



# NAS 2017

## NATIONAL ACHIEVEMENT SURVEY

Class : 3, 5 and 8

# RAJASTHAN

## State Learning Report

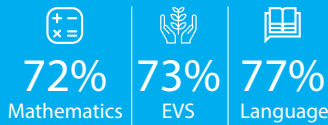


The National Achievement Survey (NAS) was conducted throughout the country on November 13, 2017 for Classes 3, 5 and 8 in government and government aided schools. The survey tools used multiple test booklets with 45 questions in Classes III and V and 60 questions in Class VIII in Mathematics, Language, 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

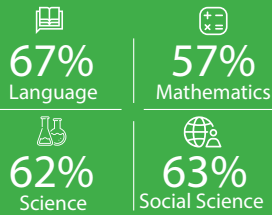
**In Class 3**, on an average, the correct responses to the subjects were as follows:



**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:



87%

Children could understand what the teacher says in the classroom.



32%

of the school buildings need significant repair.

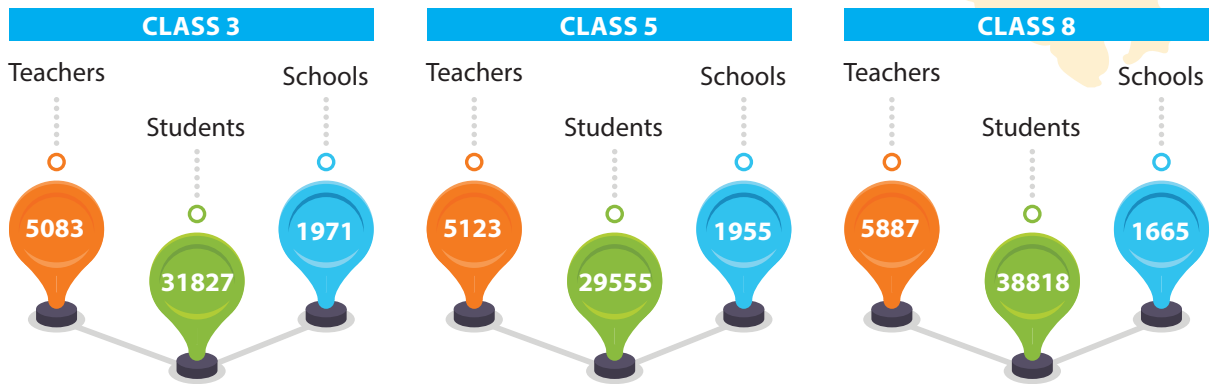
## Highest Performing Learning Outcomes

- **M418:** Calculates time intervals/duration of familiar daily life events by using forward or backward counting/addition and subtraction (79)
- **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 (81)
- **M309:** Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc (82)
- **M317:** Reads the time correctly to the hour using a clock/watch (82)
- **M302:** Compares numbers up to 999 based on their place values (83)

