NAS 2017

NATIONAL ACHIEVEMENT SURVEY

Class : 3, 5 and 8

ANDHRA PRADESH
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.
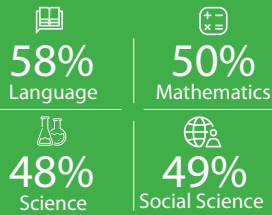
HIGHLIGHTS

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

74% Mathematics | **73%** EVS | **79%** Language
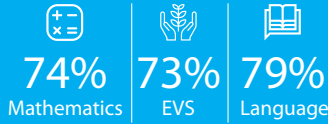
In Class 5, on an average, the correct responses to the subjects were as follows:

64% Mathematics | **64%** EVS | **67%** Language
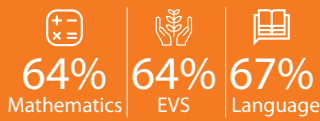
In Class 8, on an average, the correct responses to the subjects were as follows:

58% Language | **50%** Mathematics

48% Science | **49%** Social Science

88%
Children could understand what the teacher says in the classroom.

28%
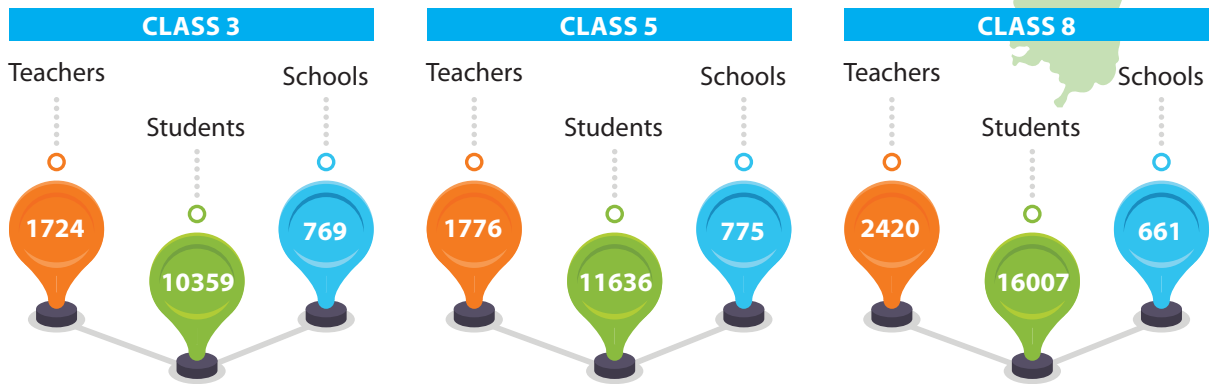of the school buildings need significant repair.

Highest Performing Learning Outcomes

- **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 (80)
- **M302:** Compares numbers up to 999 based on their place values (85)
- **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. (85)
- **M319:** Records data using tally marks, represents pictorially and draws conclusions (86)
- **M309:** Identifies and makes 2D-shapes by paper folding, paper cutting on the dot grid, using straight lines etc (87)

Lowest Performing Learning Outcomes

- **M311:** Fills a given region leaving no gaps using a tile of a given shape (15)
- **SST610:** Locates important historical sites, places on an outline map of India (28)
- **SST625:** Describes the functioning of rural and urban local government bodies in sectors like health and education (30)
- **M818:** Finds surface area and volume of cuboidal and cylindrical object (31)
- **SST722:** Explains the significance of equality in democracy (34)

