

NAS 2017

NATIONAL ACHIEVEMENT SURVEY

Class : 3, 5 and 8

WEST BENGAL

State Learning Report

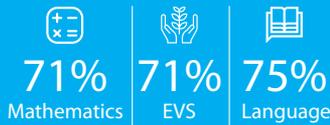


The National Achievement Survey (NAS) was conducted throughout the country on November 13, 2017 for Classes 3, 5 and 8 in government and government aided schools. The survey tools used multiple test booklets with 45 questions in Classes III and V and 60 questions in Class VIII in Mathematics, Language,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

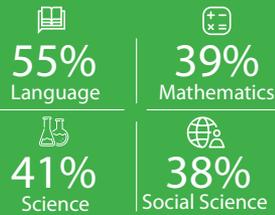
In Class 3, on an average, the correct responses to the subjects were as follows:



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:



81%

Children could understand what the teacher says in the classroom.



35%

of the school buildings need significant repair.

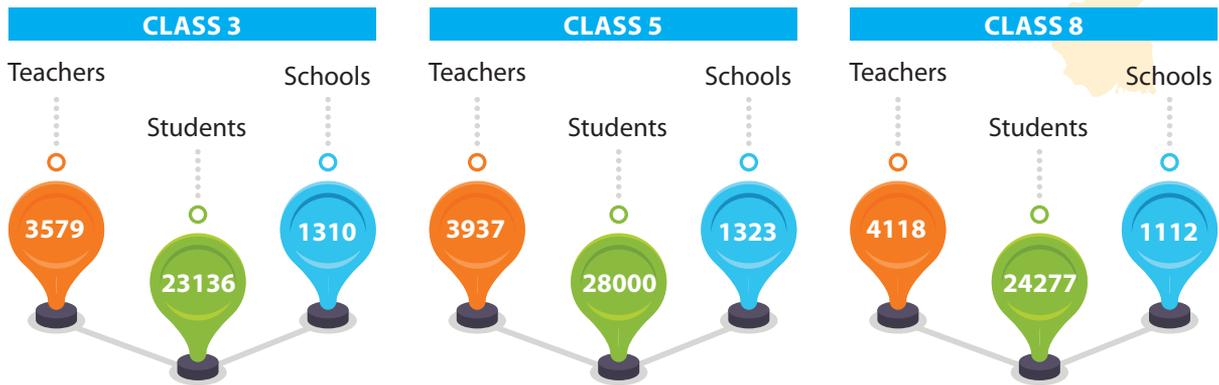
Highest Performing Learning Outcomes

- **M302:** Compares numbers up to 999 based on their place values (78)
- **M317:** Reads the time correctly to the hour using a clock/watch (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 (80)
- **M309:** Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc (82)
- **M319:** Records data using tally marks, represents pictorially and draws conclusions (84)

