



Пятьдесят  
седьмая  
школа

# MOSCOW STATE SCHOOL 57

## 2020-21 SCHOOL PROFILE

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Vakhneeva Anna,  
Principal  
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Founded in 1877 in Moscow

Grades 2-11; co-ed

Accredited by the Moscow State  
Department of Education

Enrollment Grades 2-11: 1658

Faculty: 168 full-time and 72  
part-time

13% of full-time faculty have  
their PhD degree or higher

Senior class enrollment: 139

Graduates attending four-year  
colleges: 100%

Upper School average class  
size: 20-25

National Olympiad Diploma  
Recipients in 2019-20: 20

### GRADING SYSTEM

School 57 uses a common  
Russian five-point grading scale

School 57 Grades	US equivalent
5 Excellent level of performance	4.0
4 Good level of performance	3.5
3 Satisfactory level of performance	3.0
2 Unsatisfactory level of performance	2.0

School 57 does not rank  
students or provide a GPA.

### ABOUT US

Moscow State School 57 is a public school located in the historical center of Moscow, Russia. The school has a total enrollment of 1658 students in Grades 2-11. There are 139 students in the Class of 2020.

The mission of School 57 is to provide students a challenging learning environment focused on math, science, and technology. Building on leadership in mathematics education, School 57 strives to achieve leading positions in a wide range of subject areas and continues to develop the traditions of fundamental education in Russia. The traditions of the highest academic preparation level have been preserved throughout the entire 140 years of the school's history.

Fifty years ago, School 57 launched the first specialized math classes. Since then, School 57 began to form as a school that uses innovative methods in teaching, primarily mathematics. Over the past 35 years, School 57 has taken a nationally leading role in the fields of teaching mathematics and physics.

School 57 has received national and international recognition:

- ◆ The school is consistently ranked among the top 10 best Moscow schools and the top 30 best Russian schools based on the academic achievements of its graduates;
- ◆ Among the school faculty, 20 teachers hold national level awards, and four teachers have received a special Presidential Award;
- ◆ In 2020, two teachers were distinguished on the highest national level for their excellence in education;
- ◆ The school has been awarded grants from the American Mathematical Society and Physical Society and the French Mathematical Society;
- ◆ School 57 was among only ten educational institutions in Russia to be awarded the first-level grant from the George Soros foundation.

The school's international academic reputation is supported by its notable alumni, among whom are globally acclaimed mathematicians, physicists, biochemists, economists, and computer scientists. Several School 57 alumni currently hold professorship positions at the Massachusetts Institute of Technology, Yale University, Boston University, the University of Chicago, UCLA, UC Berkeley, and other universities and research centers in Europe and North America.

### SCHOOL 57 ECOSYSTEM

The school is known for its unique academic and community spirit. The school has adopted the practice of open discussion between students and teachers. The School 57 Governance Council consists of 15 members: five student members (8-11 grades), elected by the school's student body, five parents or guardians of current students elected by the school's parents, and five teachers at the school elected by school staff. Student-led independent media, Media57 <https://www.facebook.com/media57sch/>, covers school and student-life related current events.

Creativity and the student-specific interest-oriented academic paths are universally encouraged. 100% of students are involved in community programs, including volunteering, participating in charity events, organizing subject weeks for younger students, and peer mentor programs. Vertical integration and cooperation among grades are a fundamental principle of the School 57 ecosystem and extends to the alumni of School 57.

School 57 alumni comprise an integral part of the school's unique community, mentoring after-school academic clubs and programs, assisting in organizing famous school-based math Olympiads, and enriching current students by delivering lectures and master classes. Through the broad network of alumni who continuously support the school's educational projects, students have an outstanding opportunity to join the scientific community as early as 8th grade.

### NATIONAL ACADEMIC COMPETITIONS RESULTS

School 57 consistently shows high results at the National Olympiads. Every year, the students of School 57 comprise over 2% of the total National Olympiad Diploma recipients. The recipients of National Olympiad Diplomas get a guaranteed enrollment in the national state universities.

School 57	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Winners	9	6	5	5	6	8	n/a
Laureates	7	19	17	25	17	26	26
# of Subjects	6	9	8	12	9	11	8

### 2020 INTERNATIONAL ACADEMIC AWARDS:

- ◆ One silver medal at the International Mathematical Olympiad,
- ◆ One gold medal at the International Chemistry Olympiad,
- ◆ One gold medal at the International Olympiad in Informatics.



