



# PISA 2009 FAQ



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**cmecc**

Council of  
Ministers  
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Conseil des  
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(Canada)

# PISA 2009 FAQ

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# What is PISA?

The Programme for International Student Assessment (PISA), first undertaken in 2000, is a survey of the knowledge and skills of 15-year-olds and one of the most ambitious international educational projects ever undertaken.

Coordinated by the Organisation for Economic Co-operation and Development (OECD), PISA draws on leading international expertise to develop valid comparisons across countries and cultures and provides education researchers

and policy makers with comprehensive international data in three core learning areas, reading, mathematics, and science.

PISA 2009 involved approximately 470,000 students from 65 countries and economies. The focus for PISA 2009 was reading, but the assessment also included mathematics and science, and collected data on student, family, and school factors that can help explain differences in performance.

# Why does Canada participate in PISA?

Canada has chosen to participate in PISA to ensure that provinces can evaluate the success of their education systems in comparison to each other and to countries and economies around the world.

PISA 2009 will be a valuable resource for education researchers and government policy makers who wish to study and propose improvements to Canada's systems of education. The federal government will also conduct analyses of PISA data sets, as will provinces, who will undertake analyses pertinent to their unique educational circumstances.



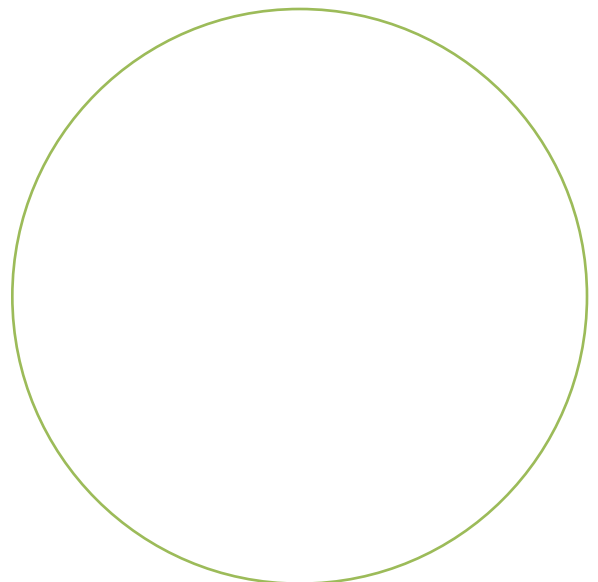
## What is the cost of PISA?

Most of the direct costs for PISA are assumed by HRSDC, while indirect costs are taken on by participating provinces. In each of three years of the latest cycle of PISA, the direct cost was approximately \$2.4 million.

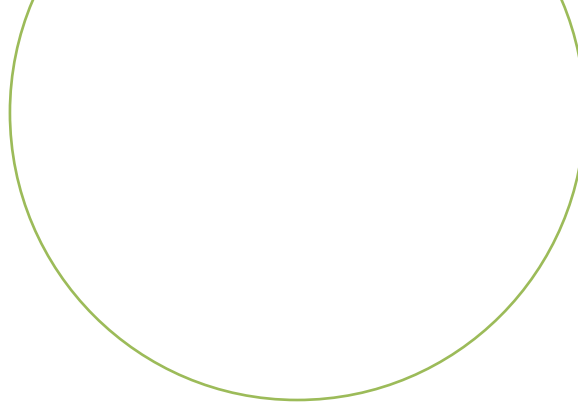


## Who are the Canadian partners involved in PISA?

The Council of Ministers of Education, Canada (CMEC), Human Resources and Skills Development Canada (HRSDC), and Statistics Canada are partners in administering PISA and in producing the Canadian report.







## What is the PISA assessment cycle?

PISA operates on a nine-year cycle that allows for comparison of results over time in all three domains, reading, mathematics, and science. This data helps participating countries and economies — and Canadian provinces — understand how

the performance of their education systems may have changed from one point in time to another. Each PISA assessment has a major domain or focus and two minor domains. The major domain (shown in green) changes every three years.

2000	<b>Reading</b>	Math	Science
2003	Reading	<b>Math</b>	Science
2006	Reading	Math	<b>Science</b>
2009	<b>Reading</b>	Math	Science
2012	Reading	<b>Math</b>	Science
2015	Reading	Math	<b>Science</b>



# What is the difference between the OECD PISA report and the Canadian report?

The OECD PISA report focuses on the results for each country and economic region that has chosen to participate in the assessment. It also offers detailed quantitative and qualitative information on personal and school factors that influence a student's performance in reading.

Canada releases its own companion report at the same time as the OECD report to provide further information on

student performance at the provincial level and to show comparative results among Canadian provinces and other countries and economies. The Canadian report also provides performance results for English- and French-language systems.

