

Poland

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Introduction

Overview of Education System

The Polish school system consists of preprimary education (*przedszkole*), primary school (Grades 1 to 8), secondary school (Grades 9 to 12/13), and postsecondary nontertiary schools.^{1,2,a} Preprimary education is available for children starting at age 3. Institutions for children ages 0 to 3 years are supervised by the Minister of Family, Labour, and Social Policy. Parallel to the system of general schools, there is also a system of artistic education in Poland supervised by the Minister of Culture and National Heritage. Separate governance arrangements exist for higher education, which is managed by the Minister of Science and Higher Education.

The school system combines centralized regulation and decentralized school administration with important roles assumed by local governments and schools. Parliamentary acts and ministerial ordinances regulate key aspects of the system, such as the general structure of the school system, management and funding, core curricula, timetables, examinations and assessments, admissions, and remuneration rules and career advancement arrangements for teachers. Local governments and school principals have broad autonomy in establishing schools, school administration, hiring teachers, and influencing learning conditions and teacher professional development. Quality assurance is divided among the Ministry of National Education, Heads of the Regional Education Authorities (*kurator oświaty*), and school principals. Some responsibilities at the school level are also granted to teaching councils (composed of all teachers), parent councils, school councils, or student government. The unified system of external examinations, operated by the Central and Regional Examination Boards also plays an important role in quality assurance, admissions, and certification. Schools are financed mainly by local governments, based on a central government subsidy adjusted for student and school characteristics and their own funds. Nonpublic institutions are also eligible for public funding.

In the last two decades, the education system has been affected by substantial reforms.³ Of particular importance are changes to the school starting age and changes to school structure.

^a See the Eurydice description of Education in Poland for more detailed information: https://eacea.ec.europa.eu/national-policies/eurydice/content/poland_en

Until 2009, the school entry age was 7. Starting in September 2009, children could begin primary school education at age 6 at the discretion of their parents. At the same time, the age of compulsory participation in one-year preprimary education was lowered from 6 to 5. In September 2014 (the cohort participating in TIMSS 2019 assessment), children born in first six months of 2008 (half of the cohort) were required to start education in first grade, together with the large majority of children age 7. In the following year, all children commenced compulsory schooling in Grade 1 at age 6. As a result, 6 years olds constituted about half of all students in the first grade in school year 2014–2015 and more than 70 percent in the following school year. However, when a new government came into power in 2015, this reform was reversed; starting in September 2016, the starting age for compulsory education was raised from 5 to 6, and the school entry age was raised back to 7.

In 2017, the new government decided to eliminate lower secondary schools and reinstate the previous school structure. This change was legislated in 2016 and implemented in 2017. Education in primary schools was extended from six to eight years, by integrating two years of the prereform three-year lower secondary schools. As the result, sixth graders continued their education in seventh and eighth grade, and lower secondary (Grades 7 to 9) schools were phased out. The last cohort of students finished lower secondary schools in 2019 and are continuing secondary education according to the former curricula. The graduates of primary schools attend secondary schools, which have been extended by one year, and learn according to new curricula. The reform also aimed at modernizing vocational education by increasing the importance of dual vocational training and the cooperation of schools with employers and other business partners.

At present, primary education is organized as a single-structure, eight-year primary school for students ages 6 or 7 to 15. Primary education is compulsory for all children beginning at age 7.

Secondary education (typically for students ages 15 to 18, 19, or 20) consists of the following types of schools:

- Four-year general secondary schools (general lyceum, *liceum ogólnokształcące*)
- Five-year technical secondary schools (*technikum*)
- Three-year Stage I sectoral vocational schools (*szkoła branżowa I stopnia*)
- Two-year Stage II sectoral vocational schools (*szkoła branżowa II stopnia*)

Postsecondary schools offer programs of up to 2.5 years leading to vocational qualifications. They are intended mainly for students ages 19 to 20/21 years who have completed general upper secondary education and want to obtain vocational education.

Higher education programs are offered in public or private institutions, in accordance with the three-cycle Bologna degree structure. Programs at all levels are offered as full-time and part-time programs in both public and nonpublic institutions. Higher education is further divided into university (“academic”) and nonuniversity (“professional,” or “professionally oriented”) institutions.