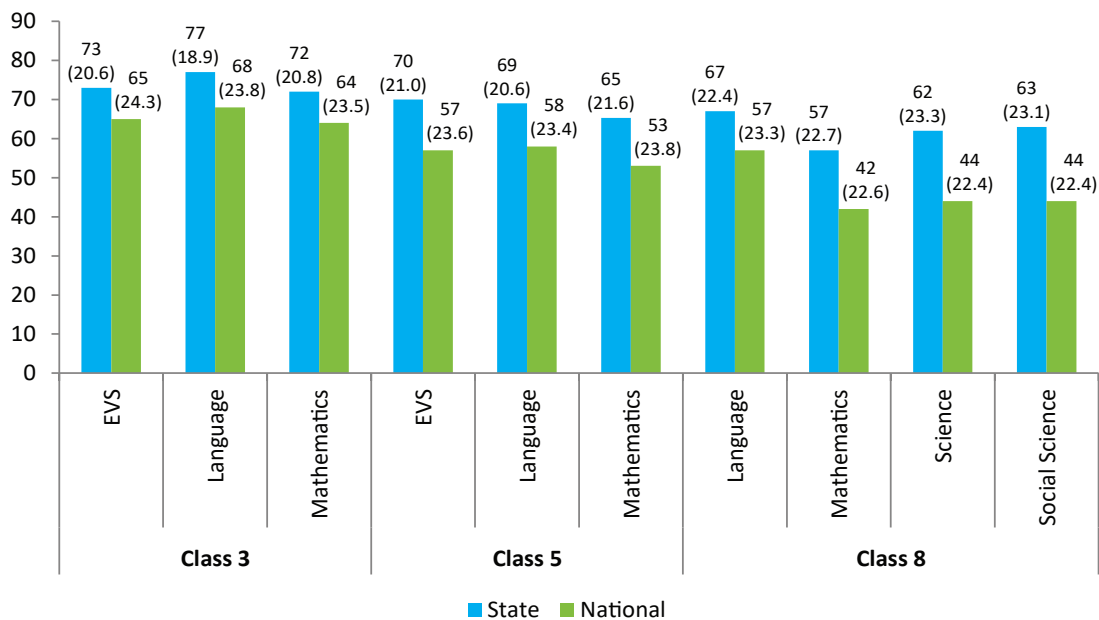
## Lowest Performing Learning Outcomes

- **SST625:** Describes the functioning of rural and urban local government bodies in sectors like health and education (31)
- **M818:** Finds surface area and volume of cuboidal and cylindrical object (32)
- **M808:** Use various algebraic identities in solving problems of daily life (34)
- **M312:** Estimates and measures length and distance using standard units like centimetres or metres & identifies relationships (38)
- **E313:** Observes rules in games (local, indoor, outdoor) (40)

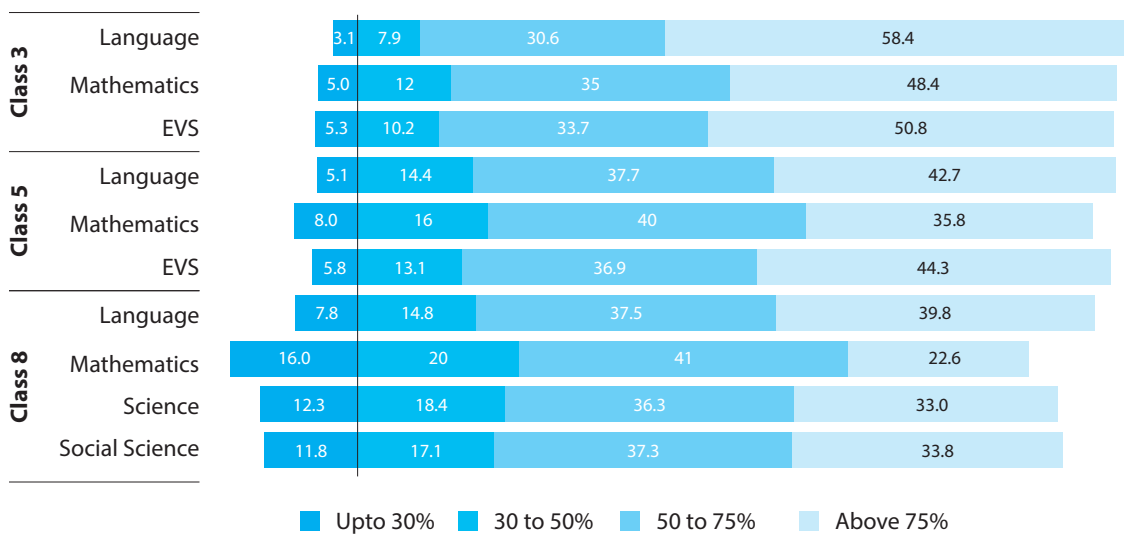
## Participation



## Average Achievement by Classes and Subjects



## Distribution of Students Achievement by Classes and Subjects



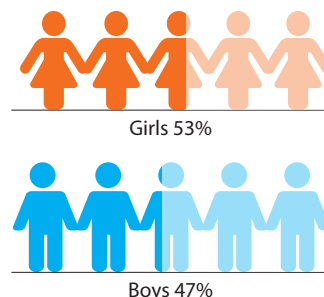
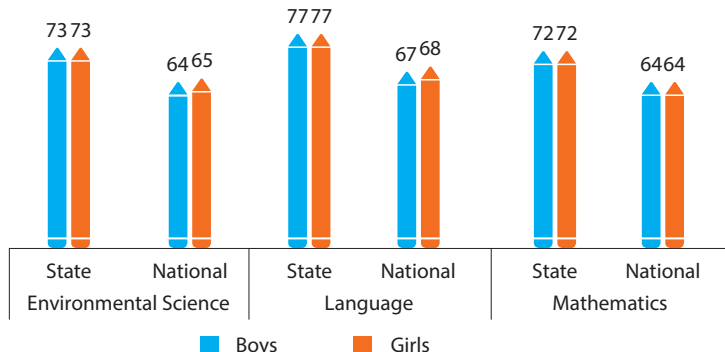
E.g. In Class 3 language, percentage of students achieving upto 30% is 3.1, between 30%-50% is 7.9, between 50%-75% is 30.6 and above 75% is 58.4.