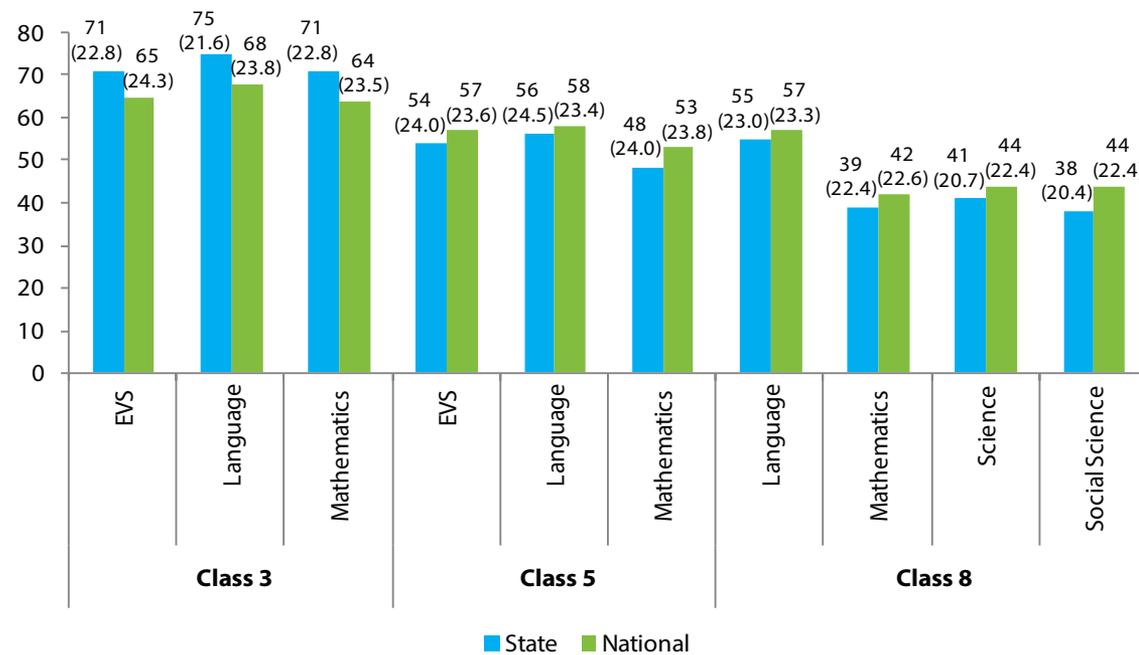
Lowest Performing Learning Outcomes

- **SST823:** Applies the knowledge of the Fundamental Rights to find out about their violation, protection and promotion in a given situation (21)
- **SST827:** Describes the process of making a law. (e.g. Domestic Violence Act, RTI Act, RTE Act) (22)
- **SST610:** Locates important historical sites, places on an outline map of India (24)
- **SCI704:** Conducts simple investigation to seek answers to queries (25)
- **M801:** Generalises properties of addition, subtraction, multiplication and division of rational numbers through patterns (26)

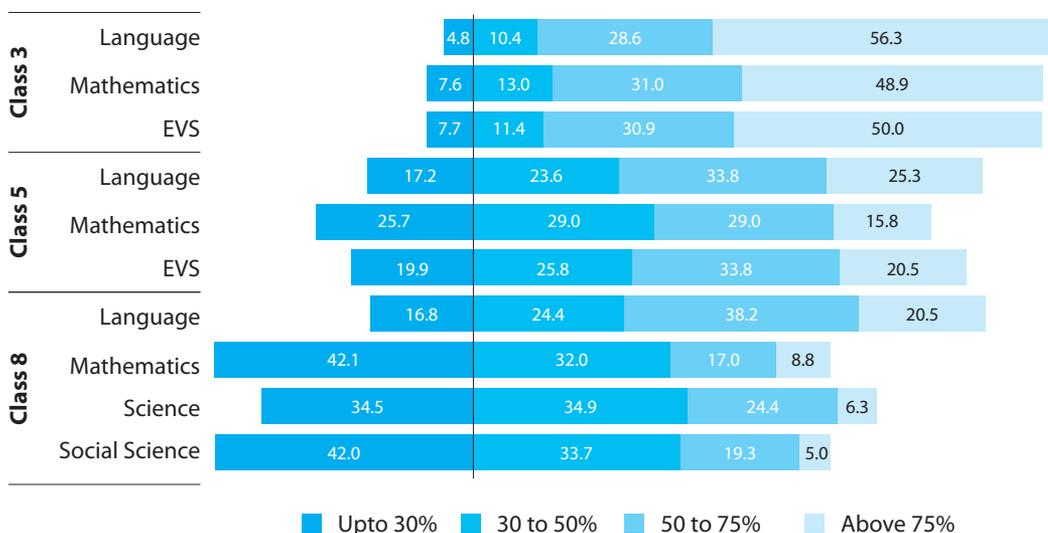
Participation



Average Achievement by Classes and Subjects



Distribution of Students Achievement by Classes and Subjects



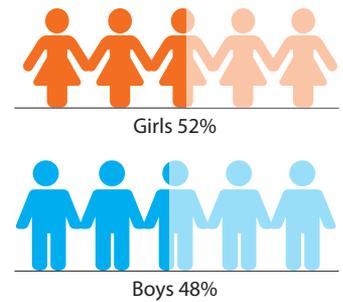
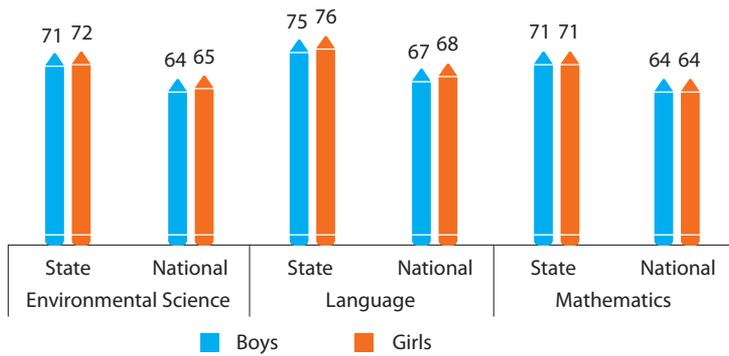
E.g. In Class 3 language, percentage of students achieving upto 30% is 4.8, between 30%-50% is 10.4, between 50%-75% is 28.6 and above 75% is 56.3.

