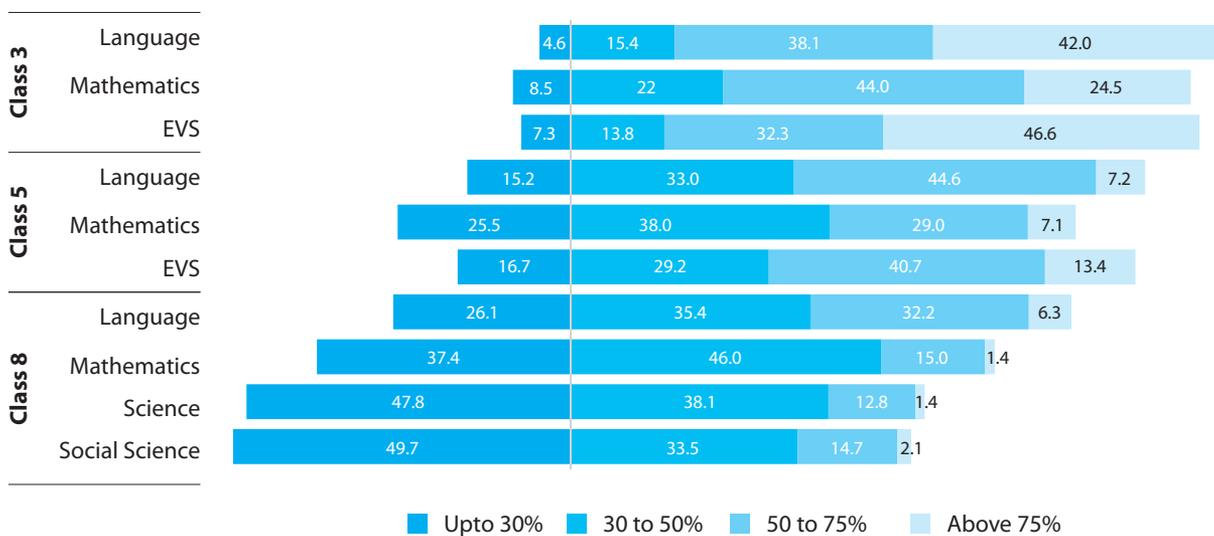
## Participation



## Average Achievement by Classes and Subjects



## Distribution of Students Achievement by Classes and Subjects

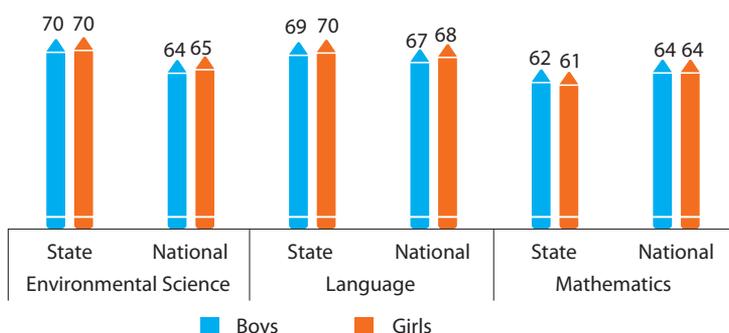


E.g. In Class 3 language, percentage of students achieving upto 30% is 4.6, between 30%-50% is 15.4, between 50%-75% is 38.1 and above 75% is 42.0.

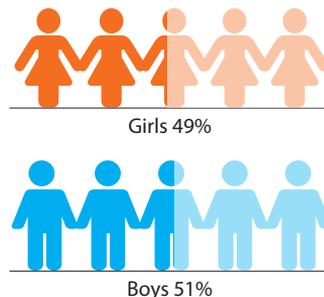
# Class 3 State Results by Student Groups

## PERFORMANCE

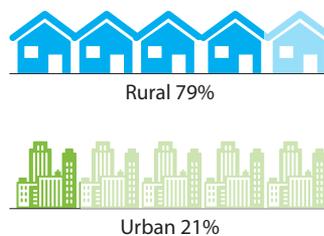
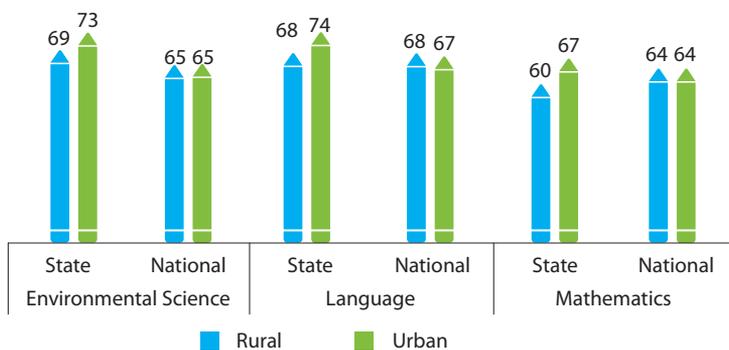
### By Gender