# Class 3 State Results by Student Groups

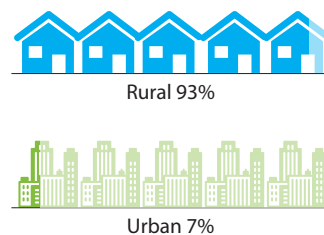
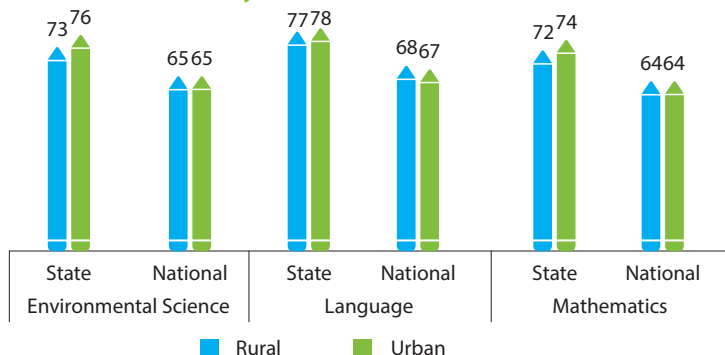
## PERFORMANCE

## PARTICIPATION

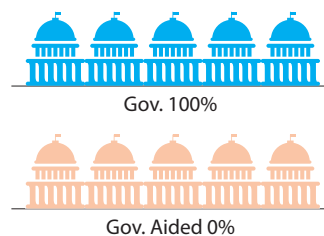
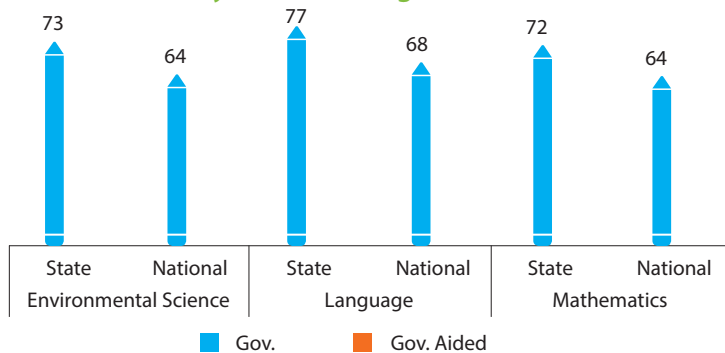
### By Gender



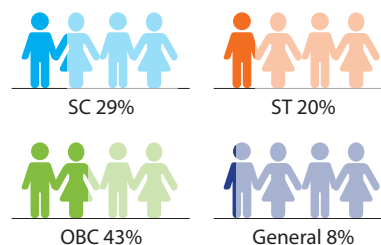
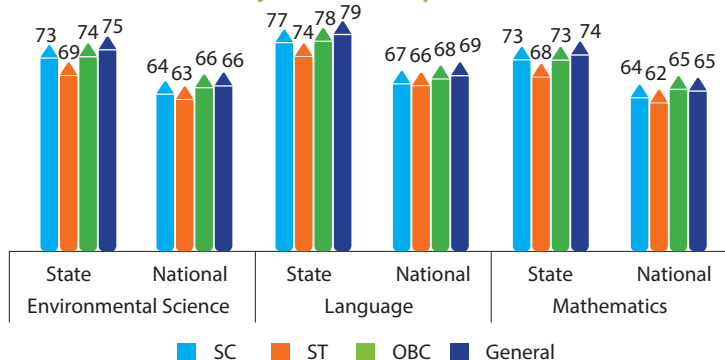
### By School Location



### By School Management



### By Social Groups

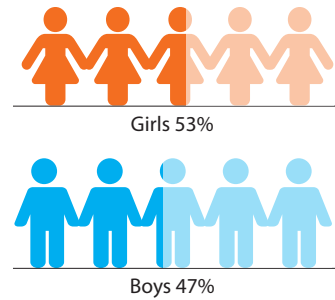
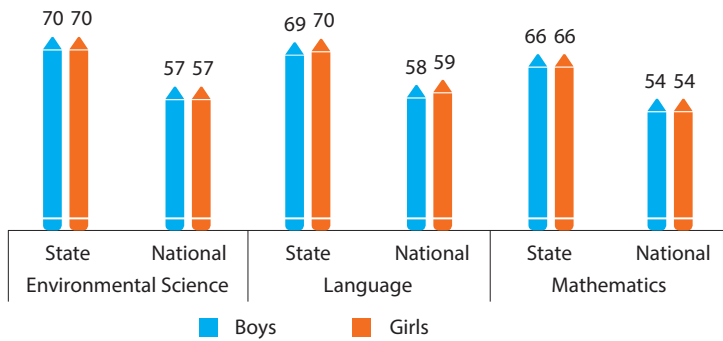