The core curriculum defines curricular contents and aims, and knowledge, skills, and competencies that students are expected to acquire by the end of primary education and on which

school curricula and textbooks are based. Core curriculum is also used as a framework for external examinations. TIMSS 2019 topics was taught according to the curriculum adopted before the reform,^b and starting in Grade 4, according to the new curriculum.^c A separate regulation defines outline timetables, which list the minimum weekly number of hours to be allocated to subjects in individual grades.^d

The school year begins on the first weekday in September and ends on the first Friday after June 20. The school year is divided into two semesters separated by a winter break. Winter break, which lasts two weeks, is set between mid-January and the end of February, and timing varies between the provinces. Primary school students normally attend school five days a week (Monday through Friday). Each lesson (period/class) typically lasts 45 minutes; however, in Grades 1 to 3, teachers determine the length of each lesson.

Internal assessments are conducted by teachers, and external assessments by Central Examination Board and Regional Examination Boards. Each school adopts its own assessment system based on national legislation. Students are assessed by teachers throughout the school year. Students' learning achievements are assessed by a generalist teacher in Grades 1 to 3 and separately for each subject by subject teachers in Grades 5 to 8. Midyear (semester) and end-of-year marks are based on single marks given during a semester or year. Students in Grades 1 to 3 receive one end-of-year descriptive mark for educational activities and one end-of-year mark for behavior. In Grades 4 to 8, teachers typically use a marking scale of 1 to 6 to assess learning achievements (6: excellent, 5: very good, 4: good, 3: satisfactory, 2: acceptable, 1: unsatisfactory). The school statute may allow descriptive assessment to be used instead in Grade 4. There is a separate mark for behavior (conduct) according to the following scale: excellent, very good, good, acceptable, unacceptable, and inadmissible.

Promotion is automatic in Grades 1 to 3. A student may repeat a year only in exceptional cases justified by the student's level of development, achievements, or health. In Grades 4 to 8, students must receive a positive mark for each compulsory subject or class at the end of the school year to be promoted to the next grade. A student who has received up to two unsatisfactory marks may resit for an exam. In principle, a student who fails this additional

^b *Rozporządzenie Ministra Edukacji Narodowej z dnia 30 maja 2014r. w sprawie podstawy programowej wychowania przedszkolnego i kształcenia ogólnego w poszczególnych typach szkół, Dziennik Ustaw, 2014r., poz. 803 z 18 czerwca 2014* [Ordinance of the Minister of National Education of May 30, 2014, Concerning the National Curriculum for Pre-primary and General Education in All School Types] the Journal of Laws of the Republic of Poland 2014, item 803.

^c *Rozporządzenie Ministra Edukacji Narodowej z dnia 14 lutego 2017r. w sprawie podstawy programowej wychowania przedszkolnego oraz podstawy programowej kształcenia ogólnego dla szkoły podstawowej, w tym dla uczniów z niepełnosprawnością intelektualną w stopniu umiarkowanym lub znacznym, kształcenia ogólnego dla branżowej szkoły I stopnia, kształcenia ogólnego dla szkoły specjalnej przysposabiającej do pracy oraz kształcenia ogólnego dla szkoły policealnej. Dziennik Ustaw, 2017., poz.356* [Ordinance of the Minister of National Education of February 14, 2017 Concerning the National Curriculum for Pre-primary and General Education in Primary schools, including pupils with mental disabilities, General Education for stage I sectoral vocational schools, General Education for schools preparing for jobs and post-secondary General Education] (the Journal of Laws of the Republic of Poland 2017, item 356).

^d *Rozporządzenie Ministra Edukacji Narodowej z dnia 3 kwietnia 2019 r. w sprawie ramowych planów nauczania dla publicznych szkół (Dziennik Ustaw 2019, poz. 639).* [Ordinance of the Minister of National Education of 3 April 2019 on the outline timetables in public schools] ((the Journal of Laws of the Republic of Poland 2019, item 639).

attempt is not promoted to the next grade. However, the school teaching council may promote a student conditionally who has received an unsatisfactory mark in only one subject.

External examinations are carried out by the Central and Regional Examination Boards.⁶ Before the change of school structure, all students took a compulsory external assessment at the end of primary education (after Grade 6). In the new system, the structure of school education requires all students in Grade 8 to take a compulsory exam. This exam assesses the extent to which students meet the requirements set out in the national core curriculum between 2019 and 2021. The exam covers Polish, mathematics, and foreign language. Beginning in 2021, it will include an additional subject of the student's choosing: biology, chemistry, physics, geography, or history. Results of the exam are used, together with school marks and other achievements, in the recruitment process to the secondary schools.