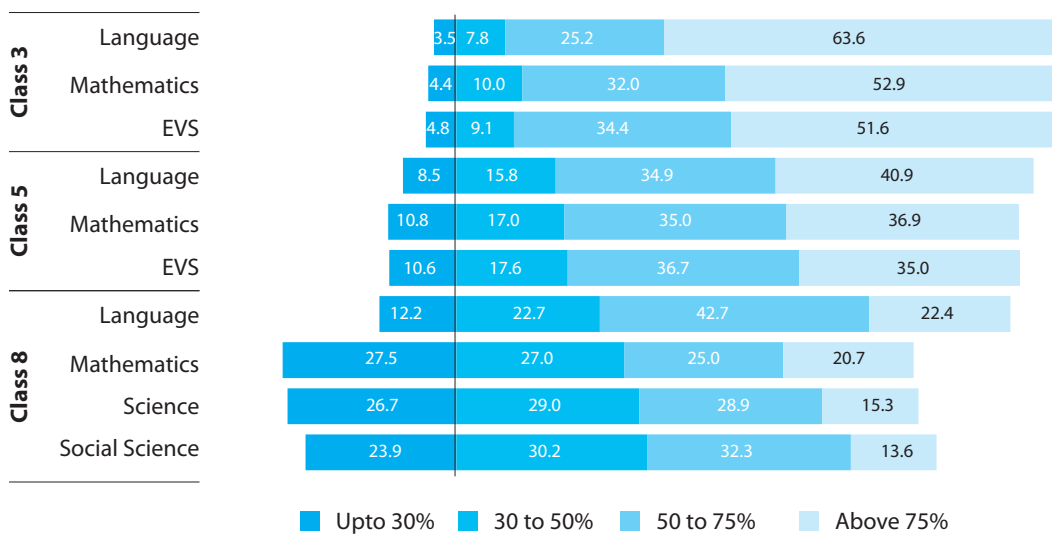## Participation

Andhra Pradesh - 13 Districts

CLASS 3

Teachers: 1724
Students: 10359
Schools: 769

CLASS 5

Teachers: 1776
Students: 11636
Schools: 775

CLASS 8

Teachers: 2420
Students: 16007
Schools: 661

Average Achievement by Classes and Subjects

Class	Subject	State	National
Class 3	EVS	73 (19.5)	65 (24.3)
Class 3	Language	79 (19.6)	68 (23.8)
Class 3	Mathematics	74 (20.0)	64 (23.5)
Class 5	EVS	64 (22.8)	57 (23.6)
Class 5	Language	67 (22.5)	58 (23.4)
Class 5	Mathematics	64 (23.4)	53 (23.8)
Class 8	Language	58 (22.0)	57 (23.3)
Class 8	Mathematics	50 (25.6)	42 (22.6)
Class 8	Science	48 (23.4)	44 (22.4)
Class 8	Social Science	49 (22.3)	44 (22.4)

Legend: ■ State ■ National
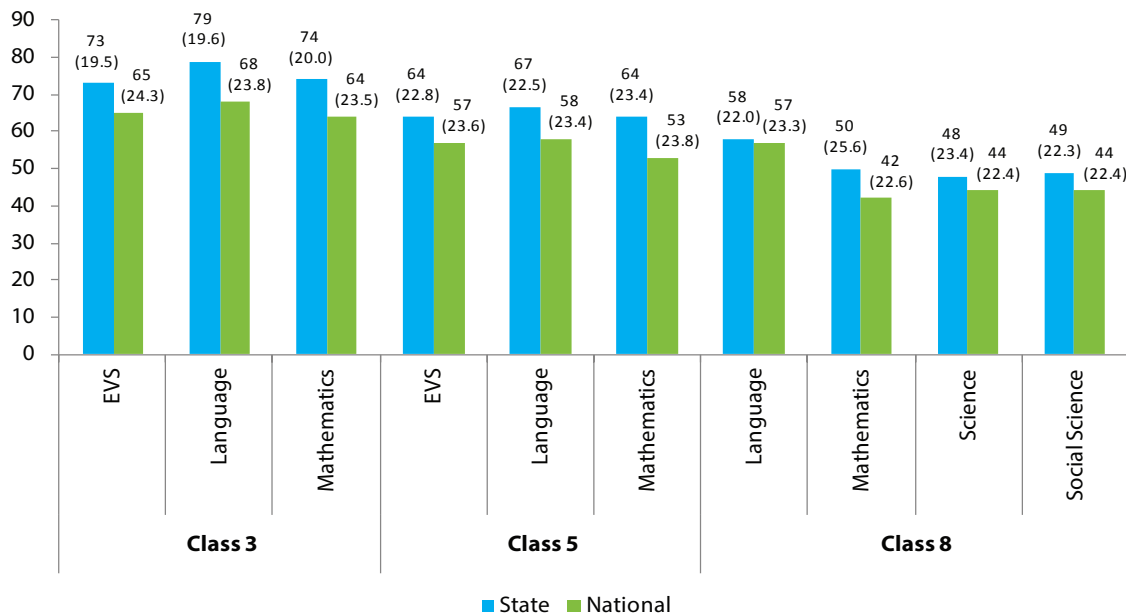
Distribution of Students Achievement by Classes and Subjects