Class 3 State Results by Student Groups

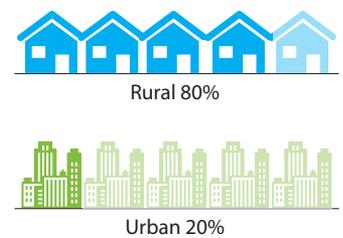
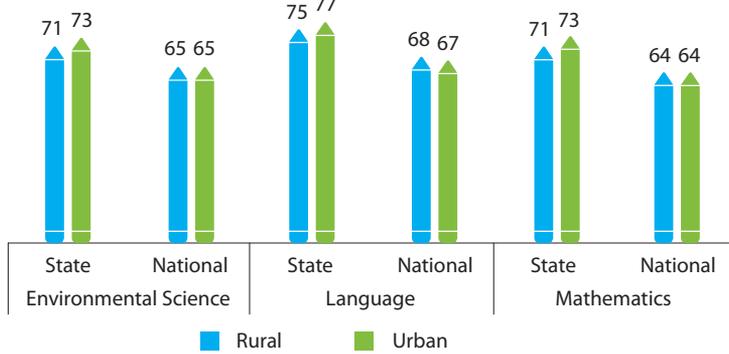
PERFORMANCE

PARTICIPATION

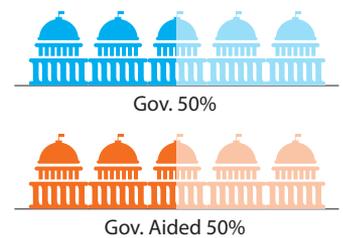
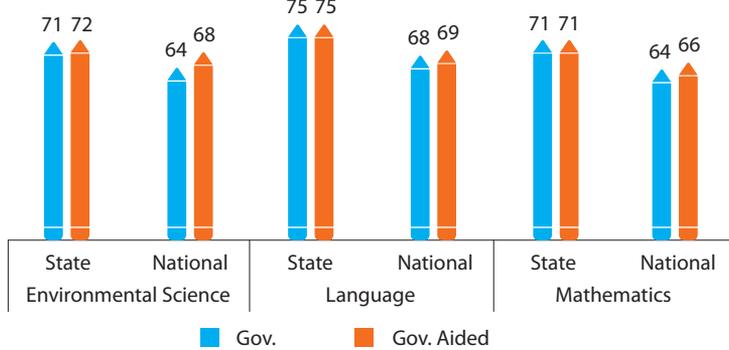
By Gender



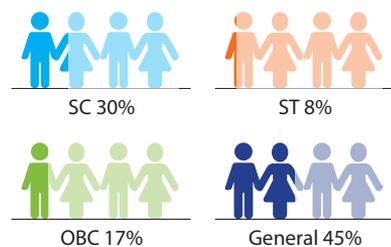
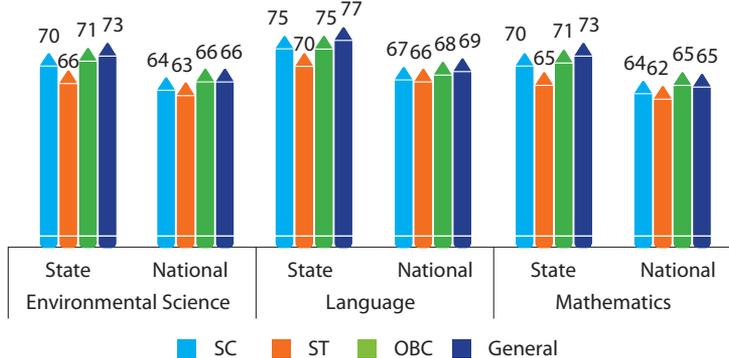
By School Location