# Class 5 State Results by Student Groups

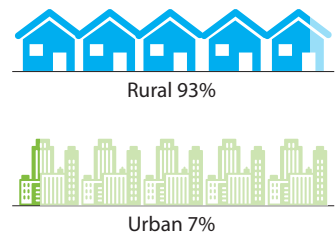
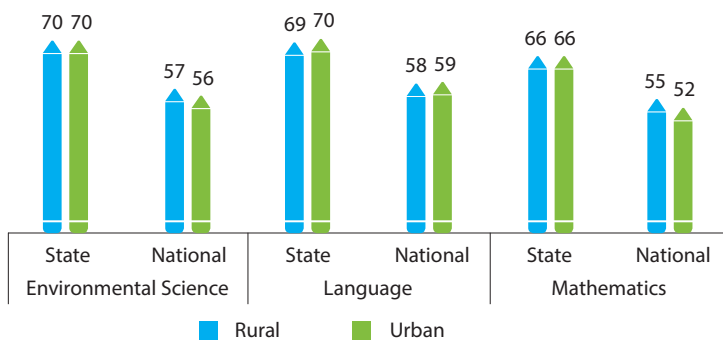
## PERFORMANCE

## PARTICIPATION

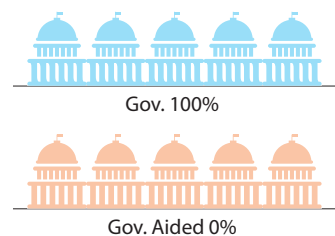
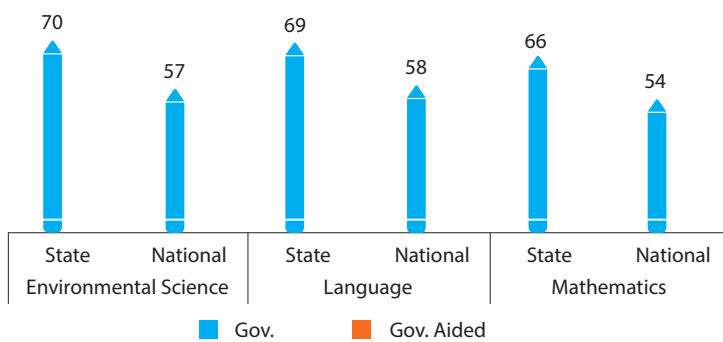
### By Gender



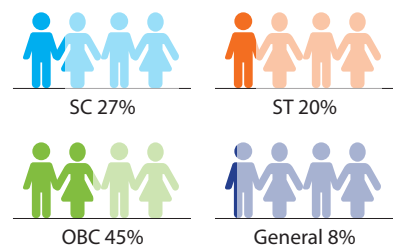
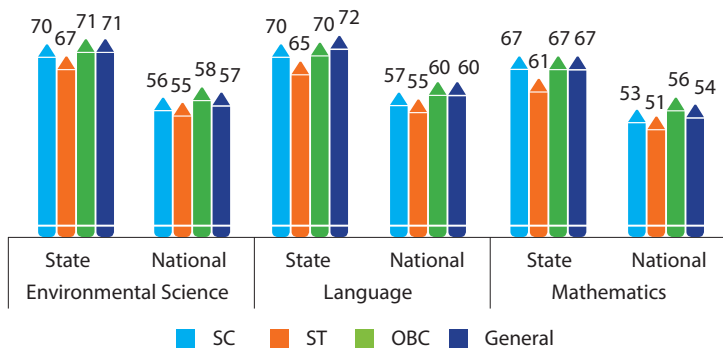
### By School Location



### By School Management



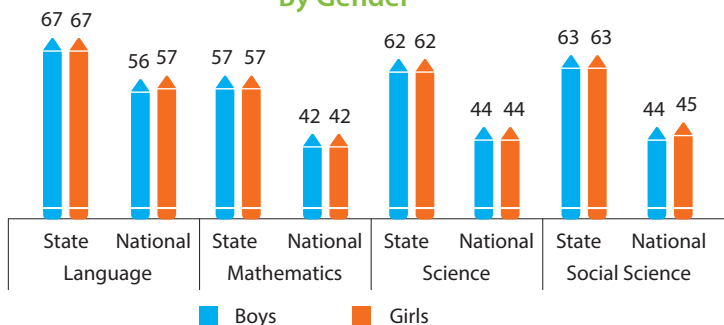
### By Social Groups



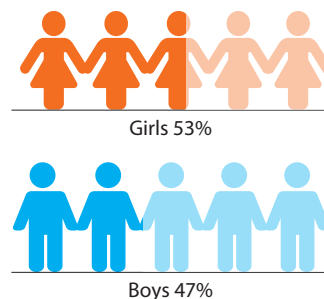
# Class 8 State Results by Student Groups