A second Canadian report providing quantitative and qualitative information at the provincial level on personal and school factors that influence a student's performance in reading will be released in spring 2011.

# Who from Canada participated in PISA 2009?

In Canada, approximately 23,000 15-year-old students from 1,000 different schools took part in PISA 2009. The total number of students who participated from each province is outlined in Table A.2 of

the Canadian report. Currently, Yukon, Northwest Territories, and Nunavut do not participate in PISA, nor do Aboriginal students from band-operated schools.





## How can student performance among countries, economies, and Canadian provinces be compared?

Educational systems and school programs differ from one jurisdiction to another, so comparing results can be a complex task. PISA allows a variety of education systems to be compared according to a set of common benchmarks in reading, mathematics, and science. These benchmarks have been established through extensive consultations with OECD participant countries and with the guidance of statisticians,

psychometricians, and other pedagogic experts from around the world.

By agreeing to the common benchmarks developed by PISA to evaluate student achievement, Canadian provinces — as well as OECD countries and economies — are able to determine their relative performance in relation to other PISA participants, even if their approaches to education differ.

## How can we compare average scores?

Because scores were based on samples of students from each country and province, we cannot say with complete certainty that these scores are the same as those that would have been obtained had all 15-year-olds been tested. A “confidence interval” is a range of scores within which the score for the population is likely to fall 95 per cent of the time or 19 times out of 20.

When comparing two countries or two provinces, the two average scores cannot be said to be different from each other if the confidence interval for the two average scores overlaps. For example, countries performing about the same as Canada have a confidence interval for the average score that overlaps with Canada’s confidence interval. In such cases, it would not be statistically valid to say that one performs better than the other.



## How does PISA define reading literacy?

In PISA, the term “reading” is used for “reading literacy” by which is meant the active, purposeful, and functional application of reading in a range of situations and for various purposes. To quote from the OECD definition, “Reading is understanding, using, reflecting on, and engaging with written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society.”



## What are the levels of reading achievement?

Reading achievement was divided into six levels representing a group of tasks of increasing difficulty, with Level 6 as the highest and Level 1 as the lowest. A difference of one level can be considered an important difference in student performance.





# How does PISA define mathematical literacy and scientific literacy?

Mathematical literacy is defined as the capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments, and to use and engage with mathematics in ways that meet the needs of that individual's life.

Scientific literacy is defined in PISA as an individual's capacity to use scientific knowledge, to identify questions, and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and changes made to it through human activity.

# Is the assessment fair to students across Canada?

Canada's active participation in PISA ensures that the unique qualities of our country's education systems are taken into account. Factors such as linguistic differences, rural and urban school locations, and cultural influences were all considered in the design of the assessment. In addition, the universal framework for each subject incorporates an agreed-upon philosophy for all countries that is based upon the latest pedagogical research.

In the sense that Canadian students answered the same questions as students from every other country, it is very fair. The assessment is also unique in that it is not tied to the curriculum of any province or participating country or economy but is instead a fair measurement of students' abilities to use their learning skills to solve real-life situations. It measures learning outcomes; it does not attempt to assess approaches to learning.



# What did we learn from the 2009 assessment?

Some of the key findings about the performance of our students include the following:

- As in 2000, 2003, and 2006, Canadian 15-year-old students achieved top-tier ranking in 2009 in reading, mathematics, and science.
- In combined reading, only students in Shanghai-China, Korea, Finland, and Hong Kong-China performed significantly better than Canadian students in average scores.
- In mathematics, only seven countries/economies performed better than Canada in average scores; in science, only six performed better.
- Over the four administrations of the assessment which has taken place since 2000, Canada's results in mathematics and science have remained stable. However, some countries and economies have improved their overall scores over time and thus improved their ranking over Canada's.
- Canada has a larger proportion of high achievers and a smaller proportion of low achievers compared to the OECD average.
- Canada is one of the few countries that combines high PISA scores with high equity, meaning that there is a relatively small gap between the highest and lowest performing students. This is an important indicator of the equity of Canadian educational outcomes.
- In reading, girls continue to outperform boys. The Canadian results mirror OECD findings.
- In mathematics, boys outperform girls, but the difference is smaller than the gender difference favouring girls in reading. Once again, the Canadian results mirror OECD findings.
- In science, Canadian boys outperform girls only slightly; however, on average across OECD countries, boys and girls have similar performance.
- In most provinces, students attending majority-language school systems outperform students who attend minority-language systems.



# When will the next PISA assessment take place?

PISA will be administered again in 2012. In addition to the areas of mathematics, science, and reading, students will also be assessed on their problem-solving skills through the use of a computer-based assessment.