By School Management



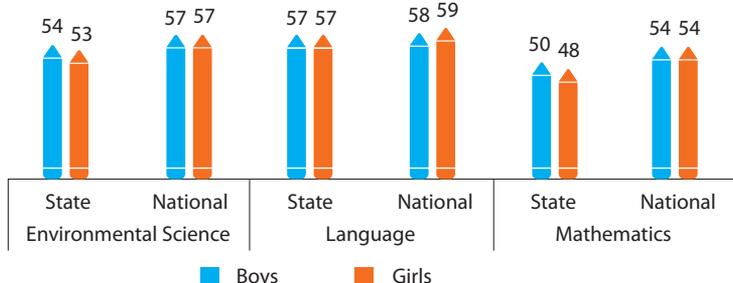
By Social Groups



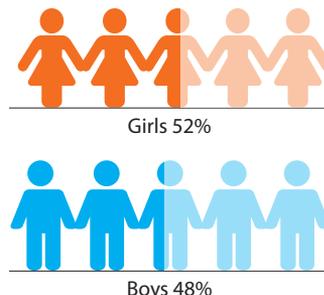
Class 5 State Results by Student Groups

PERFORMANCE

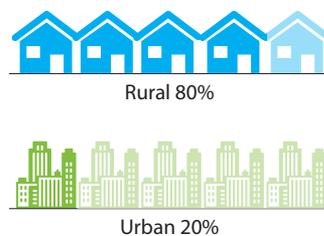
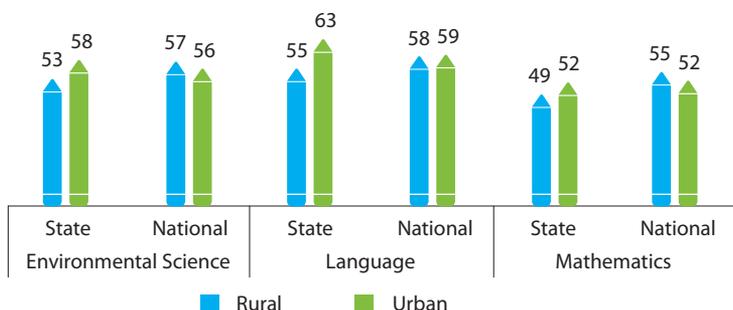
By Gender



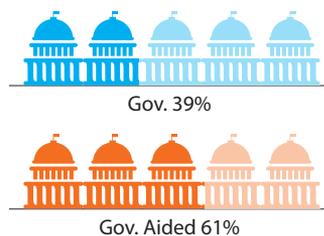
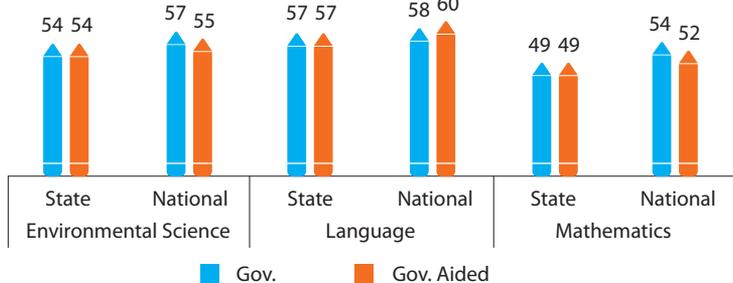
PARTICIPATION



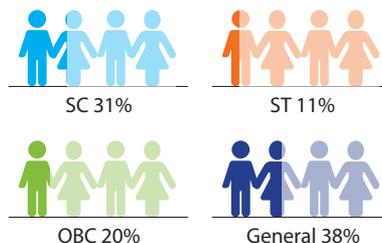
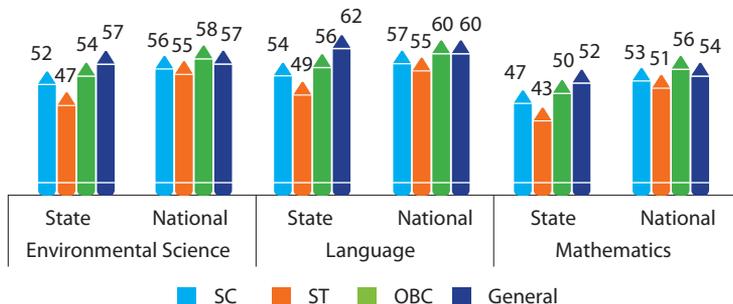
By School Location