## PERFORMANCE

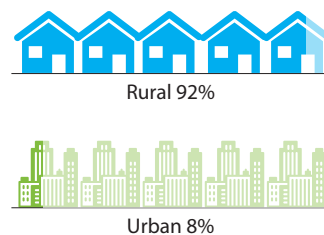
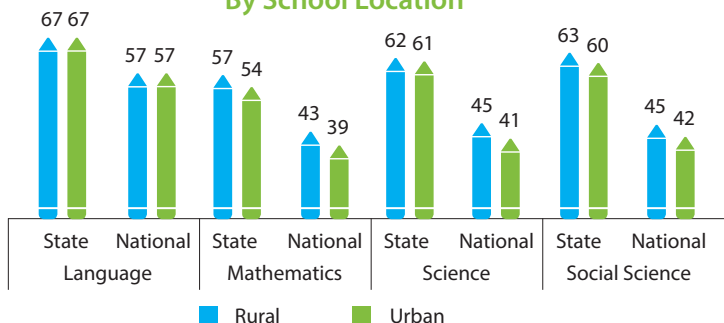
### By Gender



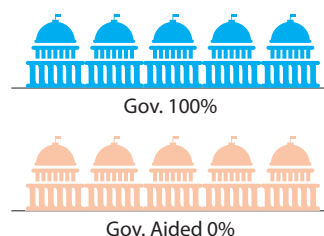
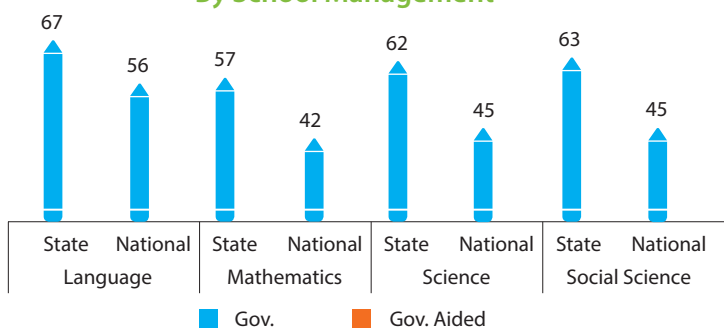
## PARTICIPATION



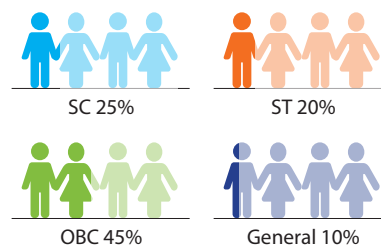
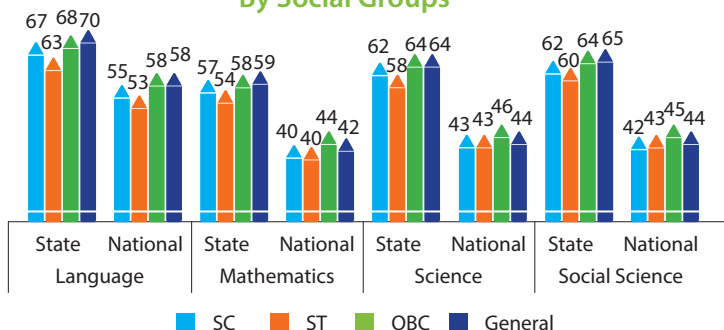
### By School Location



### By School Management



### By Social Groups



## What children say about schools?



**92%** children in Class 3, **94%** in Class 5 and **96%** children in Class 8 like to come to school.



**23%** students in Class 3, **24%** in Class 5 and **22%** in Class 8 find it difficult to travel to school.

**79%** children in Class 3, **83%** in Class 5 and **87%** children in Class 8 could understand what the teachers say in the classroom.







For **75%** students in Class 3, **72%** in Class 5 and **61%** students in Class 8, the language used at home and by the teachers is the same.



**79%** students in Class 3 and Class 5 and **76%** in Class 8 go out and play during the games period.


## What teachers responded?


 **56%** teachers in Class 3,  
 **60%** in Class 5 and  
 **77%** in Class 8 are teaching the same subjects they have pursued during their higher studies.


