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पढ़े चलो , बढ़े चलो
RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN

NATIONAL ACHIEVEMENT SURVEY – CLASS X
CYCLE 2 (2017-18)

STATE REPORT CARD

ICSE

PARTICIPATION

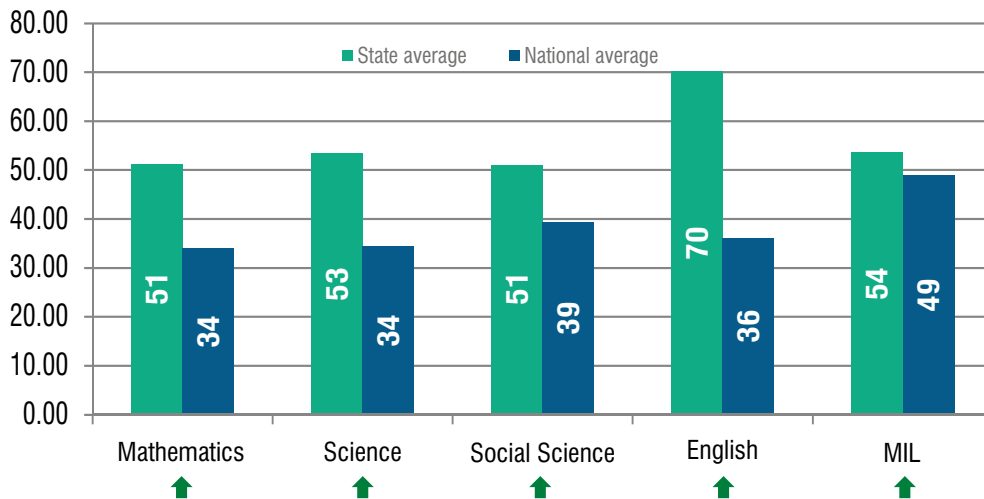| 187	6569	82%
Participating School	Participating Students	School Response Rate

This State Report Card (SRC) of National Achievement Survey (NAS) Class X (Cycle 2) provides an overview of students' academic performance in the state. The NAS surveyed a representative sample of all school types in each state and measured students' performance in five subjects – Mathematics, Science, Social Science, English and Modern Indian Languages (MIL) — Reading Comprehension.

Performance of students in your state: **Average Percent Correct**

State average / National average

Subject	State average	National average
Mathematics	51	34
Science	53	34
Social Science	51	39
English	70	36
MIL	54	49

KEY

⬆ State average score is significantly ABOVE National average score

⬌ No significant difference between State and National average scores

⬇ State average score is significantly BELOW National average score

Distribution of students by range (percent correct)

SUBJECTS		0 – 35 (%)	36 – 50 (%)	51 – 75 (%)	76 – 100 (%)
Mathematics	State	27	27	32	14
	National	67	20	11	2
Science	State	17	25	50	8
	National	62	27	10	1
Social Science	State	15	33	50	2
	National	44	38	17	1
English	State	7	8	38	47
	National	61	21	15	3
Modern Indian Language (MIL)	State	22	21	43	14
	National	27	27	39	7

Performance by: LOCATION

Subjects	Rural (% Correct)	Urban (% Correct)	Significant Difference
Mathematics	46	52	⬇
Science	50	54	⬇
Social Science	48	52	⬇
English	65	72	⬇
MIL	54	54	⬌

Performance by: GENDER

Subjects	Girls (% Correct)	Boys (% Correct)	Significant Difference
Mathematics	50	52	⬌
Science	53	54	⬌
Social Science	51	51	⬌
English	72	68	⬆
MIL	55	53	⬌

Performance by: SOCIAL GROUP

Subjects	SC (% Correct)	Others (% Correct)	Significant Difference	ST (% Correct)	Others (% Correct)	Significant Difference	OBC (% Correct)	Others (% Correct)	Significant Difference
Mathematics	42	53	⬇	42	53	⬇	47	53	⬇
Science	47	55	⬇	46	55	⬌	51	55	⬌
Social Science	45	52	⬇	50	52	⬇	49	52	⬇
English	60	72	⬇	56	72	⬇	67	72	⬇
MIL	53	53	⬌	56	53	⬌	55	53	⬌