By School Management



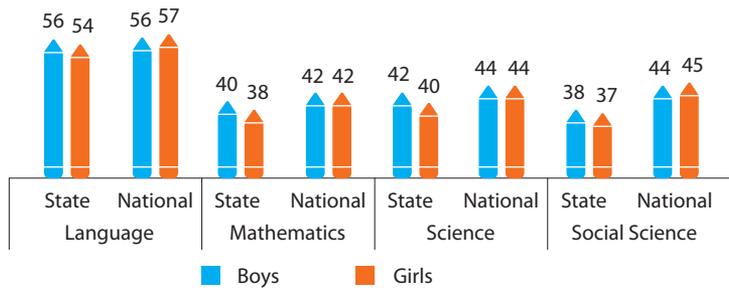
By Social Groups



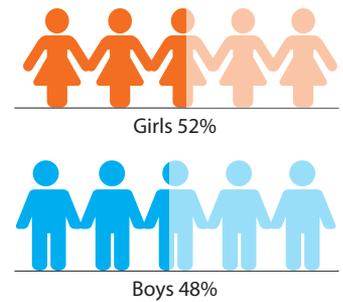
Class 8 State Results by Student Groups

PERFORMANCE

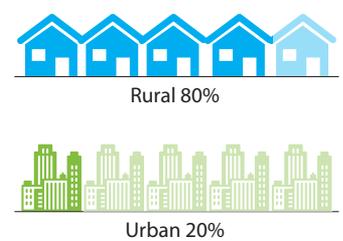
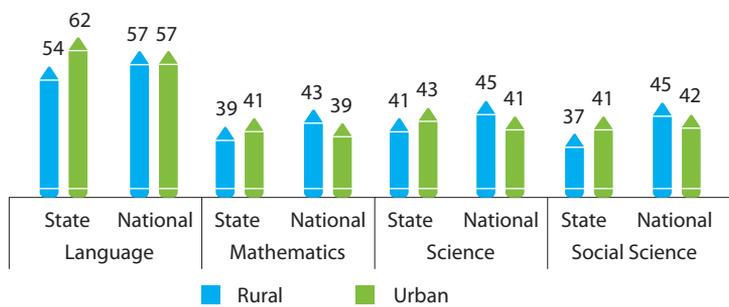
By Gender



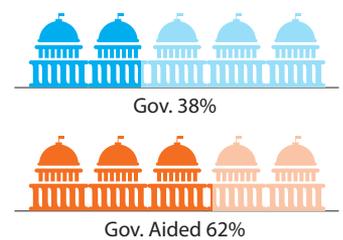
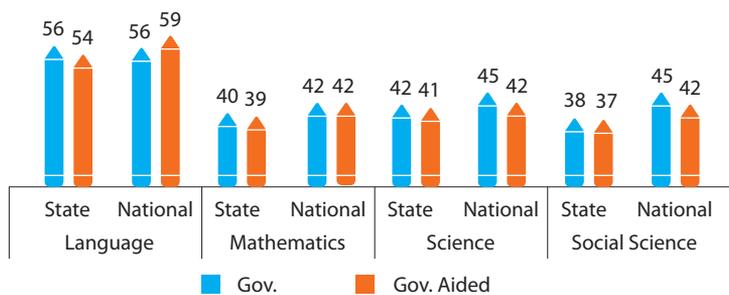
PARTICIPATION



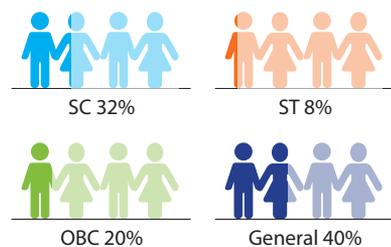
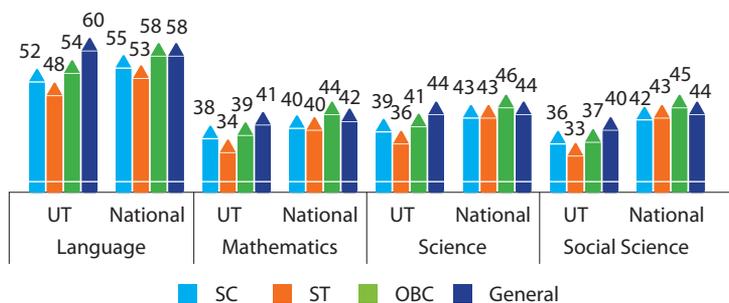
By School Location



By School Management



By Social Groups



What children say about schools?



97% children in Class 3 and Class 5 and **96%** children in Class 8 like to come to school.



17% students in Class 3, **23%** in Class 5 and **24%** students in Class 8 find it difficult to travel to school.

81% children in Class 3, **79%** in Class 5 and **78%** children in Class 8 could understand what the teachers say in the classroom.



For **82%** students in Class 3, **79%** in Class 5 and **78%** students in Class 8, the language used at home and by the teachers is the same.



83% students in Class 3, **81%** in Class 5 and **78%** students in Class 8 go out and play during the games period.

What teachers responded?

 **41%** teachers in Class 3,
 **59%** in Class 5 and
 **84%** in Class 8 are teaching the same subjects they have pursued during their higher studies.


47% teachers in the state fully understand the curricular goals.