Class	Subject	Upto 30%	30 to 50%	50 to 75%	Above 75%
Class 3	Language	3.5	7.8	25.2	63.6
Class 3	Mathematics	4.4	10.0	32.0	52.9
Class 3	EVS	4.8	9.1	34.4	51.6
Class 5	Language	8.5	15.8	34.9	40.9
Class 5	Mathematics	10.8	17.0	35.0	36.9
Class 5	EVS	10.6	17.6	36.7	35.0
Class 8	Language	12.2	22.7	42.7	22.4
Class 8	Mathematics	27.5	27.0	25.0	20.7
Class 8	Science	26.7	29.0	28.9	15.3
Class 8	Social Science	23.9	30.2	32.3	13.6

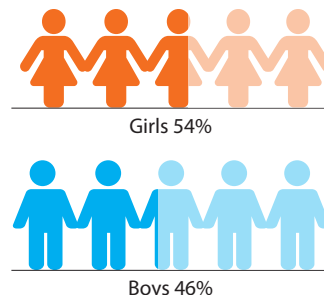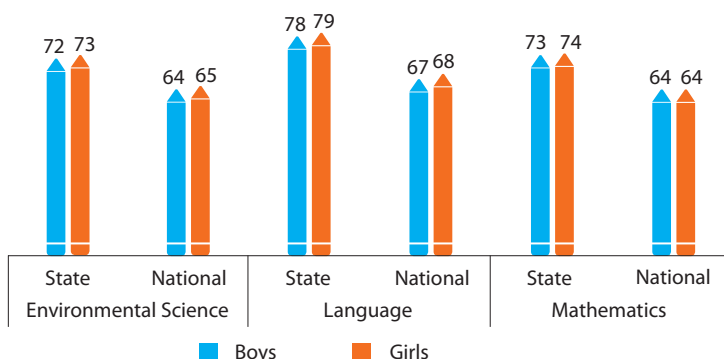Legend: ■ Upto 30% ■ 30 to 50% ■ 50 to 75% ■ Above 75%

E.g. In Class 3 language, percentage of students achieving upto 30% is 3.5, between 30%-50% is 7.8, between 50%-75% is 25.2 and above 75% is 63.6.
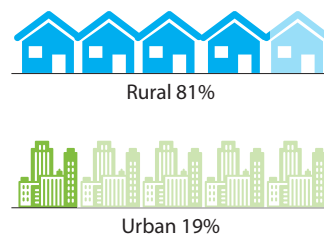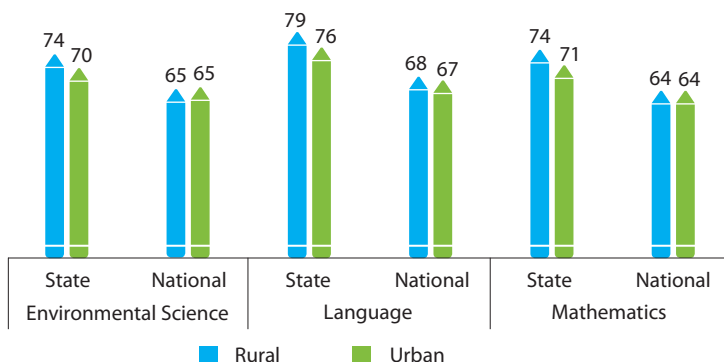
Class 3 State Results by Student Groups

PERFORMANCE

By Gender
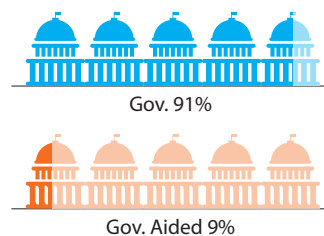
	State	National		State	National		State	National
Boys	72	64		78	67		73	64
Girls	73	65		79	68		74	64
	Environmental Science			Language			Mathematics	

■ Boys   ■ Girls

By School Location

	State	National		State	National		State	National
Rural	74	65		79	68		74	64
Urban	70	65		76	67		71	64
	Environmental Science			Language			Mathematics	

■ Rural   ■ Urban

By School Management

	State	National		State	National		State	National
Gov.	73	64		79	68		74	64
Gov. Aided	72	68		76	69		71	66
	Environmental Science			Language			Mathematics	

■ Gov.   ■ Gov. Aided

By Social Groups

	State	National		State	National		State	National
SC	74	64		79	67		74	64
ST	68	63		75	66		70	62
OBC	73	66		79	68		74	65
General	73	66		79	69		75	65
	Environmental Science			Language			Mathematics	