Student participation: PERCENT

State sample		
Group	**Number of students**	**%**
Girls	3017	46
Boys	3552	54

State sample		
Group	**Number of students**	**%**
Rural	1441	22
Urban	5128	78

Group	**Number of students**	**%**
SC	312	5
ST	90	1
OBC	1544	24
Others	4623	70

MAXIMUM INTERVENTION REQUIRED (% of Students score below 35%)

Subject	Value
Mathematics	27
Science	17
Social Science	15
English	7
MIL	22
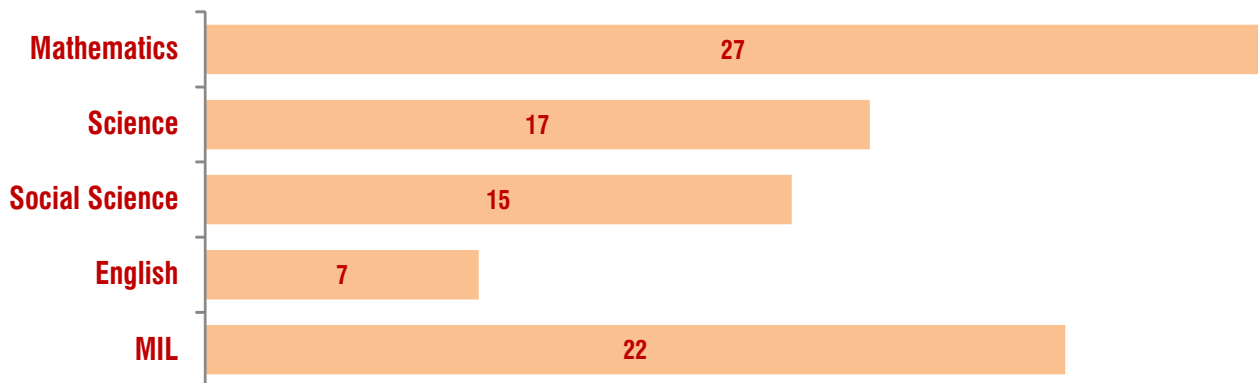
Skill-wise performance: (ITEM % CORRECT)

Subjects	Skill 1 (% correct)	Skill 2 (% correct)	Skill 3 (% correct)
Mathematics	55	51	45
Science	56	53	52
Social Science	53	51	48
English	79	66	73
MIL	61	59	58

Skill 1	**Remembering:** Recognizing or recalling knowledge from memory.
Skill 2	**Understanding:** Constructing meaning from different types of functions be they written or graphic messages.
Skill 3	**Applying:** Carrying out or using a procedure through executing, or implementing.

Subjects	Content domain	State average (percent correct)	National average (percent correct)	Significant difference
MATHEMATICS	**Mathematics (overall)**	**51**	**34**	⬆
	Algebra	50	35	⬆
	Geometry	55	35	⬆
	Mensuration	48	34	⬆
	Trigonometry	59	37	⬆
	Coordinate geometry	34	29	⬆
	Number system	38	30	⬆
	Statistics	50	33	⬆
	Probability	57	35	⬆
SCIENCE	**Science (overall)**	**53**	**34**	⬆
	Food	51	35	⬆
	Materials	57	33	⬆
	The living world	56	38	⬆
	Moving things, people and ideas	51	35	⬆
	How things work	28	22	⬆
	Natural phenomena	45	27	⬆
	Natural resources	55	40	⬆
SOCIAL SCIENCE	**Social science (overall)**	**51**	**39**	⬆
	History	50	38	⬆
	Geography	47	39	⬆
	Economics	55	40	⬆
	Political science	52	41	⬆
ENGLISH	**English (overall)**	**70**	**36**	⬆
	Reading comprehension	72	37	⬆
	Language element	68	35	⬆
MODERN INDIAN LANGUAGE (MIL)	**Modern Indian Language (overall)**	**54**	**49**	⬆
	Reading comprehension	59	52	⬆