 26% Teachers responded that there is lack of adequate toilet facilities.	 26% Teachers responded that there is lack of drinking water facilities.	 35% Teachers responded that the school buildings needs significant repair.	 9% Teachers responded that there is lack of electricity.
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 27% Teachers in the state opined that they are overloaded with work.	 40% Teachers in the state are highly satisfied with their job.
 88% Teachers in the state have adequate instructional material and supplies.	 84% Teachers in the state have adequate work space.

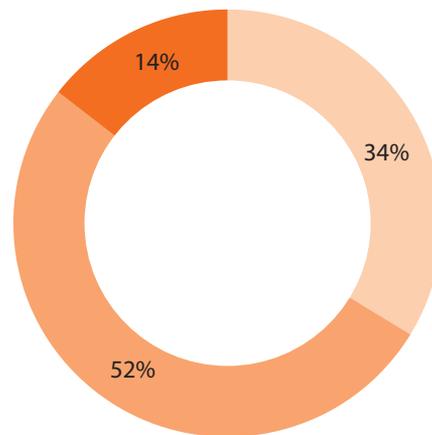
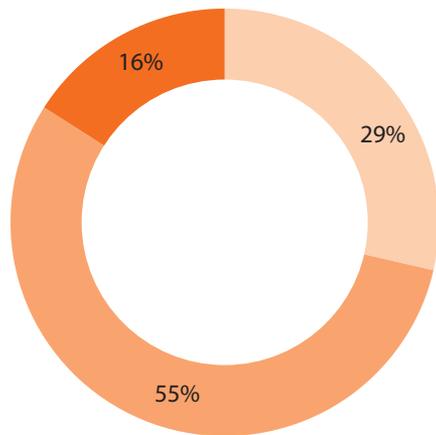
How do teachers assess children in the classroom?

	Never (in %)	For some lessons (in %)	Almost every lesson (in %)
Oral Tests	7	33	61
Written Tests	2	33	66
Multiple choice type	3	23	74
Observation	3	28	70
Home assignments	10	46	44
Student self assessment	12	60	28
Project work	23	58	19
Peer assessment	16	62	22
Portfolio	37	47	16

What teachers say about parent’s involvement?

Parental support for students’ Achievement

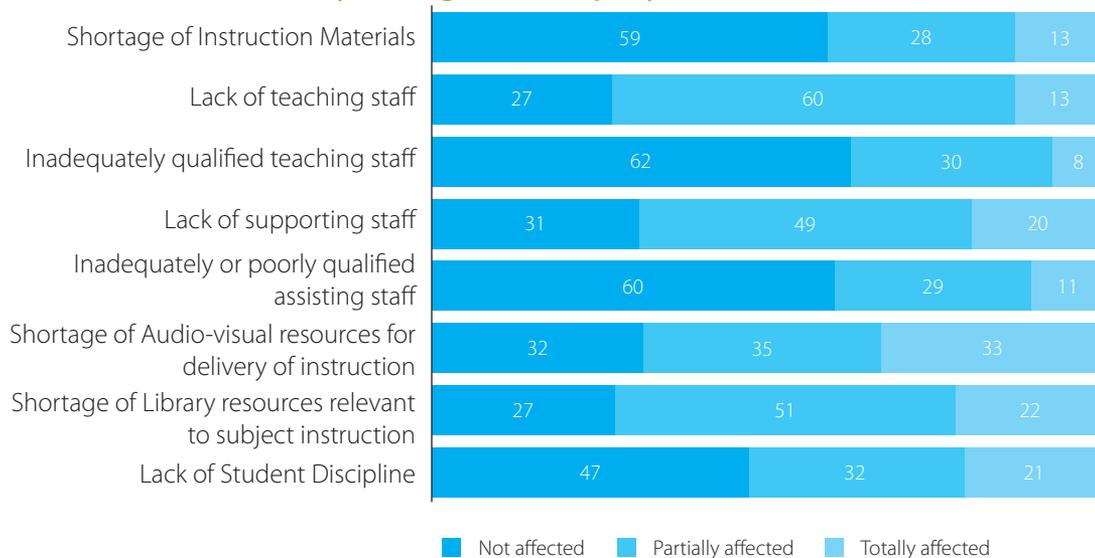
Parental involvement in school activities



Low Medium High

What the head teacher responded?