At the end of upper secondary education, graduates can take the matriculation examination (*egzamin maturalny*). This exam certifies the achievement of knowledge and skills defined in a core curriculum and enables entrance to higher education. Higher education institutions use the results of the matriculation examination in a given subject or subjects as criteria in the admission process. Examinations have both written and oral parts. The compulsory examinations are Polish, mathematics, a foreign language, and a selected additional subject. Students in vocational tracks can take vocational examinations (officially termed “examinations confirming vocational qualifications”) intended to evaluate the candidate’s attainment of the required knowledge and skills covered by a single qualification related to a given occupation. Adults can also sit for extramural examinations for different levels of education.

Use and Impact of TIMSS

TIMSS 2011 and TIMSS 2015 national reports were published, and national events were organized to disseminate the results. Because of the lack of representative data on students’ performance in Grade 3 or 4 of the primary school, TIMSS data is an important input into monitoring the quality of education in Poland.

TIMSS 2011 and TIMSS 2015 assessments, together with the results of national assessments conducted in Poland, were important in raising awareness about the strength and weakness of mathematical education in primary schools. TIMSS results were also used in the discussions on homework activities of children.

The Mathematics Curriculum in Primary and Lower Secondary Grades

The core curriculum defines general and specific requirements (learning outcomes) that determine the range of knowledge and skills students are expected to achieve. Each school should follow the core curriculum. It is implemented through school curricula that describe how the aims and contents of education are implemented as part of individual classes. Curricula and syllabi are

⁶ See Central Examination Board website for more details of the examination system: <https://cke.gov.pl/en/>

developed individually by teachers or in collaboration with colleagues. More often, however, they choose or adapt curricula developed by other authors; typically, these curricula accompany the textbooks available on the market. A curriculum should be approved by the head of a school upon consultation with the teaching council. In implementing curricula, teachers may choose textbooks from a list approved by the Minister of National Education or choose to use other educational resources or exercise materials instead of textbooks.

Mathematics is a mandatory subject area at all education levels and in all types of schools. It is part of the curriculum for the first stage of education (Grades 1 to 3) and taught as separate subject starting from Grade 4 (with four class hours per week in Grades 4 to 8).

The curriculum for Grades 1 to 3 assumes education based on multifunctional activities with functional, methodical, and content integration. Consequently, national regulations do not specify how much time should be dedicated to mathematics education. In the curriculum followed by the TIMSS 2019 cohort, the objective for teaching mathematics in Grades 1 to 3 is “providing children with knowledge and skills needed in everyday life and at school and helpful with solving problems.”

Mathematics instruction at this level includes:

- Spatial relations, ordering, and classification
- Counting (counting objects, independence of the number of objects from the counting method, comparing sizes of sets)
- Number notation up to 1,000 (including decimal notation)
- Arithmetic operations (addition, subtraction, multiplication, and division)
- Measuring, weighing, counting money, and using the calendar
- Describing concrete situations with mathematics, solving single-operation and simple multiple-operation word problems
- Geometric figures (e.g., triangles, squares, rectangles, and circles)

In the new core curriculum for Grades 1 to 3, implemented for cohorts starting primary schools in 2017, general objectives of the core curriculum distinguish four areas of development: physical, emotional, social, and cognitive. The area of cognitive development defines two skills specific to mathematics:

- An ability to understand basic mathematical concepts and operations, independently use them in various life situations, initial mathematization along with a description of words, images, and symbol
- An ability to read simple mathematical texts (e.g., text tasks, puzzles and riddles, symbols)

The core curriculum for Grades 1 to 3 also lists more specific learning outcomes divided into six areas of achievement (number of learning outcomes and examples of specific learning outcomes in parentheses):

- Understanding spatial relations and size characteristics (3)
- Understanding numbers and their properties (4)

- Use of numbers (4)
- Reading mathematical texts (4)
- Understanding geometric concepts (4)
- Application of mathematics in life situations and in other areas of education (9)

Changing the school structure in 2017 required the adaptation of the core curriculum for second stage of primary school curriculum (Grades 4 to 8). Objectives and specific learning outcomes are defined separately for Grades 4 to 8 and 7 to 8 without distinguishing objectives for each grade. The core curriculum did not change radically, and most of the changes involved the simple transposition of learning outcomes from the previous curriculum of Grades 4 to 6 (prereform, second stage of primary school curriculum) and Grades 7 to 9 (prereform lower secondary school). However, some new learning outcomes were added, and some more advanced learning outcomes previously listed for lower secondary schools (7 to 9) were dropped and moved to the secondary school curriculum (e.g. exponentiation, functions, systems of linear equations, volume and surface of cylinder, cones and spheres).