More difficult

20%
of students answered this item correctly

If $ax^2+bx+c=0$ has equal roots, then c is equal to

1. $\dfrac{-b}{2a}$

2. $\dfrac{b}{2a}$

3. $\dfrac{-b^2}{4a}$

4. $\dfrac{b^2}{4a}$

Skill: Skill 3 item
Content Domain: Algebra

% Answers:
1. 30.0%
2. 25.1%
3. 19.5%
4. **19.8%**

If the nth term of an A.P. is (3n + 1), then its 30th term is

1. 31
2. 91
3. 90
4. 94

Skill: Skill 2 item
Content Domain: Algebra

% Answers:
1. 25.8%
2. **32.0%**
3. 27.8%
4. 8.9%

32%
of students answered this item correctly

50%
of students answered this item correctly

AOB is a sector of a circle of radius 4 cm subtending an angle of 45° at the centre 'O' of the circle. Area of the sector, in cm², is

1. π
2. 2π
3. 3π
4. 4π

Skill: Skill 1 item
Content Domain: Mensuration

% Answers:
1. 17.4%
2. **49.6%**
3. 11.2%
4. 17.5%

If $\triangle ABC \cong \triangle PQR$, then which of the following is true?

1. $B \leftrightarrow R$
2. $C \leftrightarrow Q$
3. $A \leftrightarrow R$
4. $A \leftrightarrow P$

Skill: Skill 1 item
Content Domain: Geometry

% Answers:
1. 11.1%
2. 13.2%
3. 15.8%
4. **56.5%**

57%
of students answered this item correctly

71%
of students answered this item correctly

If $\tan \theta = \dfrac{3}{4}$, then $\cot \theta$ is equal to

1. $\dfrac{4}{3}$
2. $\dfrac{3}{7}$
3. $\dfrac{4}{7}$
4. $\dfrac{7}{4}$

Skill: Skill 1 item
Content Domain: Trigonometry

% Answers:
1. **71.1%**
2. 11.4%
3. 9.2%
4. 5.5%

Less difficult

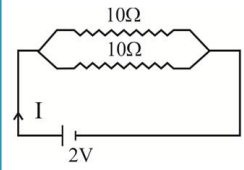---

KEY

NAS items

This ladder shows the percentage of students answering selected NAS items correctly.

It provides a snapshot of what students know and can do in Mathematics.

More difficult

18%
of students answered this item correctly

The current I in the circuit shown in the figure is

Skill: Skill 3 item
Content Domain: Physics

1.   0.1A
2.   0.2A
3.   0.3A
4.   0.4A

% Answers:
1.   20.2%
2.   38.0%
3.   17.9%
4.   18.2%

The image of an object formed by your eye lens on the retina is

1.   erect and real
2.   inverted and real
3.   erect and virtual
4.   inverted and virtual.

Skill: Skill 2 item
Content Domain: Physics

% Answers:
1.   33.1%
2.   31.7%
3.   21.7%
4.   10.9%

32%
of students answered this item correctly

Packets of potato chips are filled with nitrogen gas in order to avoid

1.   Rusting
2.   Rancidity
3.   Reduction
4.   Decomposition

Skill: Skill 2 item
Content Domain: Chemistry

% Answers:
1.   11.3%
2.   53.4%
3.   19.0%
4.   14.1%

53%
of students answered this item correctly

The unit of work is

1.   joule
2.   newton
3.   newton / meter
4.   watt

Skill: Skill 1 item
Content Domain: Physics

% Answers:
1.   61.5%
2.   12.0%
3.   11.5%
4.   12.4%

62%
of students answered this item correctly

The fluid secreted in our mouth that mixes with food making it slippery and easy to swallow is

1.   gastric juice
2.   hormones
3.   saliva
4.   bile

Skill: Skill 1 item
Content Domain: Biology

% Answers:
1.   11.1%
2.   10.0%
3.   71.0%
4.   5.6%

71%
of students answered this item correctly

Less difficult

KEY ▷ **NAS item**

This ladder shows the percentage of students answering selected NAS items correctly.

It provides a snapshot of what students know and can do in Science.

More difficult

20% of students answered this item correctly

The legislative powers for the Union List in India does not include

1. Foreign a airs
2. Banking
3. Defence
4. Police

Skill: Skill 1 item
Content Domain: Political Science

% Answers:
1. 43.6%
2. 19.5%
3. 14.6%
4. **19.9%**

Observe the table regarding hypothetical data of educational achievement of rural population of a state is given below. Choose one option and fill in the blanks.