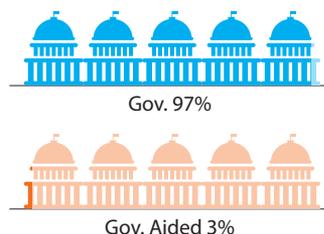
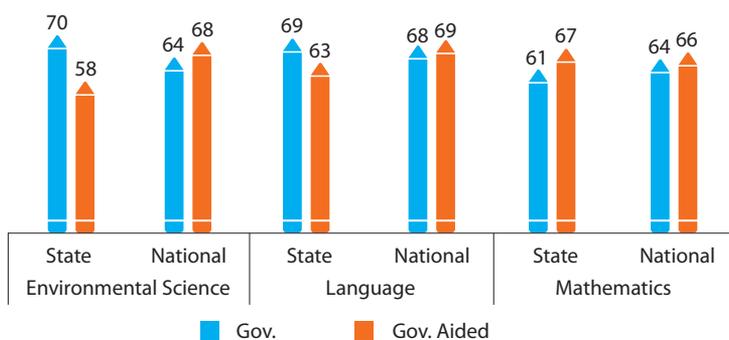
## PARTICIPATION



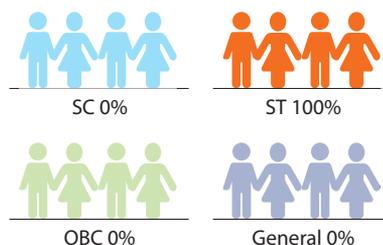
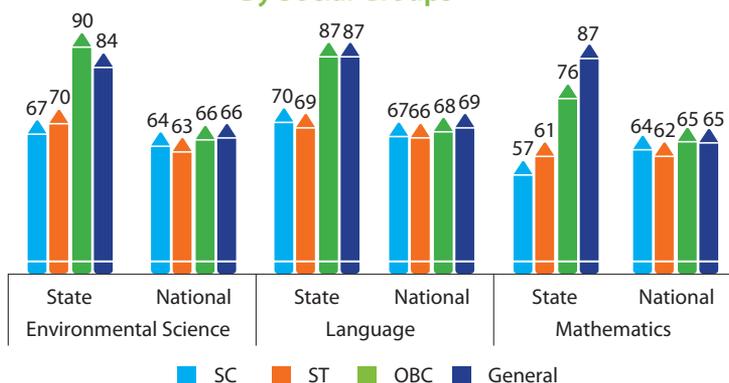
### By School Location



### By School Management



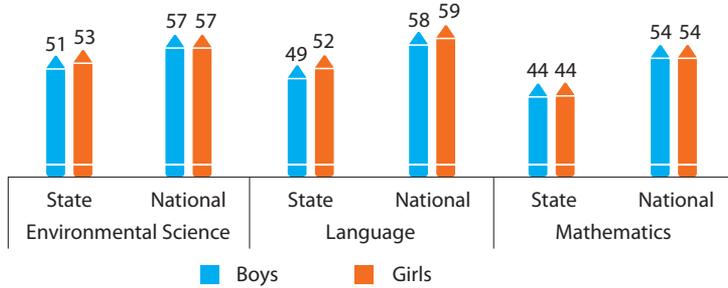
### By Social Groups



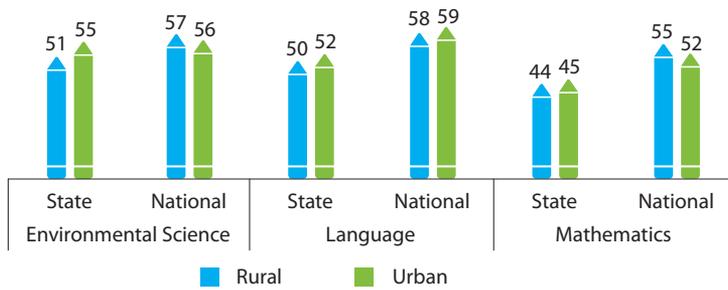
# Class 5 State Results by Student Groups