  
**71%** Teachers in the state fully understand the curricular goals.


  
**11%**  
Teachers responded that there is lack of adequate toilet facilities.


  
**19%**  
Teachers responded that there is lack of drinking water facilities.


  
**32%**  
Teachers responded that the school buildings needs significant repair.

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

  
**28%**  
Teachers in the state opined that they are overloaded with work.

  
**65%**  
Teachers in the state are highly satisfied with their job.

  
**94%**  
Teachers in the state have adequate instructional material and supplies.

  
**82%**  
Teachers in the state have adequate work space.

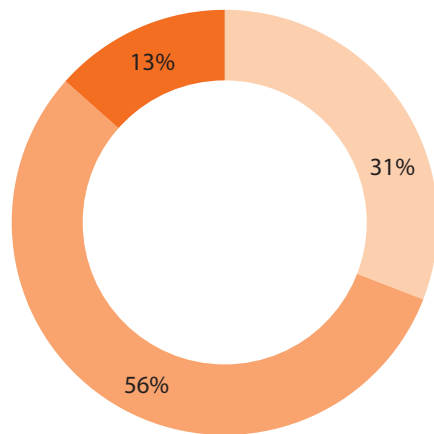


## How do teachers assess children in the classroom?

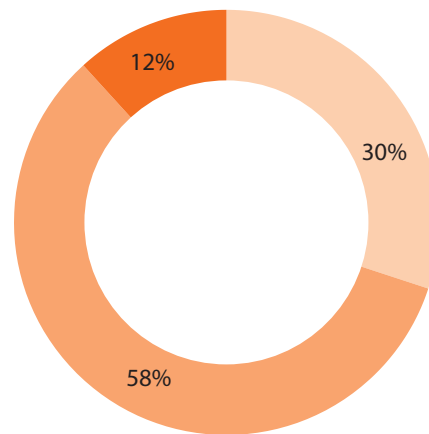
	Never (in %)	For some lessons (in %)	Almost every lesson (in %)
Oral Tests	3	19	78
Written Tests	2	26	72
Multiple choice type	2	20	78
Observation	1	17	82
Home assignments	1	5	93
Student self assessment	5	51	43
Project work	12	63	25
Peer assessment	6	58	36
Portfolio	15	16	70

## What teachers say about parent's involvement?

### Parental support for students' Achievement



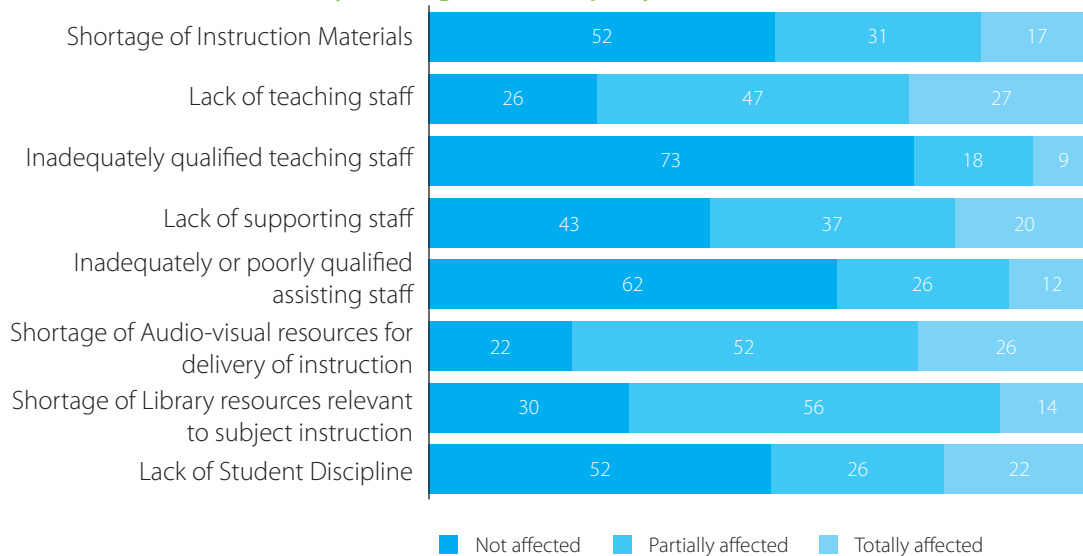
### Parental involvement in school activities



Low Medium High

## What the head teacher responded?

### School activities affected by shortage or inadequacy



Not affected Partially affected Totally affected

Eg. 52% 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
Jhunjhunu	82
Dhaulpur	80
Jaipur	80
Nagaur	79
Dausa	79
Sikar	78
Bharatpur	78
Churu	77
Tonk	77
Ajmer	76
Barmer	76
Kota	76
Jaisalmer	76
Bundi	75
Udaipur	75
Jodhpur	75
Baran	75
Bikaner	73
Sawai madhopur	73
Jhalawar	73
Jalor	71
Hanumangarh	71
Alwar	70
Pali	69
Ganganagar	69
Pratapgarh (raj.)	69
Chittaurgarh	69
Dungarpur	68
Karauli	68
Rajsamand	67
Banswara	67
Sirohi	66
Bhilwara	64