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### COLLEGE-LEVEL COURSES DESCRIPTION BY SUBJECT:

#### Mathematics and Mathematical Analysis (Math, CS, Econ Tracks):

Set Theory and Mapping  
Mathematical Logic  
Combinatorics  
Introduction to Probability  
Principles of Number Theory  
Game Theory  
Calculus  
Linear Algebra  
Statistics

#### Biology and Biomedical Track:

Botany and Zoology  
Physiology and Anatomy  
Molecular Biology  
Bioengineering  
Bioinformatics and Genetics  
Biophysics and Biochemistry  
Virology  
Environmental Studies

#### Physics (Math, CS, Physics Tracks):

Molecular physics and Thermodynamics  
Electricity & Magnetism  
Optics  
Theory of Relativity  
Quantum Physics  
Astronomy

#### Humanities Track:

Literary Analysis  
Comparative Literature  
World History  
Art Studies  
Latin

English and American Literature  
Social Sciences & Humanities

#### Economics Track:

Microeconomics  
Macroeconomics  
Econometrics  
Statistics

International Economics and Trade  
Principles of Finance

#### Computer Science:

Data Structure and Algorithms  
Computer Programming  
Theoretical computer science  
Programming Languages  
Web-programming

### ACADEMIC CLUBS:

Robotics  
Competitive Programming  
Mathematical Competitions  
Science Competitions  
Research Principles and Methods  
What? Where? When? – Mind Game

### COMMUNITY-ORIENTED CLUBS AND EVENTS:

School newspaper  
Media57 student media  
School Theater  
Community Volunteering  
Charity Fairs  
Peer Mentor program  
Annual Student-Lead Subject Weeks

## UPPER SCHOOL ACADEMIC PROGRAM AND ACCELERATED CURRICULUM

All Upper School courses are highly rigorous and college preparatory. All Upper School students take at least 15 academic courses each semester. School 57 does not rank students or provide a GPA.

In grades 8-11, along with a General Track available to current students, School 57 offers selective admissions-based Specialized Program tracks for a limited number of students who are interested in intensive study in a particular area. Admissions are not limited to current school students, and students from other schools can apply on the same terms. Applicants are selected based upon their demonstrated aptitude, admission test scores in a school-specific set of written and oral subject exams, academic achievement, and student portfolios that include prizes from science and math competitions. After the first round of entrance exams, selected students proceed with an invitation-based interview with school department heads. An average acceptance rate for the most selective Specialized Program tracks is 17%.

Specialized Program tracks offered in 2020-21:

- ◆ Mathematics track with accelerated studies in mathematics, computer science, physics - 14 students in the Class of 2020;
- ◆ Physics track with accelerated studies in physics, mathematics, and computer science - 16 students in the Class of 2020;
- ◆ Economics track with accelerated studies in economics, mathematics, and computer science - 17 students in the Class of 2020;
- ◆ Humanities track with accelerated studies in literature, history, Latin, and world art studies - 21 students in the Class of 2020;
- ◆ Biomedical track with accelerated studies in biology, chemistry, and mathematics - 17 students in the Class of 2020;
- ◆ Computer Science track with accelerated studies in computer science, mathematics, and programming languages – a new track added in 2018, as a result no students in the Class of 2020.

The rigorous college-level curriculum of Specialized Program tracks provides students with the opportunity to achieve in all disciplines while emphasizing the particular area of studies. All Specialized Program tracks have required courses and electives, and also involve after-school and extracurricular commitments, including participation in National Olympiads and contests.

## UNIFIED STATE EXAM RESULTS

The Russian Unified State Exam taken by high school graduates is necessary and sufficient for applying for undergraduate programs in Russia.

### School 57 Graduate Class Unified State Exam Participation by Subject and Score Distribution in 2020 (100 is the highest score)

Subject	School 57 score distribution						National average score 2016-19
	Total # of students	100	95-99	85-94	75-84	Less than 75	
Russian Lang.	131	4	21	54	26	26	<b>69.3</b>
Math 2	84	8	7	19	21	29	<b>49.6</b>
English Lang.	57	0	5	33	10	9	<b>70.9</b>
Physics	28	0	7	8	7	6	<b>52.4</b>
Computer Science	18	0	2	2	8	6	<b>58.7</b>

### Number of School 57 National Olympiads Diploma recipients by subject

Subject	2018-2019			2019-2020	
	Winners	Laureates	Total number of National Diplomas	Subject	# of Diplomas
Literature	-	1	<b>95</b>	Mathematics	5
World Art	-	2	<b>79</b>	English Lang.	1
Mathematics	1	6	<b>134</b>	Physics	3
English Lang.	-	1	<b>92</b>	Computer Sci.	6
Physics	1	4	<b>107</b>	Biology	2
Phys. Ed.	-	1	<b>25</b>	Chemistry	1
Computer Sci.	1	3	<b>100</b>	Economics	1
Biology	-	3	<b>69</b>	Astronomy	1
Chemistry	1	-	<b>84</b>		