## PERFORMANCE

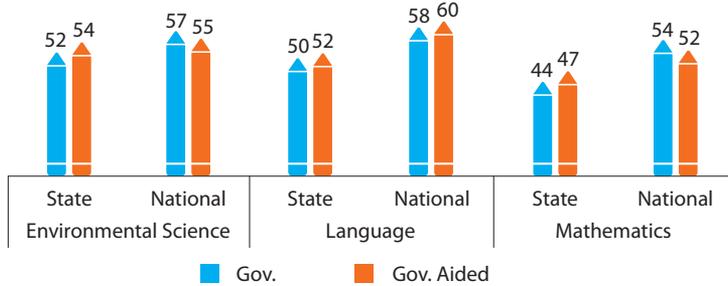
### By Gender



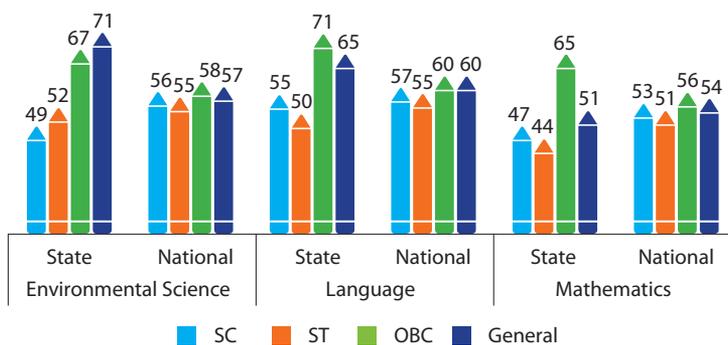
### By School Location



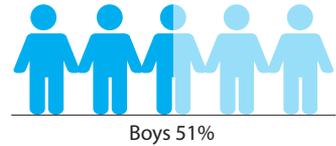
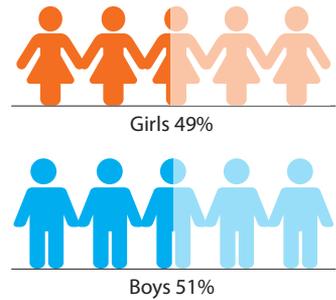
### By School Management



### By Social Groups



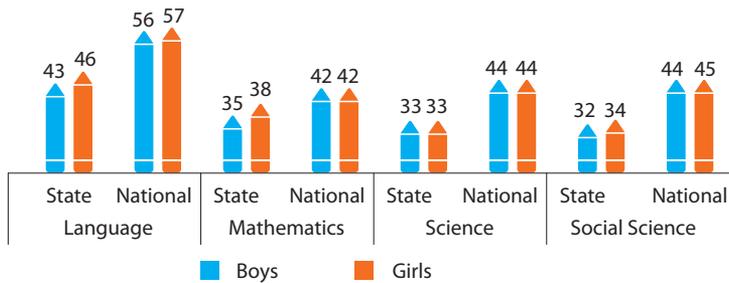
## PARTICIPATION



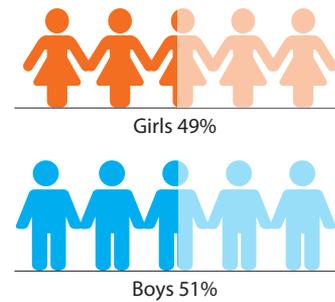
# Class 8 State Results by Student Groups

## PERFORMANCE

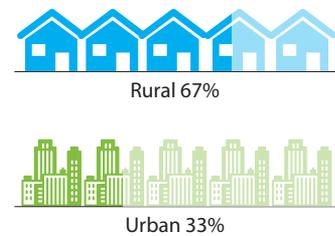
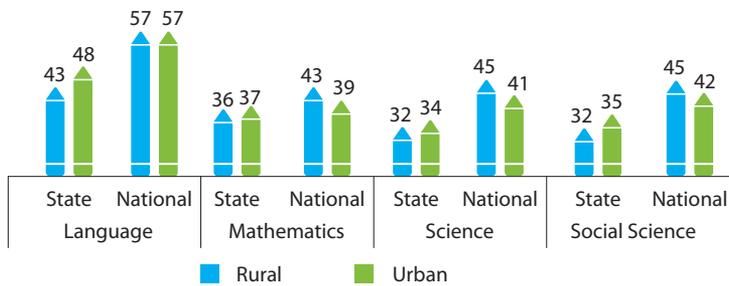
### By Gender



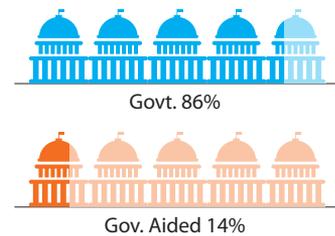
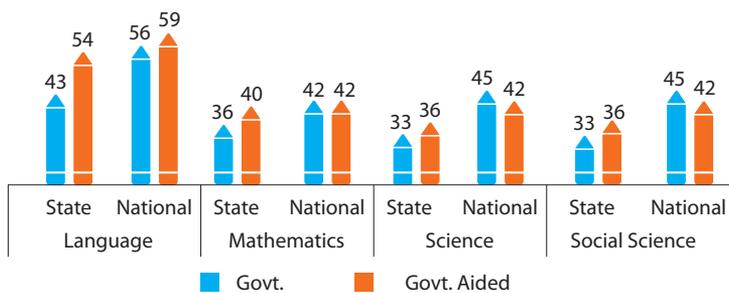
## PARTICIPATION