### Class 5

District Name	District Mean
Jhunjhunu	77
Nagaur	77
Dhaulpur	76
Dausa	75
Churu	74
Barmer	73
Bharatpur	73
Jaipur	73
Jodhpur	73
Jaisalmer	71
Jhalawar	70
Ajmer	69
Jalor	69
Baran	68
Rajsamand	68
Sikar	67
Tonk	67
Sawai madhopur	67
Alwar	66
Bundi	66
Kota	66
Hanumangarh	66
Bikaner	66
Ganganagar	65
Udaipur	65
Dungarpur	64
Chittaurgarh	64
Karauli	63
Pali	63
Bhilwara	62
Sirohi	60
Pratapgarh (raj.)	58
Banswara	58

### Class 8

District Name	District Mean
Nagaur	74
Dhaulpur	73
Dausa	70
Churu	69
Ajmer	69
Jhunjhunu	69
Bharatpur	68
Barmer	67
Sikar	66
Sawai madhopur	65
Jaipur	65
Jaisalmer	65
Bundi	64
Kota	64
Jhalawar	64
Jodhpur	64
Karauli	63
Tonk	63
Jalor	61
Alwar	61
Rajsamand	61
Udaipur	59
Dungarpur	58
Bikaner	58
Baran	58
Chittaurgarh	57
Hanumangarh	57
Ganganagar	55
Pratapgarh (raj.)	53
Sirohi	53
Bhilwara	52
Banswara	52
Pali	51

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

Annex - I

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	65
E303	Identifies relationships with and among family members	70
E304	Identifies objects, signs (vessels, stoves, transport, means of communication, transport, signboards etc.), places (types of houses/shelters, bus stand, petrol pump etc.) activities (works people do, cooking processes, etc.) at home/school/ neighbourhood	71
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	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)	75
E309	Identifies directions, location of objects/places in simple maps using signs/symbols/verbally	65
E310	Guesses properties, estimates quantities of materials/ activities in daily life and verifies using symbols/non-standard units	78
E311	Records observations, experiences, information on objects/ activities/places visited in different ways and predicts patterns etc	64
E313	Observes rules in games (local, indoor, outdoor)	40
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	81
<b>Language</b>		
L304	Reads small texts with comprehension i.e., identifies main ideas, details, sequence and draws conclusions	75
L312	Reads printed scripts on the classroom walls: poems, posters, charts etc	76
<b>Mathematics</b>		
M301	Reads and writes numbers up to 999 using place value	68
M302	Compares numbers up to 999 based on their place values	83

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	67
M304	Constructs and uses the multiplication facts (up till 10) in daily life situations	75
M305	Analyses and applies an appropriate number operation in the situation/ context	69
M306	Explains the meaning of division facts by equal grouping/ sharing and finds it by repeated subtraction	73
M309	Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc	82
M311	Fills a given region leaving no gaps using a tile of a given shape	52
M312	Estimates and measures length and distance using standard units like centimetres or metres & identifies relationships	38
M317	Reads the time correctly to the hour using a clock/watch	82
M318	Extends patterns in simple shapes and numbers	68
M319	Records data using tally marks, represents pictorially and draws conclusions	78

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
<b>EVS</b>		
E403	Identifies relationship with and among family members in extended family	70
E410	Records observations/experiences/information for objects, activities, phenomena, places visited in different ways and predicts patterns and activities/ phenomena	74
E501	Explains the super senses and unusual features (sight, smell, hear, sleep, sound, etc.) of animals and their responses to light, sound, food etc	69
E503	Describes the interdependence among animals, plants and humans	68
E504	Explains the role and functions of different institutions in daily life (Bank, Panchayat, cooperatives, police station, etc.)	79
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)	54
E506	Groups objects, materials, activities for features/properties such as shape, taste, colour , texture, sound, traits etc	52
E507	Traces the changes in practices, customs, techniques of past and present through coins, paintings, monuments, museum etc. and interacting with elders	66
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	66
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	65
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	76
E512	Voices opinions on issues observed/experienced and relates practices /happenings to larger issues of society	71
E513	Suggests ways for hygiene, health, managing waste, disaster/ emergency situations and protecting/saving resources	77
<b>Language</b>		
L504	Reads and comprehends independently storybooks, news items/ headlines, advertisements etc	66
L508	Reads text with comprehension, locates details and sequence of events	70