■ SC   ■ ST   ■ OBC   ■ General

PARTICIPATION

Girls 54%

Boys 46%

Rural 81%

Urban 19%

Gov. 91%

Gov. Aided 9%

SC 25%   ST 11%

OBC 55%   General 9%

Class 5 State Results by Student Groups
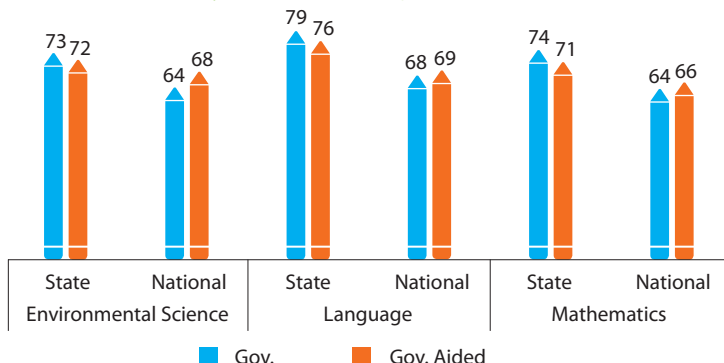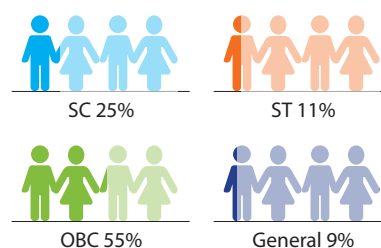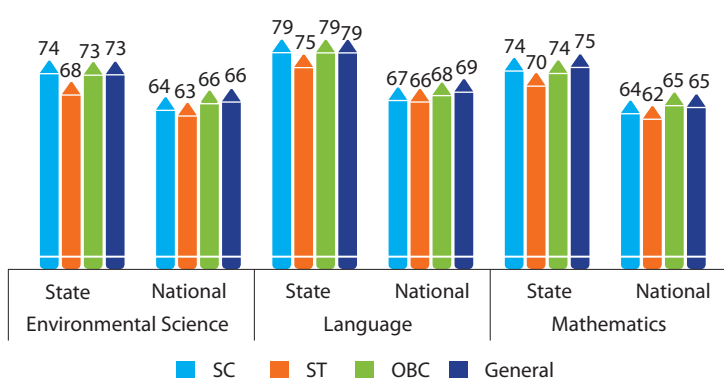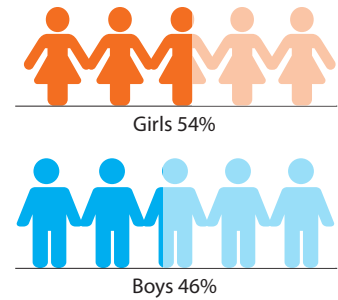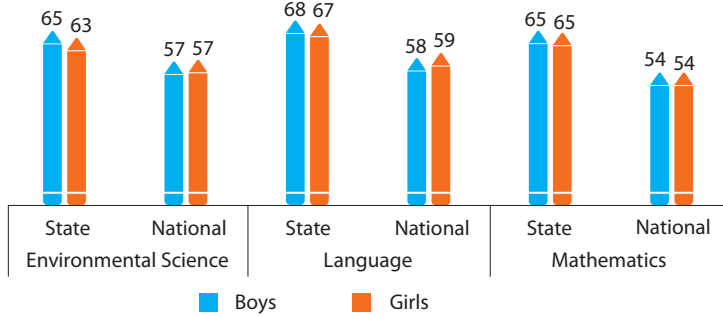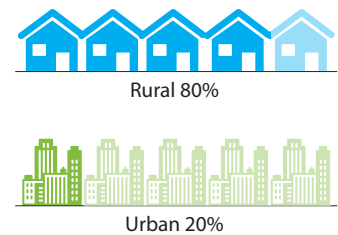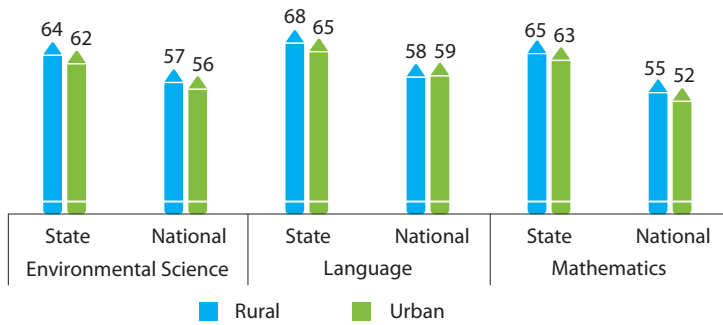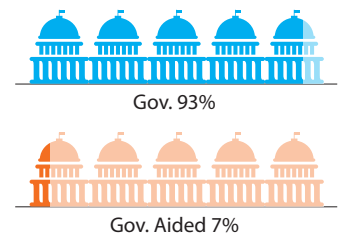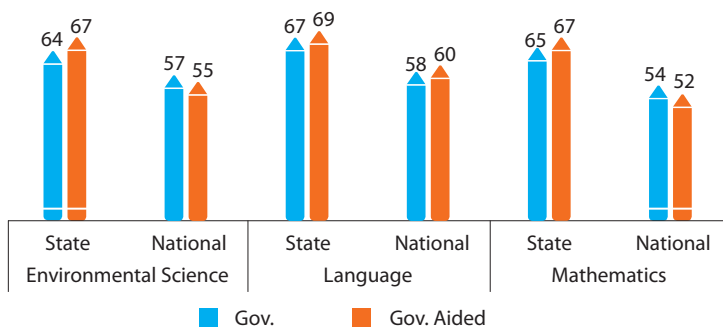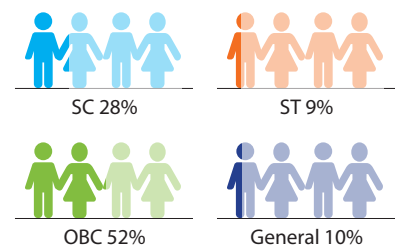
PERFORMANCE