The following general objectives should be achieved by the end of the second stage of primary school curriculum (Grades 4 to 8):

- Arithmetic fluency (*sprawność rachunkowa*)
 - Performing simple calculations in memory or in more difficult activities in writing and using these skills in practical situations
 - Verifying and interpreting the results obtained and evaluating the solution
- Use and creation of information
 - Reading and interpreting data presented in various forms and their processing
 - Interpreting and creating mathematical texts and graphical representation of data
 - Using mathematical language to describe reasoning and results obtained
- Use and interpretation of representation
 - Using simple, well-known mathematical objects, interpreting mathematical concepts, and operating mathematical objects
 - Choosing a mathematical model for a simple situation and building it in various contexts, also in a practical context
- Reasoning and argumentation
 - Performing simple reasoning, providing arguments justifying the correctness of reasoning, distinguishing between proof and example
 - Seeing regularities, similarities, and analogies, and drawing conclusions based on them
 - The use of strategies resulting from the task content, creating strategies to solve the problem, also in multistage solutions and in those that require the ability to combine knowledge from different branches of mathematics

Expected learning outcomes for Grades 4 to 6 are grouped into 14 areas (number of specific learning outcomes in brackets): natural numbers in the decimal positional system (5); actions on natural numbers (17); integers (5); fractions and decimals (14); elements of algebra (2); lines and line segments (5); angles (6); polygons (8); shapes (5); calculations in geometry (7); practical calculations (9); and elements of descriptive statistics (2).

The Science Curriculum in Primary and Lower Secondary Grades

Science is a mandatory content area at all education levels and in all types of schools. In six years of primary school, science is not distinguished as separate subject in Grades 1 to 3. At this stage, science education is expected to yield 10 learning outcomes (written in “can do” statements). Among these outcomes are research skills (e.g., students observe and conduct simple scientific experiments, analyze them, and associate the reason with the result), explanations (e.g., students explain how natural phenomena depend on the seasons), knowledge of facts (e.g., students name body parts and internal organs of humans and animals), and practical knowledge (e.g., students know the basic rules of healthy nutrition and the basic threats in the world of plants and the world of animals, and actively participate in environmental protection in their local area).

In Grades 4 to 6, science topics are integrated into one subject: Nature (*przyroda*). Separate science subjects are introduced in lower secondary schools (Grades 7 to 9) and upper secondary schools. Exhibit 1 lists the number of class periods for each subject in Grades 4 to 8.

The curriculum introduced in 2017 for eight years of primary school, maintained the integrated teaching of different subjects in Grades 1 to 3. The subject Nature was maintained only in Grade 4 with separate science subjects starting in Grade 5 (biology and geography) and Grade 7 (chemistry and physics). In addition, the school subject “technics” is taught in Grades 4 to 8, and includes some concepts and skills related to science.

Exhibit 1: Weekly Number of 45-minute Science Classes of Subjects by Grade

Subject	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Nature	2	-	-	-	-
Geography	-	1	1	2	1
Biology	-	1	1	2	1
Chemistry	-	-	-	2	2
Physics	-	-	-	2	2
Technics	1	1	1	-	-

In Grades 1 to 3, science is part of the integrated teaching content and does not have a dedicated number of hours of instruction. According to the core curriculum of 2012, which applied to TIMSS 2015 and 2019 students, teaching and learning were expected to yield 10 learning outcomes (written in “can do” statements). Among these outcomes were research skills (e.g., students

observe and conduct simple scientific experiments, analyze them, and associate the reason with the result), explanations (e.g., students explain how natural phenomena depend on the seasons), knowledge of facts (e.g., students name body parts and internal organs of humans and animals), and practical knowledge (e.g., students know the basic rules of healthy nutrition and the basic threats in the world of plants and the world of animals, and actively participate in environmental protection in their local area).

The 2017 curriculum, followed by a younger cohort than the cohort participating in TIMSS 2019, is more specific. General objectives distinguish four areas of development: physical, emotional, social, and cognitive. The area of cognitive development defines the following science skills: the ability to observe facts and natural, social, and economic phenomena; perform experiments; formulate conclusions and observations; and understand the relationship between components of the natural environment. The curriculum for Grades 1 to 3 also define 31 learning outcomes grouped into three achievement areas (with the number of learning outcomes in parentheses):

- Understanding the natural environment (8)
- Human life functions, health protection, safety, and rest (15)
- Understanding geographical space (7)

The core curriculum emphasizes the need to organize activities that support the perception of the natural environment and its exploration, the opportunity to learn the values and interrelationships of components of the natural environment, learning the values and norms that source a healthy ecosystem, and behaviors resulting from these values.