School activities affected by shortage or inadequacy



Not affected Partially affected Totally affected

Eg. 59% 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
Kolkata	80
Koch Bihar	77
Purba Bardhaman	77
Paschim Bardhaman	77
Purba Medinipur	76
Haora	76
Dakshin Dinajpur	75
Paschim Medinipur	74
South Twenty Four Pargana	74
Nadia	74
Hugli	73
Jhargram	72
Maldah	72
North Twenty Four Pargana	70
Puruliya	70
Murshidabad	70
Birbhum	68
Bankura	68
Alipurduar	67
Siliguri	66
Uttar Dinajpur	65
Jalpaiguri	58
Darjeeling	—

Class 5

District Name	District Mean
Kolkata	63
Purba Medinipur	59
South Twenty Four Pargana	59
Hugli	58
Purba Bardhaman	57
Paschim Medinipur	56
Bankura	56
Koch Bihar	56
Haora	55
Maldah	54
Murshidabad	54
North Twenty Four Pargana	54
Paschim Bardhaman	53
Nadia	50
Puruliya	50
Alipurduar	49
Jhargram	49
Uttar Dinajpur	48
Siliguri	48
Dakshin Dinajpur	47
Birbhum	47
Jalpaiguri	34
Darjeeling	—

Class 8

District Name	District Mean
Purba Medinipur	52
Kolkata	50
South Twenty Four Pargana	49
Paschim Medinipur	49
Murshidabad	47
Purba Bardhaman	45
Jhargram	44
Paschim Bardhaman	43
Nadia	43
Maldah	42
Hugli	42
Haora	42
Siliguri	41
North Twenty Four Pargana	41
Koch Bihar	40
Birbhum	40
Bankura	39
Dakshin Dinajpur	39
Alipurduar	38
Puruliya	37
Jalpaiguri	35
Uttar Dinajpur	32
Darjeeling	—

Performance of the State in Learning Outcomes (LOs)

Annex - I

LO Code	Learning Outcome Class 3	Average Performance (in Percent)
EVS		
E302	Identifies simple features (e.g. movement, at places found/ kept, eating habits, sounds) of animals and birds in the immediate surroundings	60
E303	Identifies relationships with and among family members	75
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	70
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	71
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	65
E310	Guesses properties, estimates quantities of materials/ activities in daily life and verifies using symbols/non-standard units	69
E311	Records observations, experiences, information on objects/ activities/places visited in different ways and predicts patterns etc	66
E313	Observes rules in games (local, indoor, outdoor)	53
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	80
Language		
L304	Reads small texts with comprehension i.e., identifies main ideas, details, sequence and draws conclusions	76
L312	Reads printed scripts on the classroom walls: poems, posters, charts etc	72
Mathematics		
M301	Reads and writes numbers up to 999 using place value	69
M302	Compares numbers up to 999 based on their place values	78

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	66
M304	Constructs and uses the multiplication facts (up till 10) in daily life situations	74
M305	Analyses and applies an appropriate number operation in the situation/ context	66
M306	Explains the meaning of division facts by equal grouping/ sharing and finds it by repeated subtraction	72
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	42
M312	Estimates and measures length and distance using standard units like centimetres or metres & identifies relationships	51
M317	Reads the time correctly to the hour using a clock/watch	79
M318	Extends patterns in simple shapes and numbers	62
M319	Records data using tally marks, represents pictorially and draws conclusions	84

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
EVS		
E403	Identifies relationship with and among family members in extended family	61
E410	Records observations/experiences/information for objects, activities, phenomena, places visited in different ways and predicts patterns and activities/ phenomena	54
E501	Explains the super senses and unusual features (sight, smell, hear, sleep, sound, etc.) of animals and their responses to light, sound, food etc	31
E503	Describes the interdependence among animals, plants and humans	53
E504	Explains the role and functions of different institutions in daily life (Bank, Panchayat, cooperatives, police station, etc.)	65
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)	30
E506	Groups objects, materials, activities for features/properties such as shape, taste, colour , texture, sound, traits etc	32
E507	Traces the changes in practices, customs, techniques of past and present through coins, paintings, monuments, museum etc. and interacting with elders	54
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	53
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	52
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	50
E512	Voices opinions on issues observed/experienced and relates practices /happenings to larger issues of society	49
E513	Suggests ways for hygiene, health, managing waste, disaster/ emergency situations and protecting/saving resources	65
Language		
L504	Reads and comprehends independently storybooks, news items/ headlines, advertisements etc	51
L508	Reads text with comprehension, locates details and sequence of events	59