PARTICIPATION

By Gender

	Environmental Science		Language		Mathematics	
	State	National	State	National	State	National
Boys	65	57	68	58	65	54
Girls	63	57	67	59	65	54

Boys ▮ Girls ▮

Girls 54%

Boys 46%

By School Location

	Environmental Science		Language		Mathematics	
	State	National	State	National	State	National
Rural	64	57	68	58	65	55
Urban	62	56	65	59	63	52

Rural ▮ Urban ▮

Rural 80%

Urban 20%

By School Management

	Environmental Science		Language		Mathematics	
	State	National	State	National	State	National
Gov.	64	57	67	58	65	54
Gov. Aided	67	55	69	60	67	52

Gov. ▮ Gov. Aided ▮

Gov. 93%

Gov. Aided 7%

By Social Groups

	Environmental Science		Language		Mathematics	
	State	National	State	National	State	National
SC	63	56	65	57	62	53
ST	57	55	61	55	57	51
OBC	66	58	69	60	67	56
General	66	57	69	60	68	54

SC ▮ ST ▮ OBC ▮ General ▮

SC 28%

ST 9%

OBC 52%

General 10%

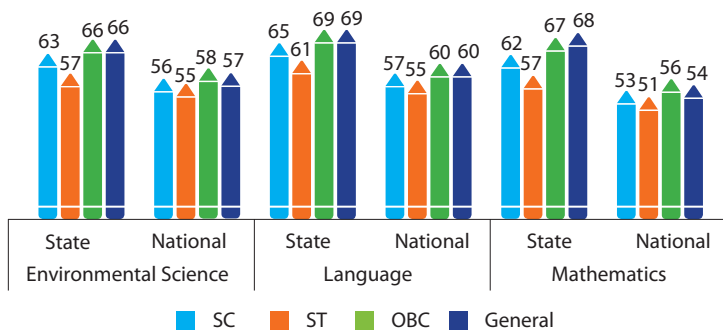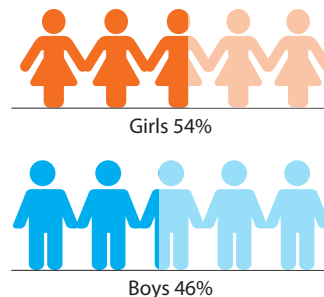# Class 8 State Results by Student Groups