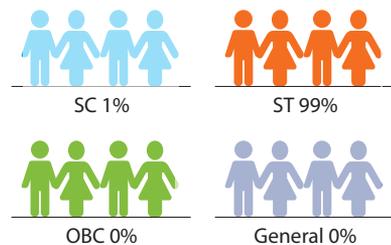
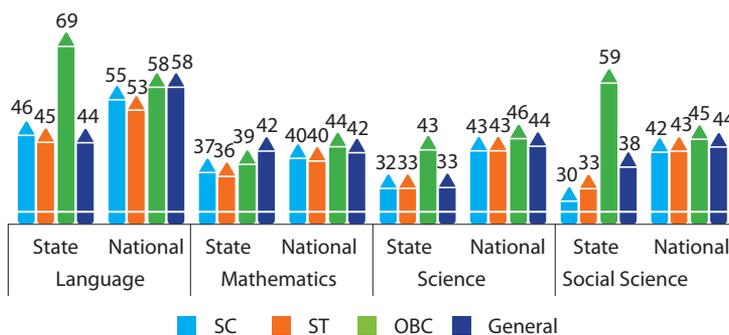
### By School Location



### By School Management



### By Social Groups



## What children say about schools?



**98%** children in Class 3, **97%** in Class 5 and **95%** children in Class 8 like to come to school.



**11%** students in Class 3, **10%** in Class 5 and **7%** students in Class 8 find it difficult to travel to school.

**78%** children in Class 3, **70%** in Class 5 and **62%** children in Class 8 could understand what the teachers say in the classroom.



For **72%** students in Class 3, **63%** in Class 5 and **66%** students in Class 8, the language used at home and by the teachers is the same.



**91%** students in Class 3, **89%** in Class 5 and **87%** in Class 8 go out and play during the games period.

## What teachers responded?

 **66%** teachers in Class 3,  
 **58%** in Class 5 and  
 **57%** in Class 8 are teaching the same subjects they have pursued during their higher studies.

  
**45%** teachers in the state fully understand the curricular goals.

  
**10%**  
teachers responded that there is lack of adequate toilet facilities.

  
**13%**  
teachers responded that there is lack of drinking water facilities.

  
**30%**  
teachers responded that the school buildings needs significant repair.

  
**19%**  
teachers responded that there is lack of electricity.

  
**11%**  
Teachers in the state opined that they are overloaded with work.

  
**51%**  
Teachers in the state are highly satisfied with their job.

  
**82%**  
Teachers in the state have adequate instructional material and supplies.

  
**92%**  
Teachers in the state have adequate work space.

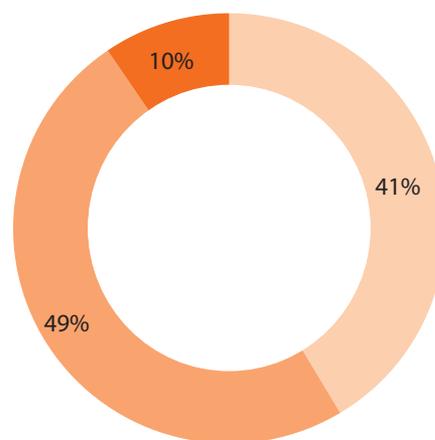
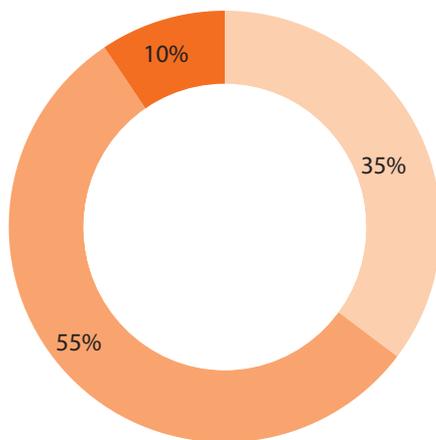
## How do teachers assess children in the classroom?