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
Mathematics		
M401	Applies operations of numbers in daily life situations	51
M412	Explores the area and perimeter of simple geometrical shapes (triangle, rectangle, square) in terms of given shape as a unit	48
M418	Calculates time intervals/duration of familiar daily life events by using forward or backward counting/addition and subtraction	62
M421	Represent the collected information in tables and bar graphs and draws inferences from these	57
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	52
M505	Finds the number corresponding to part of a collection	56
M506	Identifies and forms equivalent fractions of a given fraction	41
M508	Converts fractions into decimals and vice versa	49
M509	Classifies angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing	44
M512	Relates different commonly used larger and smaller units of length, weight and volume and converts larger units to smaller units and vice versa	46
M513	Estimates the volume of a solid body in known units	35
M514	Applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals	41
M515	Identifies the pattern in triangular number and square number	39
M516	Collects data related to various daily life situations, represents it in tabular form and as bar graphs and interprets it	53

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
Language		
L813	Read textual/non-textual materials with comprehension and identifies the details, characters, main idea and sequence of ideas and events while reading	54
Mathematics		
M601	Solves problems involving large numbers by applying appropriate operations	36
M606	Solves problems on daily life situations involving addition and subtraction of fractions / decimals	38
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	37
M621	Arranges given/collected information in the form of table, pictograph and bar graph and interprets them	36
M702	Interprets the division and multiplication of fractions	37
M705	Solves problems related to daily life situations involving rational numbers	32
M706	Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers	28
M707	Adds/subtracts algebraic expressions	53
M710	Solves problems related to conversion of percentage to fraction and decimal and vice versa	31
M717	Finds out approximate area of closed shapes by using unit square grid/ graph sheet	34
M719	Finds various representative values for simple data from her/ his daily life contexts like mean, median and mode	48
M721	Interprets data using bar graph such as consumption of electricity is more in winters than summer	36
M801	Generalises properties of addition, subtraction, multiplication and division of rational numbers through patterns	26
M802	Finds rational numbers between two given rational numbers	41
M803	Proves divisibility rules of 2, 3, 4, 5, 6, 9 and 11	40
M804	Finds squares, cubes, square roots and cube roots of numbers using different methods	37
M808	Use various algebraic identities in solving problems of daily life	51
M812	Verifies properties of parallelogram and establishes the relationship between them through reasoning	30
M818	Finds surface area and volume of cuboidal and cylindrical object	31
M819	Draws and interprets bar charts and pie charts	39

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
Science		
SCI703	Classifies materials and organisms based on properties/ characteristics	38
SCI704	Conducts simple investigation to seek answers to queries	25
SCI705	Relates processes and phenomenon with causes	43
SCI708	Measures and calculates e.g., temperature; pulse rate; speed of moving objects; time period of a simple pendulum, etc	46
SCI710	Plots and interprets graphs	36
SCI711	Constructs models using materials from surroundings and explains their working	31
SCI801	Differentiates materials, organism and processes	56
SCI804	Relates processes and phenomenon with causes	41
SCI805	Explains processes and phenomenon	32
SCI807	Measures angles of incidence and reflection, etc	39
SCI811	Applies learning of scientific concepts in day-to-day life	38
SCI813	Makes efforts to protect environment	58
Social Science		
SST605	Identifies latitudes and longitudes, e.g., poles, equator, tropics, States/UTs of India and other neighbouring countries on globe and the world map	34
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	33
SST703	Explains preventive actions to be undertaken in the event of disasters	52
SST704	Describes formation of landforms due to various factors	47
SST722	Explains the significance of equality in democracy	35
SST726	Describes the process of election to the legislative assembly	29
SST731	Explains the functioning of media with appropriate examples from newspapers	37
SST733	Differentiates between different kinds of markets	50
SST734	Traces how goods travel through various market places	47
SST802	Describes major crops, types of farming and agricultural practices in her/his own area/state	39
SST805	Locates distribution of important minerals e.g. coal and mineral oil on the world map	31
SST807	Justifies judicious use of natural resources	43
SST809	Draws interrelationship 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	35
SST815	Explains the origin, nature and spread of the revolt of 1857 and the lessons learned from it	39
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	27
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	51
SST823	Applies the knowledge of the Fundamental Rights to find out about their violation, protection and pro-motion in a given situation	21
SST827	Describes the process of making a law. (e.g. Domestic Violence Act, RTI Act, RTE Act)	22
SST831	Identifies the role of Government in providing public facilities such as water, sanitation, road, electricity etc., and recognizes their availability	30
SST833	Draws bar diagram to show population of different countries/ India/states	51

Core Team

MHRD

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

Shri Anil Swarup, Former Secretary, School Education & Literacy, SE&L, (till 30th 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.