Before 2017, the curriculum for Nature in primary school did not distinguish specific objectives and requirements for each grade, defining them for Grades 4 to 6. This core curriculum was followed by TIMSS 2015 students. The new curriculum introduced in 2017 and applicable to the TIMSS 2019 cohort distinguished the subject Nature only in Grade 4. The objectives and requirements were therefore narrowed down compared with the previous curriculum, although they were made more detailed, and their number increased in some grades. The core curriculum lists objectives (general requirements) and content (detailed requirements).

Objectives are divided into three sections: knowledge, skills, and attitudes.

- Knowledge includes the following objectives:
 - Mastering the basic vocabulary of nature (biological, geographical, with elements of physical and chemical vocabulary)
 - Understanding the ways to conduct observations and orientation in the field
 - Learning plans and maps as sources of geographical information
 - Understanding the systems building the human body (bone, respiratory, digestive, blood, reproductive, nervous)
 - Understanding the natural and anthropogenic components of the environment, understanding the simple relationships between these components

- Understanding the features and changes in the landscape in the immediate vicinity of the school
- Skills include:
 - Conducting observations and measurements in the field, including the use of various aids (plan, map, magnifying glass, compass, tape measure, binoculars, etc.)
 - Performing observations and experiments in accordance with the instructions (verbal, textual and graphic), properly documenting them and presenting the results
 - Analyzing, describing, comparing, classifying, using various sources of information (e.g. personal observations, research, experiments, texts, maps, tables, photographs, films, information and communication technologies)
 - The use of acquired knowledge about the structure, hygiene of own body in everyday life
 - Applying the principles of caring for your own health, including disease prevention
 - Indicating the adaptation of organisms to the living environment and obtaining food
 - Recognizing the relationships between individual components of the natural environment, as well as between components of the environment and human activity
- Attitudes include:
 - Careful observation of natural phenomena, accurate and meticulous conducting of experiments, using the instructions when making measurements and experiments, taking notes and processing the results
 - Recognizing the multilateral value of nature in integral human development
 - Responding appropriately to life-threatening dangers
 - Improving the ability to care for your own body and immediate surroundings
 - Developing sensitivity to all manifestations of life
 - Improving communication, cooperation, and action skills as well as leadership skills
 - Adopting attitudes of shared responsibility for the state of the natural environment by appropriate behavior in the natural environment; shared responsibility for the state of the immediate area; activities for the local environment; sensitivity to the beauty of nature; the order and aesthetics of developing the immediate area; and conscious actions for environmental and nature protection

Specific learning outcomes (detailed requirements) are in practice more important in shaping textbooks and instruction. They are divided into seven areas (with the number of learning outcomes and their examples in brackets):

- Ways to learn about nature (6)
- Orientation in the field (11)
- Weather, components of weather, and observation of weather (8)
- Me and my body (6)
- Me and my surroundings (10)

- The environment in my neighborhood (13)
- Anthropogenic environment and the landscape in the immediate vicinity of the school (9)

The core curriculum of Nature emphasizes outdoor activities, which includes trips outside of school (these trips need not be distant and may include, for example, a visit to the school playground, the road in front of the school, or a park). This subject has a practical focus on the neighboring environment that is also present in the learning outcomes for Grades 1 to 3.

In Grades 5 to 8, science is divided into four subjects: geography, biology, chemistry, and physics. Their content combines the topics covered in the previous Nature curriculum and specific subjects in primary school and lower secondary school. Compared with the previous core curriculum, some of the content is more detailed, and some content was reduced. Similar to the inquiry-based learning in the previous core curriculum, this curriculum emphasizes the use of observation and experiments.

The curriculum thoroughly describes the teaching objectives for each subject. It describes biology, for example, in terms of the following five objectives (general requirements):

- Searching for, using, and producing information
- Reasoning and argumentation
- Methodology of biological research
- Biological diversity and basic biological processes
- Conditions of human health

The expected learning outcomes for biology are organized under the following units (with the number of specific skills listed in curriculum in parentheses):

- Organization and life chemistry (10)
- Diversity of life (87)
- Human body (69)
- Homeostasis (4)
- Genetics (11)
- Evolution of life (3)
- Ecology (9)
- Threats to biodiversity (4)

The other science subjects are described in a similar way.