|                         | Never (in %) | For some lessons (in %) | Almost every lesson (in %) |
|-------------------------|--------------|-------------------------|----------------------------|
| Oral Tests              | 6            | 57                      | 37                         |
| Written Tests           | 3            | 33                      | 64                         |
| Multiple choice type    | 9            | 62                      | 29                         |
| Observation             | 14           | 64                      | 22                         |
| Home assignments        | 2            | 34                      | 64                         |
| Student self assessment | 21           | 64                      | 15                         |
| Project work            | 10           | 72                      | 17                         |
| Peer assessment         | 33           | 56                      | 11                         |
| Portfolio               | 13           | 44                      | 43                         |

## What teachers say about parent’s involvement?

Parental support for students’ Achievement

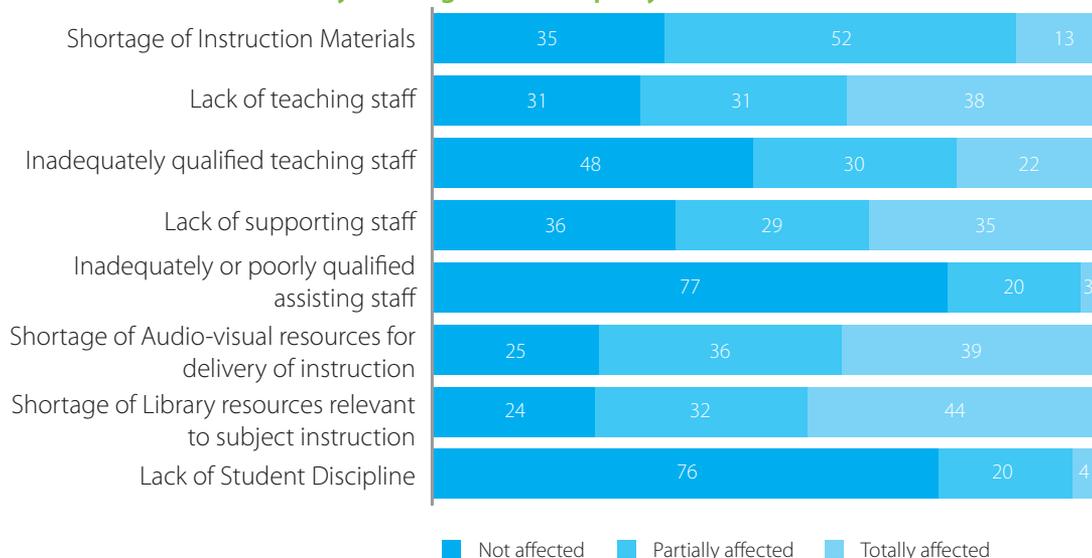
Parental involvement in school activities



Low Medium High

## What the head teacher responded?

School activities affected by shortage or inadequacy



Eg. 35% of the head teacher responded that the school activities were not affected by the shortage of instructional materials.

## Average Performance of the District

### Class 3

| District Name | District Mean |
|---------------|---------------|
| Kolasib       | 75            |
| Aizawl        | 72            |
| Saiha         | 70            |
| Champhai      | 68            |
| Serchhip      | 68            |
| Mamit         | 64            |
| Lunglei       | 63            |
| Lawngtlai     | 54            |

### Class 5

| District Name | District Mean |
|---------------|---------------|
| Aizawl        | 55            |
| Kolasib       | 53            |
| Champhai      | 52            |
| Mamit         | 52            |
| Lunglei       | 50            |
| Serchhip      | 49            |
| Saiha         | 41            |
| Lawngtlai     | 38            |

### Class 8

| District Name | District Mean |
|---------------|---------------|
| Kolasib       | 42            |
| Lunglei       | 40            |
| Aizawl        | 37            |
| Champhai      | 36            |
| Saiha         | 36            |
| Serchhip      | 35            |
| Mamit         | 35            |
| Lawngtlai     | 31            |