PERFORMANCE

PARTICIPATION
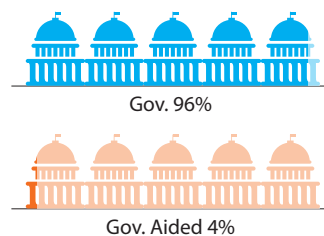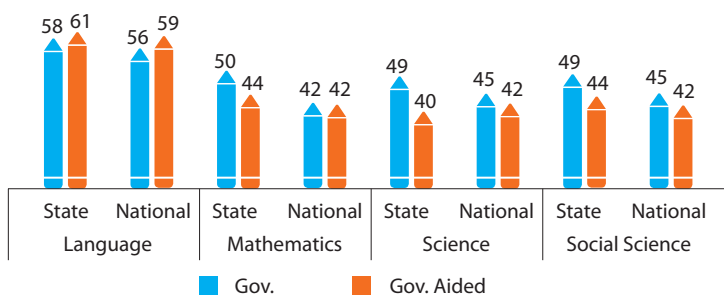
By Gender

	State	National	State	National	State	National	State	National
	Language		Mathematics		Science		Social Science	
Boys	58	56	50	42	48	44	49	44
Girls	59	57	50	42	49	44	49	45

■ Boys ■ Girls

Girls 54%

Boys 46%

By School Location

	State	National	State	National	State	National	State	National
	Language		Mathematics		Science		Social Science	
Rural	59	57	51	43	50	45	50	45
Urban	57	57	46	39	43	41	44	42

■ Rural ■ Urban

Rural 81%

Urban 19%

By School Management

	State	National	State	National	State	National	State	National
	Language		Mathematics		Science		Social Science	
Gov.	58	56	50	42	49	45	49	45
Gov. Aided	61	59	44	42	40	42	44	42

■ Gov. ■ Gov. Aided

Gov. 96%

Gov. Aided 4%

By Social Groups

	State	National	State	National	State	National	State	National
	Language		Mathematics		Science		Social Science	
SC	56	55	48	40	47	43	48	42
ST	54	53	45	40	44	43	44	43
OBC	60	58	52	44	49	46	50	45
General	61	58	51	42	51	44	51	44

■ SC ■ ST ■ OBC ■ General

SC 25%

ST 8%

OBC 53%

General 13%

What children say about schools?

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

31% students in Class 3, **28%** in Class 5 and **30%** students in Class 8 find it difficult to travel to school.

85% children in Class 3, **88%** in Class 5 and **86%** children in Class 8 could understand what the teachers say in the classroom.

For **77%** students in Class 3, Class 5 and **68%** students in Class 8, the language used at home and by the teachers is the same.

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

What teachers responded?

59% teachers in Class 3,

58% in Class 5 and

88% 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.

21% teachers responded that there is lack of adequate toilet facilities.

17% teachers responded that there is lack of drinking water facilities.

28% teachers responded that the school buildings needs significant repair.

5% teachers responded that there is lack of electricity.

19% Teachers in the state opined that they are overloaded with work.

70% Teachers in the state are highly satisfied with their job.

92% Teachers in the state have adequate instructional material and supplies.

86% 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	21	72
Written Tests	3	27	70
Multiple choice type	4	27	68
Observation	4	25	72
Home assignments	3	15	82
Student self assessment	4	33	63
Project work	3	52	45
Peer assessment	6	53	40
Portfolio	14	56	30

What teachers say about parent's involvement?

Parental support for students' Achievement

16%
19%
65%

Parental involvement in school activities

17%
17%
66%
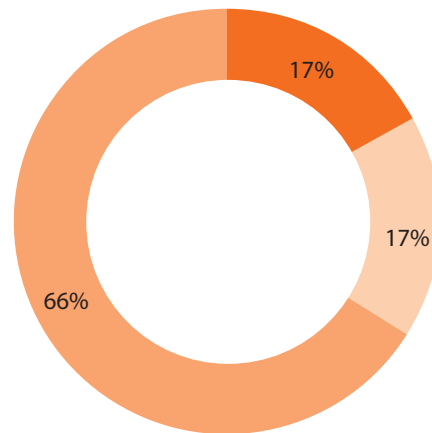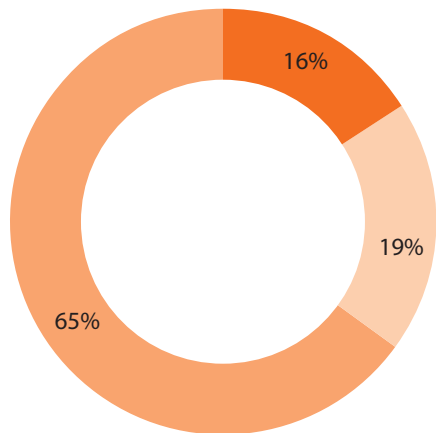
Low Medium High

What the head teacher responded?