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
<b>Mathematics</b>		
M401	Applies operations of numbers in daily life situations	56
M412	Explores the area and perimeter of simple geometrical shapes (triangle, rectangle, square) in terms of given shape as a unit	69
M418	Calculates time intervals/duration of familiar daily life events by using forward or backward counting/addition and subtraction	79
M421	Represent the collected information in tables and bar graphs and draws inferences from these	56
M501	Reads and writes numbers bigger than 1000 being used in her/his surroundings	76
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	60
M505	Finds the number corresponding to part of a collection	66
M506	Identifies and forms equivalent fractions of a given fraction	52
M508	Converts fractions into decimals and vice versa	66
M509	Classifies angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing	70
M512	Relates different commonly used larger and smaller units of length, weight and volume and converts larger units to smaller units and vice versa	74
M513	Estimates the volume of a solid body in known units	52
M514	Applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals	63
M515	Identifies the pattern in triangular number and square number	63
M516	Collects data related to various daily life situations, represents it in tabular form and as bar graphs and interprets it	76

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 ideas and events while reading	67
<b>Mathematics</b>		
M601	Solves problems involving large numbers by applying appropriate operations	55
M606	Solves problems on daily life situations involving addition and subtraction of fractions / decimals	67
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	67
M621	Arranges given/collected information in the form of table, pictograph and bar graph and interprets them	58
M702	Interprets the division and multiplication of fractions	50
M705	Solves problems related to daily life situations involving rational numbers	57
M706	Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers	54
M707	Adds/subtracts algebraic expressions	71
M710	Solves problems related to conversion of percentage to fraction and decimal and vice versa	59
M717	Finds out approximate area of closed shapes by using unit square grid/ graph sheet	42
M719	Finds various representative values for simple data from her/ his daily life contexts like mean, median and mode	53
M721	Interprets data using bar graph such as consumption of electricity is more in winters than summer	58
M801	Generalises properties of addition, subtraction, multiplication and division of rational numbers through patterns	44
M802	Finds rational numbers between two given rational numbers	60
M803	Proves divisibility rules of 2, 3, 4, 5, 6, 9 and 11	71
M804	Finds squares, cubes, square roots and cube roots of numbers using different methods	67
M808	Use various algebraic identities in solving problems of daily life	34
M812	Verifies properties of parallelogram and establishes the relationship between them through reasoning	42
M818	Finds surface area and volume of cuboidal and cylindrical object	32
M819	Draws and interprets bar charts and pie charts	56

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
<b>Science</b>		
SCI703	Classifies materials and organisms based on properties/ characteristics	61
SCI704	Conducts simple investigation to seek answers to queries	45
SCI705	Relates processes and phenomenon with causes	57
SCI708	Measures and calculates e.g., temperature; pulse rate; speed of moving objects; time period of a simple pendulum, etc	74
SCI710	Plots and interprets graphs	62
SCI711	Constructs models using materials from surroundings and explains their working	59
SCI801	Differentiates materials, organism and processes	71
SCI804	Relates processes and phenomenon with causes	60
SCI805	Explains processes and phenomenon	53
SCI807	Measures angles of incidence and reflection, etc	59
SCI811	Applies learning of scientific concepts in day-to-day life	65
SCI813	Makes efforts to protect environment	78
<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	71
SST610	Locates important historical sites, places on an outline map of India	77
SST625	Describes the functioning of rural and urban local government bodies in sectors like health and education	31
SST703	Explains preventive actions to be undertaken in the event of disasters	55
SST704	Describes formation of landforms due to various factors	52
SST722	Explains the significance of equality in democracy	54
SST726	Describes the process of election to the legislative assembly	67
SST731	Explains the functioning of media with appropriate examples from newspapers	74
SST733	Differentiates between different kinds of markets	77
SST734	Traces how goods travel through various market places	72
SST802	Describes major crops, types of farming and agricultural practices in her/his own area/state	71
SST805	Locates distribution of important minerals e.g. coal and mineral oil on the world map	50
SST807	Justifies judicious use of natural resources	56
SST809	Draws interrelationship between types of farming and development in different regions of the world	47



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	64
SST815	Explains the origin, nature and spread of the revolt of 1857 and the lessons learned from it	71
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	49
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	67
SST823	Applies the knowledge of the Fundamental Rights to find out about their violation, protection and promotion in a given situation	67
SST827	Describes the process of making a law. (e.g. Domestic Violence Act, RTI Act, RTE Act)	70
SST831	Identifies the role of Government in providing public facilities such as water, sanitation, road, electricity etc., and recognizes their availability	60
SST833	Draws bar diagram to show population of different countries/ India/states	71

## 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)

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### 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.

### For any clarification, Please contact:

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