## Performance of the State in Learning Outcomes (LOs)

Annex-1

| LO Code            | Learning Outcome Class 3  | Average Performance (in Percent) |
|--------------------|---|----------------------------------|
| <b>EVS</b>         |   |                                  |
| E302               | Identifies simple features (e.g. movement, at places found/ kept, eating habits, sounds) of animals and birds in the immediate surroundings   | 59                               |
| E303               | Identifies relationships with and among family members  | 71                               |
| E304               | Identifies objects, signs (vessels, stoves, transport, means of communication, transport, signboards etc.), places (types of houses/shelters, bus stand, petrol pump etc.) activities (work people do, cooking processes, etc.) at home/school/ neighbourhood | 72                               |
| E305               | Describes need of food for people of different age groups, animals/birds, availability of food and water and use of water at home and surroundings  | 66                               |
| E307               | Groups objects, birds, animals, features, activities according to differences/similarities using different senses. (e.g. appearance/place of living/ food/ movement/likes-dislikes/ any other features)   | 76                               |
| E309               | Identifies directions, location of objects/places in simple maps using signs/symbols/verbally   | 54                               |
| E310               | Guesses properties, estimates quantities of materials/ activities in daily life and verifies using symbols/non-standard units   | 74                               |
| E311               | Records observations, experiences, information on objects/ activities/places visited in different ways and predicts patterns etc  | 58                               |
| E313               | Observes rules in games (local, indoor, outdoor)  | 46                               |
| E314               | Voices opinion on good/bad touch , stereotypes for tasks/ play/food in family w.r.t gender, misuse/wastage of food and water in family and school   | 77                               |
| <b>Language</b>    |   |                                  |
| L304               | Reads small texts with comprehension i.e., identifies main ideas, details, sequence and draws conclusions   | 71                               |
| L312               | Reads printed scripts on the classroom walls: poems, posters, charts etc  | 64                               |
| <b>Mathematics</b> |   |                                  |
| M301               | Reads and writes numbers upto 999 using place value   | 24                               |
| M302               | Compares numbers up to 999 based on their place values  | 72                               |

| LO Code | Learning Outcome Class 3  | Average Performance (in Percent) |
|---------|---|----------------------------------|
| M303    | Solves simple daily life problems using addition and subtraction of three digit numbers with and without regrouping   | 61                               |
| M304    | Constructs and uses the multiplication facts (up till 10) in daily life situations                                    | 70                               |
| M305    | Analyses and applies an appropriate number of operations in the situation/ context                                    | 42                               |
| M306    | Explains the meaning of division facts by equal grouping/ sharing and finds it by repeated subtraction                | 63                               |
| M309    | Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc              | 87                               |
| M311    | Fills a given region leaving no gaps using a tile of a given shape  | 32                               |
| M312    | Estimates and measures length and distance using standard units like centimetres or metres & identifies relationships | 36                               |
| M317    | Reads the time correctly to the hour using a clock/watch  | 75                               |
| M318    | Extends patterns in simple shapes and numbers   | 56                               |
| M319    | Records data using tally marks, represents pictorially and draws conclusions  | 84                               |

| LO Code         | Learning Outcome Class 5  | Average Performance (in Percent) |
|-----------------|---|----------------------------------|
| <b>EVS</b>      |   |                                  |
| E403            | Identifies relationship with and among family members in extended family  | 40                               |
| E410            | Records observations/experiences/information for objects, activities, phenomena, places visited in different ways and predicts patterns and activities/ phenomena   | 63                               |
| E501            | Explains the super senses and unusual features (sight, smell, hear, sleep, sound, etc.) of animals and their responses to light, sound, food etc  | 65                               |
| E503            | Describes the interdependence among animals, plants and humans  | 63                               |
| E504            | Explains the role and functions of different institutions in daily life (Bank, Panchayat, Cooperatives, Police station, etc.)   | 62                               |
| E505            | Establishes linkages among terrain, climate, resources (food, water, shelter, livelihood) and cultural life. (e.g. life in distant/ difficult areas like hot/cold deserts)  | 26                               |
| E506            | Group objects, materials, activities for features/properties such as shape, taste, colour, texture, sound, traits etc   | 31                               |
| E507            | Traces the changes in practices, customs, techniques of past and present through coins, paintings, monuments, museums etc. and interacting with elders  | 58                               |
| E508            | Guesses (properties, conditions of phenomena), estimates spatial quantities (distance, area, volume, weight etc. ) and time in simple standard units and verifies using simple tools/ set ups                       | 48                               |
| E509            | Records observations/experiences/information in an organized manner (e.g. in tables/ sketches/ bar graphs/ pie charts) and predicts patterns in activities/phenomena to establish relation between cause and effect | 47                               |
| E510            | Identifies signs, directions, location of different objects/ landmarks of a locality /place visited in maps and predicts directions w.r.t. positions at different places for a location                             | 38                               |
| E512            | Voices opinions on issues observed/experienced and relates practices /happenings to larger issues of society  | 33                               |
| E513            | Suggests ways for hygiene, health, managing waste, disaster/ emergency situations and protecting/saving resources   | 57                               |
| <b>Language</b> |   |                                  |
| L504            | Reads and comprehends independently storybooks, news items/ headlines, advertisements etc   | 53                               |
| L508            | Reads text with comprehension, locates details and sequence of events   | 49                               |