School activities affected by shortage or inadequacy

	Not affected	Partially affected	Totally affected
Shortage of Instruction Materials	61	27	12
Lack of teaching staff	62	32	6
Inadequately qualified teaching staff	90	6	4
Lack of supporting staff	56	28	16
Inadequately or poorly qualified assisting staff	72	14	14
Shortage of Audio-visual resources for delivery of instruction	35	49	16
Shortage of Library resources relevant to subject instruction	45	44	11
Lack of Student Discipline	56	25	19

■ Not affected ■ Partially affected ■ Totally affected

E.g. 61% 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
Kadapa	79
Prakasam	79
Anantapur	78
East Godavari	78
Krishna	77
Guntur	76
Srikakulam	76
Nellore	74
Visakhapatnam	73
West Godavari	71
Vizianagaram	70
Chittoor	69
Kurnool	67

Class 5

District Name	District Mean
East Godavari	73
Kadapa	72
Guntur	68
Prakasam	68
Srikakulam	67
Krishna	65
West Godavari	64
Anantapur	64
Kurnool	63
Nellore	63
Vizianagaram	62
Visakhapatnam	59
Chittoor	53

Class 8

District Name	District Mean
East Godavari	64
Prakasam	58
Srikakulam	57
Kadapa	54
Guntur	52
Krishna	51
Anantapur	50
Vizianagaram	49
Nellore	47
Kurnool	46
Visakhapatnam	46
West Godavari	45
Chittoor	45

Performance of the State in Learning Outcomes (LOs)

Annex-1

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	64
E303	Identifies relationships with and among family members	74
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	61
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	80
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)	79
E309	Identifies directions, location of objects/places in simple maps using signs/symbols/verbally	66
E310	Guesses properties, estimates quantities of materials/activities in daily life and verifies using symbols/non-standard units	79
E311	Records observations, experiences, information on objects/activities/places visited in different ways and predicts patterns etc	70
E313	Observes rules in games (local. indoor, outdoor)	55
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	85
Language		
L304	Reads small texts with comprehension i.e., identifies main ideas, details, sequence and draws conclusions	79
L312	Reads printed scripts on the classroom walls: poems, posters, charts etc	79
Mathematics		
M301	Reads and writes numbers up to 999 using place value	74
M302	Compares numbers up to 999 based on their place values	85

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	72
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	71
M306	Explains the meaning of division facts by equal grouping/ sharing and finds it by repeated subtraction	78
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	15
M312	Estimates and measures length and distance using standard units like centimetres or metres & identifies relationships	43
M317	Reads the time correctly to the hour using a clock/watch	78
M318	Extends patterns in simple shapes and numbers	70
M319	Records data using tally marks, represents pictorially and draws conclusions	86

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
EVS		
E403	Identifies relationship with and among family members in extended family	74
E410	Records observations/experiences/information for objects, activities, phenomena, places visited in different ways and predicts patterns and activities/ phenomena	75
E501	Explains the super senses and unusual features (sight, smell, hear, sleep, sound, etc.) of animals and their responses to light, sound, food etc	55
E503	Describes the interdependence among animals, plants and humans	59
E504	Explains the role and functions of different institutions in daily life (Bank, Panchayat, cooperatives, police station, etc.)	74
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)	44
E506	Groups objects, materials, activities for features/properties such as shape, taste, colour , texture, sound, traits etc	46
E507	Traces the changes in practices, customs, techniques of past and present through coins, paintings, monuments, museum etc. and interacting with elders	64
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	60
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	61
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	64
E512	Voices opinions on issues observed/experienced and relates practices /happenings to larger issues of society	63
E513	Suggests ways for hygiene, health, managing waste, disaster/ emergency situations and protecting/saving resources	72
Language		
L504	Reads and comprehends independently storybooks, news items/ headlines, advertisements etc	64
L508	Reads text with comprehension, locates details and sequence of events	68