Educational Achievement of Rural Population of a State		
Category	Male (%)	Female (%)
Literacy rate for rural population	54	21
Literacy rate for children in age group 10-14 years	69	41
Percentage of rural children aged 10-14 attending school	64	34

_____ of rural girls are not attending school

1. 66%
2. 64%
3. 54%
4. 34%

Skill: Skill 2 item
Content Domain: Economics

% Answers:
1. **30.1%**
2. 15.4%
3. 14.6%
4. 35.5%

30% of students answered this item correctly

Which of the following is **NOT** money?

1. Currency Notes
2. Deposits
3. Coins
4. Credit Card

Skill: Skill 2 item
Content Domain: Economics

% Answers:
1. 11.2%
2. 29.9%
3. 8.8%
4. **47.4%**

47% of students answered this item correctly

Which of the following statement is incorrect?

1. People make deposits in banks
2. People take loans from banks
3. People receive interest from banks
4. People repay loans without interest

Skill: Skill 1 item
Content Domain: Economics

% Answers:
1. 10.7%
2. 9.1%
3. 17.2%
4. **60.5%**

61% of students answered this item correctly

India is an example of which of the following system?

1. Monarchy
2. Autocracy
3. Democracy
4. Anarchy

Skill: Skill 1 item
Content Domain: Political Science

% Answers:
1. 8.4%
2. 5.8%
3. **79.6%**
4. 4.3%

80% of students answered this item correctly

Less difficult

KEY ▷ **NAS items**

This ladder shows the percentage of students answering selected NAS items correctly.

It provides a snapshot of what students know and can do in Social Science.

Read the chart given below and answer the following questions.

A school decided to celebrate Book Week. The chart below shows the schedule of activities planned.Study the chart carefully and answer the questions that follow.

DAY	CLASS / ACTIVITY IN SCHOOL	VENUE	CLASS / OUTDOOR ACTIVITIES
MONDAY	Class 1 - 2 : Designing bookmarks	Classrooms	Class 8 Visit to National Library
	Class 3 - 4 : Role play	Hall -1	
	Class 5 - 6 : My favourite book--talk	Library	
TUESDAY	Class 3 - 4 : Chain story telling	Auditorium	Class 5 – 6 Film : The Jungle Book
	Class 7 - 8 : Theatre workshop by Barry John	Hall -1	
WEDNESDAY	Class 1 - 2 : Meet the fairy tale characters	Auditorium	
	Class 3 - 4 : Show and tell	Hall -1	
	Class 5 - 6 : Poetry recitation	Hall -2	
	Class 7 - 8 : Designing a bookcover— by Santosh Rai	Art room	
THURSDAY	Class 7 - 8 : Quiz: conducted by Mandeep Kaur	Hall -2	Class 3 - 4 Visit to National Book Trust
	Class 9 -10 : Meet the author-- Ruskin Bond	Library	
FRIDAY	Class 5 - 6 : Book reading by students	Classrooms	

More difficult

30% of students answered this item correctly

The school has invited _____ experts for different events.

1. Two
2. Six
3. Four
4. Five

Skill: Skill 2 item
Content Domain: Reading Comprehension

% Answers:
1. 19.9%
2. 24.5%
3. 29.7%
4. 21.5%

Which classes will go to see 'The Jungle Book' and when?

1. Class 7 and 8, Tuesday
2. Class 3 and 4, Wednesday
3. Class 9 and 10, Thursday
4. Class 5 and 6, Tuesday

Skill: Skill 1 item
Content Domain: Reading Comprehension

% Answers:
1. 12.4%
2. 16.9%
3. 16.6%
4. 51.0%

51% of students answered this item correctly

On which day can the children meet Ruskin Bond?

1. Monday
2. Wednesday
3. Thursday
4. Friday

Skill: Skill 1 item
Content Domain: Reading Comprehension

% Answers:
1. 13.3%
2. 10.8%
3. 62.4%
4. 10.9%

62% of students answered this item correctly

Less difficult

KEY

NAS items

This ladder shows the percentage of students answering selected NAS items correctly.