| LO Code            | Learning Outcome Class 5   | Average Performance (in Percent) |
|--------------------|--|----------------------------------|
| <b>Mathematics</b> |  |                                  |
| M401               | Applies operations of numbers in daily life situations   | 35                               |
| M412               | Explores the area and perimeter of simple geometrical shapes (triangle, rectangle, square) in terms of given shape as a unit   | 56                               |
| M418               | Calculates time intervals/duration of familiar daily life events by using forward or backward counting/addition and subtraction  | 51                               |
| M421               | Represent the collected information in tables and bar graphs and draws inferences from these   | 55                               |
| M501               | Reads and writes numbers bigger than 1000 being used in her/his surroundings   | 54                               |
| M504               | Estimates sum, difference, product and quotient of numbers and verifies the same using different strategies like using standard algorithms or breaking a number and then using operation | 44                               |
| M505               | Finds the number corresponding to part of a collection   | 47                               |
| M506               | Identifies and forms equivalent fractions of a given fraction  | 38                               |
| M508               | Converts fractions into decimals and vice versa  | 48                               |
| M509               | Classifies angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing   | 45                               |
| M512               | Relates different commonly used larger and smaller units of length, weight and volume and converts larger units to smaller units and vice versa  | 57                               |
| M513               | Estimates the volume of a solid body in known units  | 27                               |
| M514               | Applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals  | 36                               |
| M515               | Identifies the pattern in triangular number and square number  | 33                               |
| M516               | Collects data related to various daily life situations, represents it in a tabular form and as bar graphs and interprets it  | 58                               |

| LO Code            | Learning Outcome Class 8   | Average Performance (in Percent) |
|--------------------|--|----------------------------------|
| <b>Language</b>    |  |                                  |
| L813               | Read textual/non-textual materials with comprehension and identifies the details, characters, main idea and sequence of the ideas and events while reading | 44                               |
| <b>Mathematics</b> |  |                                  |
| M601               | Solves problems involving large numbers by applying appropriate operations   | 35                               |
| M606               | Solves problems on daily life situations involving addition and subtraction of fractions / decimals  | 33                               |
| M620               | Finds out the perimeter and area of rectangular objects in the surroundings like floor of the class room, surfaces of a chalk box etc                      | 28                               |
| M621               | Arranges given/collected information in the form of table, pictograph and bar graph and interprets them  | 28                               |
| M702               | Interprets the division and multiplication of fractions  | 34                               |
| M705               | Solves problems related to daily life situations involving rational numbers  | 37                               |
| M706               | Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers.  | 19                               |
| M707               | Adds/subtracts algebraic expressions   | 41                               |
| M710               | Solves problems related to conversion of percentage to fraction and decimal and vice versa   | 26                               |
| M717               | Finds out approximate area of closed shapes by using unit square grid/ graph sheet   | 30                               |
| M719               | Finds various representative values for simple data from her/ his daily life contexts like mean, median and mode   | 50                               |
| M721               | Interprets data using bar graph such as consumption of electricity is more in winters than summer  | 28                               |
| M801               | Generalises properties of addition, subtraction, multiplication and division of rational numbers through patterns  | 30                               |
| M802               | Finds rational numbers between two given rational numbers  | 25                               |
| M803               | Proves divisibility rules of 2, 3, 4, 5, 6, 9 and 11   | 42                               |
| M804               | Finds squares, cubes, square roots and cube roots of numbers using different methods   | 38                               |
| M808               | Use various algebraic identities in solving problems of daily life   | 40                               |
| M812               | Verifies properties of parallelogram and establishes the relationship between them through reasoning   | 29                               |
| M818               | Finds surface area and volume of cuboidal and cylindrical object   | 40                               |
| M819               | Draws and interprets bar charts and pie charts   | 45                               |

| LO Code               | Learning Outcome Class 8  | Average Performance (in Percent) |
|-----------------------|---|----------------------------------|
| <b>Science</b>        |   |                                  |
| SCI703                | Classifies materials and organisms based on properties/ characteristics   | 39                               |
| SCI704                | Conducts simple investigation to seek answers to queries  | 32                               |
| SCI705                | Relates processes and phenomenon with causes  | 29                               |
| SCI708                | Measures and calculates e.g., temperature; pulse rate; speed of moving objects; time period of a simple pendulum, etc                               | 30                               |
| SCI710                | Plots and interprets graphs   | 23                               |
| SCI711                | Constructs models using materials from surroundings and explains their working  | 27                               |
| SCI801                | Differentiates materials, organism and processes  | 48                               |
| SCI804                | Relates processes and phenomenon with causes  | 25                               |
| SCI805                | Explains processes and phenomenon   | 33                               |
| SCI807                | Measures angles of incidence and reflection, etc  | 33                               |
| SCI811                | Applies learning of scientific concepts in day-to-day life  | 25                               |
| SCI813                | Makes efforts to protect environment  | 30                               |
| <b>Social Science</b> |   |                                  |
| SST605                | Identifies latitudes and longitudes, e.g., poles, equator, tropics, States/UTs of India and other neighbouring countries on globe and the world map | 33                               |
| SST610                | Locates important historical sites, places on an outline map of India   | 24                               |
| SST625                | Describes the functioning of rural and urban local government bodies in sectors like health and education   | 24                               |
| SST703                | Explains preventive actions to be undertaken in the event of disasters  | 55                               |
| SST704                | Describes formation of landforms due to various factors   | 15                               |
| SST722                | Explains the significance of equality in democracy  | 27                               |
| SST726                | Describes the process of election to the legislative assembly   | 38                               |
| SST731                | Explains the functioning of media with appropriate examples from newspapers   | 34                               |
| SST733                | Differentiates between different kinds of markets   | 37                               |
| SST734                | Traces how goods travel through various market places   | 31                               |
| SST802                | Describes major crops, types of farming and agricultural practices in her/his own area/state  | 42                               |
| SST805                | Locates distribution of important minerals e.g. coal and mineral oil on the world map   | 37                               |
| SST807                | Justifies judicious use of natural resources  | 48                               |
| SST809                | Draws inter-relationship between types of farming and development in different regions of the world   | 35                               |