LO Code	Learning Outcome Class 5	Average Performance (in Percent)
	Mathematics	
M401	Applies operations of numbers in daily life situations	68
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	71
M421	Represent the collected information in tables and bar graphs and draws inferences from these	76
M501	Reads and writes numbers bigger than 1000 being used in her/his surroundings	63
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	61
M505	Finds the number corresponding to part of a collection	65
M506	Identifies and forms equivalent fractions of a given fraction	59
M508	Converts fractions into decimals and vice versa	65
M509	Classifies angles into right angle, acute angle, obtuse angle and represents the same by drawing and tracing	61
M512	Relates different commonly used larger and smaller units of length, weight and volume and converts larger units to smaller units and vice versa	64
M513	Estimates the volume of a solid body in known units	56
M514	Applies the four fundamental arithmetic operations in solving problems involving money, length, mass, capacity and time intervals	62
M515	Identifies the pattern in triangular number and square number	57
M516	Collects data related to various daily life situations, represents it in tabular form and as bar graphs and interprets it	78

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	57
Mathematics		
M601	Solves problems involving large numbers by applying appropriate operations	47
M606	Solves problems on daily life situations involving addition and subtraction of fractions / decimals	48
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	53
M621	Arranges given/collected information in the form of table, pictograph and bar graph and interprets them	52
M702	Interprets the division and multiplication of fractions	44
M705	Solves problems related to daily life situations involving rational numbers	52
M706	Uses exponential form of numbers to simplify problems involving multiplication and division of large numbers	44
M707	Adds/subtracts algebraic expressions	57
M710	Solves problems related to conversion of percentage to fraction and decimal and vice versa	40
M717	Finds out approximate area of closed shapes by using unit square grid/ graph sheet	38
M719	Finds various representative values for simple data from her/his daily life contexts like mean, median and mode	62
M721	Interprets data using bar graph such as consumption of electricity is more in winters than summer	52
M801	Generalises properties of addition, subtraction, multiplication and division of rational numbers through patterns	37
M802	Finds rational numbers between two given rational numbers	55
M803	Proves divisibility rules of 2, 3,4, 5, 6, 9 and 11	59
M804	Finds squares, cubes, square roots and cube roots of numbers using different methods	50
M808	Use various algebraic identities in solving problems of daily life	61
M812	Verifies properties of parallelogram and establishes the relationship between them through reasoning	36
M818	Finds surface area and volume of cuboidal and cylindrical object	31
M819	Draws and interprets bar charts and pie charts	49

LO Code	Learning Outcome Class 8	Average Performance (in Percent)
Science		
SCI703	Classifies materials and organisms based on properties/ characteristics	48
SCI704	Conducts simple investigation to seek answers to queries	34
SCI705	Relates processes and phenomenon with causes	46
SCI708	Measures and calculates e.g., temperature; pulse rate; speed of moving objects; time period of a simple pendulum, etc	55
SCI710	Plots and interprets graphs	43
SCI711	Constructs models using materials from surroundings and explains their working	45
SCI801	Differentiates materials, organism and processes	60
SCI804	Relates processes and phenomenon with causes	55
SCI805	Explains processes and phenomenon	44
SCI807	Measures angles of incidence and reflection, etc	46
SCI811	Applies learning of scientific concepts in day-to-day life	52
SCI813	Makes efforts to protect environment	54
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	53
SST610	locates important historical sites, places on an outline map of India	28
SST625	Describes the functioning of rural and urban local government bodies in sectors like health and education	30
SST703	Explains preventive actions to be undertaken in the event of disasters	38
SST704	Describes formation of landforms due to various factors	49
SST722	Explains the significance of equality in democracy	34
SST726	Describes the process of election to the legislative assembly	63
SST731	Explains the functioning of media with appropriate examples from newspapers	55
SST733	Differentiates between different kinds of markets	69
SST734	Traces how goods travel through various market places.	56
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	51
SST809	Draws interrelationship between types of farming and development in different regions of the world	42

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	50
SST815	Explains the origin, nature and spread of the revolt of 1857 and the lessons learned from it	52
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	44
SST823	Applies the knowledge of the Fundamental Rights to find out about their violation, protection and promotion in a given situation	36
SST827	Describes the process of making a law. (e.g. Domestic Violence Act, RTI Act, RTE Act)	51
SST831	Identifies the role of Government in providing public facilities such as water, sanitation, road, electricity etc., and recognizes their availability	43
SST833	Draws bar diagram to show population of different countries/India/states	64

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)

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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.