It provides a snapshot of what students know and can do in English.

SELECTED SCHOOL CHARACTERISTICS

97% of schools have a science laboratory.

50% of schools have a mathematics laboratory.

97% of schools have a library.

SELECTED TEACHER CHARACTERISTICS

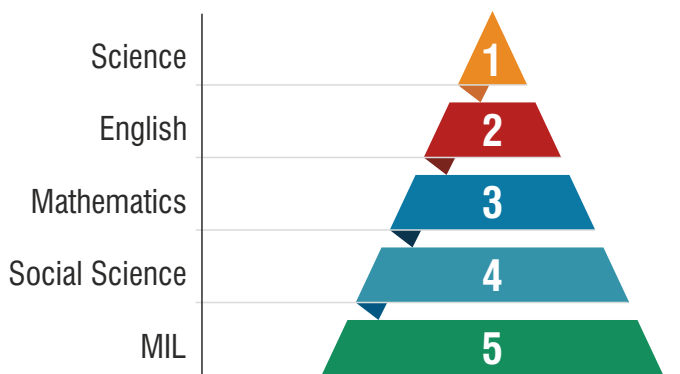**60%** of teachers sometimes make use of projects for assessing Class X students.

79% of teachers always make use of written tests or examinations.
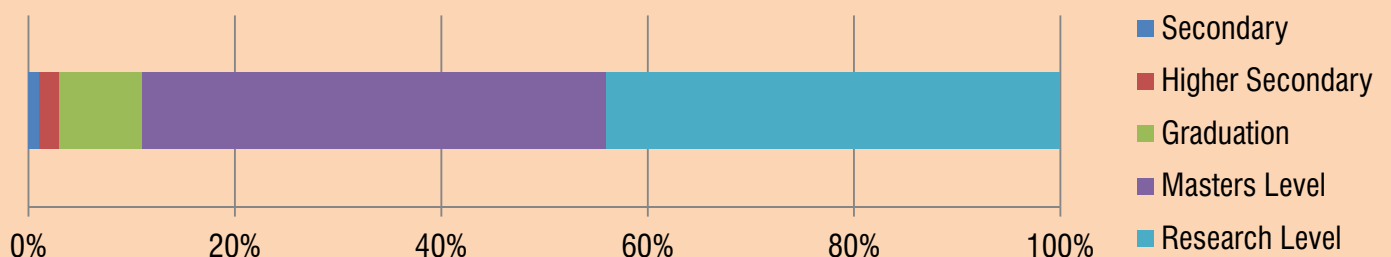
Employment Status

- 8% Temporary Teacher
- 92% Permanent Teacher

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
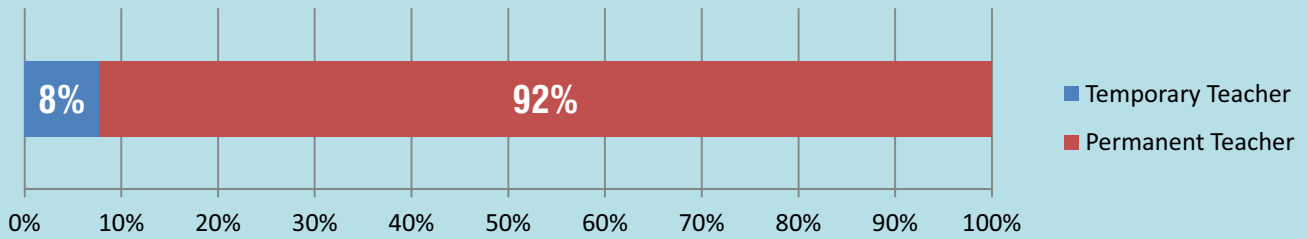
SELECTED STUDENT CHARACTERISTICS IN YOUR STATE

Student preference for subjects:

1. Science
2. English
3. Mathematics
4. Social Science
5. MIL

30% of students travel more than 5km to school.

How far students wish to study

- Secondary
- Higher Secondary
- Graduation
- Masters Level
- Research Level

0% 20% 40% 60% 80% 100%

CORE TEAM

विद्यया ऽ मृतमश्नुते

एन सी ई आर टी
NCERT

NAS for Transforming School Education