| LO Code | Learning Outcome Class 8   | Average Performance (in Percent) |
|---------|--|----------------------------------|
| SST810  | Distinguishes the modern period from the medieval and the ancient periods through the use of sources   | 37                               |
| SST815  | Explains the origin, nature and spread of the revolt of 1857 and the lessons learned from it   | 27                               |
| SST816  | Analyses the decline of pre-existing urban centers and handicraft industries and the development of new urban centers and industries in India during the colonial period | 20                               |
| SST818  | Analyses the issues related to caste, women, widow remarriage, child marriage, social reforms and the laws and policies of colonial administration towards these issues  | 26                               |
| SST823  | Applies the knowledge of the Fundamental Rights to find out about their violation, protection and promotion in a given situation   | 27                               |
| SST827  | Describes the process of making a law. (e.g. Domestic Violence Act, RTI Act, RTE Act)  | 37                               |
| SST831  | Identifies the role of Government in providing public facilities such as water, sanitation, road, electricity etc., and recognizes their availability                    | 25                               |
| SST833  | Draws bar diagram to show population of different countries/ India/states  | 57                               |

## Core Team

### MHRD

**Ms. Rina Ray**, Secretary, School Education and Literacy (SE&L)

**Shri Anil Swarup**, Former Secretary, School Education & Literacy, SE&L, (till 30<sup>th</sup> June 2018)

**Ms. Anita Karwal**, Chairperson, CBSE and Chairperson, NCTE

**Shri. Maneesh Garg**, Joint Secretary, School Education and Literacy (SE&L)

**Shri. Girish Chandrashekhhar Hosur**, Director, School Education and Literacy (SE&L)

**Ms. R. Savithri**, DDG, Statistics

### NCERT

**Prof. Hrushikesh Senapaty**, Director, NCERT

**Prof. Indrani Bhaduri**, Head, ESD and National Coordinator NAS

**Prof. Sridhar Srivastava**, Professor, ESD

**Prof. Veer Pal Singh**, Professor, ESD

**Prof. A.D. Tewari**, Professor, ESD

**Dr. Pratima Kumari**, Associate Professor

**Dr. Sukhvinder**, Assistant Professor

**Dr. Vishal D. Pajankar**, Assistant Professor

**Dr. Satya Bhushan**, Assistant Professor

**Dr. Gulfam**, Assistant Professor

**Shri N.L. Srinivas**, Sr. System Analyst

**Md. Arif Sadiq**, Programmer

**Shri Vishwa Bandhu**, Programmer

### UN ORGANIZATION /EXTERNAL

**Dr. Rudra Sahoo**, Education Specialist, UNICEF

### STATE FUNCTIONARIES

**State Directorate of Education, SCERTs, SIEs, DIETs, Schools**



## Examinations

An examination is a formal test of an individual student's knowledge or proficiency in a subject on the curriculum. The results of examinations apply to individual students, enabling them to progress through school or apply for further education or employment. Taken together, examination results provide an overall snapshot of students' performance at the end of a year of a course of learning at school. Examination results do not indicate the reasons behind high or low achievement of students.

## Achievement Surveys

Achievement Surveys provide a measure of learning across a representative sample of students. They allow classification of students at a specific grade level by their ability (what students know and can do) in different subjects on the curriculum. National Achievement Surveys provide a "Health Check" to the education system by analyzing achievement based on a range of background factors (School, home, teachers). They potentially enable policy makers and practitioners to address the challenges to enhance student learning.