Professional Development Requirements and Programs

In-service teacher training is not obligatory. However, pursuant to legislation, teachers should continuously expand their knowledge and skills, and career advancement includes an assessment of each teacher's professional achievements, based on the implementation of an agreed-upon

professional development plan. Teachers have ample opportunities for professional development. Universities offer postgraduate courses for teachers seeking to qualify to teach additional subjects, and every province has a public in-service education center. Commercial education firms also offer shorter or longer courses. Although teachers are not obligated to attend, attendance in many kinds of professional development courses counts toward promotion. Teachers are required to participate in workshops at school, devoted to issues such as formative assessment, personal development, cooperation with parents, and first aid.

Monitoring Student Progress in Mathematics and Science

The performance and progress of students are assessed regularly by teachers throughout the school year. Students are assessed separately in each subject by their subject teachers. Teachers collect information on student achievement in a form based on the assessment system adopted in a given school. Cumulative assessment results from the entire school year are taken into account in the end of term (midyear) and end of year assessments. In Grades 1 to 3, these summative assessments are descriptive in nature and address students' academic and social achievements, as well as their strengths and weaknesses. Polish law does not permit the use of conventional grades.

Starting in the fourth grade, teachers assess student achievement based on a grading scale of 1 to 6. School grades and assessment criteria should be made available to students and their parents.

Students take their first external examination in the final grade of primary school (Grade 8, and modal age 15) and in general and technical education; their second exam (Matura) is taken at the end of secondary school (Grade 12, age 19).

The Matura exam assesses the extent to which students fulfil the requirements set for each subject in the national core curriculum. It has replaced entrance exams at higher education institutions where results of the Matura exam are the key admission criteria. The oral part includes compulsory exams in the Polish language and a modern foreign language (and in a national minority language for students in schools and classes where a given national minority language is the language of instruction). The level of the exam (basic or extended) is not predefined.

The written part consists of compulsory exams at the basic level in the Polish language, mathematics, and a modern foreign language (and a national minority language for students in schools and classes where a given national minority language is the language of tuition). Additionally, students should choose at least one additional subject (and may choose up to six subjects) for an exam at the extended level. These subjects include biology, chemistry, philosophy, physics, geography, history, history of music, history of art, information technology, Latin and ancient culture, a minority language (ethnic or national), a modern foreign language, Polish language, regional language, mathematics, and knowledge about society.

Special Initiatives in Mathematics and Science Education

Competitions organized by organizations have a prominent role in the school systems. Achievements in competitions are recognized by the Ministry or regional education authorities. They can be listed in school-leaving certificates and are used in admissions to higher levels of schooling.

Polish schools actively engage in international science-related events such as Earth Day or Landscape Day. A number of special initiatives are also initiated by Polish nongovernment organizations and research institutions. The Science Picnic is Europe's largest outdoor event aiming to promote science. Since 2008, the Science Picnic has been organized jointly by Polish Radio and the Copernicus Science Centre. Every year, it attracts crowds of visitors to Warsaw. Scientific institutions, universities, research institutes, museums, cultural institutions, foundations related to science, and science clubs present their achievements and reveal behind-the-scenes aspects of their everyday work. They present science to audiences of various ages in ways that are easily understood with the aid of experiments, demonstrations, and interactive exhibits.

The 23rd Science Picnic, People and Machines event was held at the National Stadium in May 2019. Holding the event at the National Stadium made participation comfortable and convenient for scientists and visitors and helped the event achieve a higher turnout than in previous years. The exhibits presented by research institutions and science demonstrators from Poland and around the world occupied nearly the entire outer ring of the National Stadium, the access routes to the ring, and some of the rooms within the building itself. The event attracted more than 100,000 visitors.

Between 2013 and 2015, the Copernicus Science Centre in cooperation with the Educational Research Institute conducted a project called Science Lab. The project consisted of several elements, including an evaluation of science education in Polish schools (i.e., the organization of the science teaching process, methods most often used by science teachers, teaching aids, teaching objectives, and learning outcomes of the science curriculum), the preparation of teaching materials (i.e., lesson scenarios and a database of good practices for science teachers to use during lessons outside the classroom), the preparation of guidelines for local authorities on what kind of science equipment would be most useful for science teachers in schools, and the preparation of guidelines for teachers, school directors, and the Ministry of Education. The Copernicus Science Centre has continued to support teachers by organizing teacher training workshops and activities, and promoting science teaching and learning in Poland. It also targets children and youth at all ages. Examples include the Young Explorer Clubs program consisting of over 180 clubs, and support for the development of smaller science centers across Poland.

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