COUNTRY NOTE

PROGRAMME FOR INTERNATIONAL STUDENT ASSESSMENT (PISA)
RESULTS FROM PISA 2015

URUGUAY

Key findings

- While student performance remains below the OECD average in science, reading and mathematics, Uruguay saw modest but significant improvements in performance in 2015. Improvements are particularly visible in reading, where both Uruguay's mean score and its ranking among Latin American countries improved between 2009 and 2015 (Figure I.4.1 and Table I.4.4a). Science performance improved and returned to 2006 levels, after a significant decline was observed between 2006 and 2012 (Figure I.2.21 and Table I.2.4a). Mathematics performance was in line with previous rounds of PISA, although between 2012 and 2015, Uruguay caught up to Chile's mean score and overtook Mexico's (Figure I.5.3 and Table I.5.4a).

- Grade repetition is frequent, in Uruguay, particularly among disadvantaged students and in schools where students are, on average, more disadvantaged. About one in three 15-year-old students in Uruguay had repeated a grade, the fourth highest percentage across PISA-participating education systems (Figure II.5.5).

Student performance in science

- Students in Uruguay score 435 points in science, on average (Table I.2.3) – significantly below the OECD average and Chile, but above other countries in the Latin American region participating in PISA (Brazil, Colombia, Costa Rica, the Dominican Republic, Mexico and Peru) (Figures I.2.13 and I.2.14).

- Uruguay's mean performance significantly improved from 2012: the negative trend in science performance observed in Uruguay between 2006 and 2012 has been reversed in 2015 (Table I.2.4a). And while no significant difference is observed between 2006 and 2015 mean scores, the lowest-performing students in Uruguay have improved their performance by 20 score points, on average, narrowing the gap with the highest-performing students (Table I.2.4c, online only).

- On average, across OECD countries, just over 20% of students do not reach the baseline level of proficiency in science, Level 2. At this level, students can draw on their knowledge of basic science content and procedures to identify an appropriate explanation, interpret data, and identify the question being addressed in a simple experiment. All students should be expected to attain Level 2 by the time they leave compulsory education. However, the share of low-performing students in Uruguay is two times that of the OECD average – 41% – and has not decreased significantly between 2006 and 2015 (Table I.2.2a).

- Some 8% of students across OECD countries are top performers in science, meaning that they are proficient at Level 5 or 6. At these levels, students can creatively and autonomously apply their scientific knowledge and skills to a wide variety of situations, including unfamiliar ones. The

share of top-performing students in Uruguay is well below the OECD average (1.3%) and has not increased between 2006 and 2015 (Table I.2.2a).

- Boys outperform girls in science by an average of 9 points in Uruguay – a significant gender gap. This is a change from 2006, the last time science was a major domain, when no gender gap was observed (Tables I.2.8a and I.2.8d). Moreover, the share of top-performing boys in science (1.7%) is about twice as large as the share of top-performing girls (0.8%) (Table I.2.6a).

Student performance in reading

- On average, students in Uruguay score 437 points in reading (Table I.4.3), below the OECD average and Chile, but above other countries in the Latin American region participating in PISA (Brazil, Colombia, Costa Rica, the Dominican Republic, Mexico and Peru) (Figure I.4.1).

- Uruguay's mean performance has improved since 2009, when reading was the main domain, from 426 to 437 score points, with an average improvement of 5 score points every three years. (Table I.4.4a). Moreover, Uruguay overtook Mexico and Costa Rica (whose mean scores were similar to and above Uruguay's in 2009, respectively) (Figure I.4.4).

- About 20% of students in OECD countries, on average, do not attain the baseline level of proficiency in reading, considered the level at which students begin to demonstrate the reading skills that will enable them to participate effectively and productively in life. In Uruguay, 4 in 10 students (39%) perform below Level 2 in reading (Table I.4.2a).

- Across OECD countries, 8.3% of students are top performers in reading, meaning that they are proficient at Level 5 or 6. At these levels students can find information in texts that are unfamiliar in form or content, demonstrate detailed understanding, and infer which information is relevant to the task. They are also able to critically evaluate such texts and build hypotheses about them, drawing on specialised knowledge and accommodating concepts that may be contrary to expectations. Only about 1 in 40 students (2.5%) in Uruguay is a top performer.

- On average, across OECD countries, boys are more likely than girls to perform below Level 2 in reading. Uruguay follows this trend with 45% of boys, but only 34% of girls scoring below Level 2. However, equal shares of boys and girls score at the highest levels in reading (at or above Level 5), different from the OECD average, where more girls than boys perform at the highest levels (Table I.4.6a).

Student performance in mathematics

- Students in Uruguay score, on average, 418 points in mathematics (Table I.5.3) – below the OECD average but comparable with Chile, and above other countries in the Latin American region participating in PISA (Brazil, Colombia, Costa Rica, the Dominican Republic, Mexico and Peru) (see Figure I.5.1).

- Uruguay's mean performance has not changed significantly since 2003 (Table I.5.4a). However, whereas the mean performance was significantly below that of Chile and similar to Mexico's in 2012, Chile and Uruguay now share similar levels of performance in mathematics in 2015, above the performance of Mexico (Figure I.5.4).

- On average across OECD countries, almost one in four students (23.4%) does not reach the baseline Level 2 of proficiency in mathematics. Students who do not reach this level can sometimes carry out a routine procedure, such as an arithmetic operation, in situations where all the instructions are given to them, but have difficulty recognising how a (simple) real-world situation can be represented mathematically (e.g. comparing the total distance across two

alternative routes, or converting prices into a different currency). In Uruguay, the number of low-performing students is double that of the OECD average, with 52% of students performing below Level 2, a similar percentage as in previous PISA rounds.

- Around one in ten students in OECD countries is a top performer in mathematics, on average. In Uruguay, only 1.7% of students are top performers.

- Boys outperform girls in mathematics by an average of 14 points, similar to the OECD average. This gender gap has remained stable over time (Tables I.5.8a, I.5.8b and I.5.8d).

Context for student achievement

In 2014, Uruguay's per capita GDP was less than half the OECD average, after accounting for purchasing power parities (Table I.2.11). Uruguay spends only about one-third of the OECD average expenditure per student between the ages of 6 and 15, slightly more than Mexico but less than Chile. If Uruguay had the same per capita GDP as the OECD average, its mean score in science would have been 463 points – 28 points higher than its actual score, but still below the OECD average.

Some 72% of 15-year-olds in Uruguay are covered by the PISA sample, similar to Brazil (71%), Colombia (75%) and Peru (74%), but below Chile (80%) (Table I.6.1). Students covered by the PISA sample include all 15-year-olds who are enrolled in grade 7 and above on the day of the test. Coverage estimations may differ from administrative enrolment rates because they are calculated from information directly collected from schools on the number of 15-year-olds enrolled at the time of the PISA test. They do also account for school and student exclusions from the sample, e.g. due to disability or limited language proficiency. Such exclusions are very rare in Uruguay, representing less than 0.1% of the overall enrolment.

The share of 15-year-olds covered by the PISA sample has shown an increasing trend over time – from about 65% on average in the earlier PISA rounds (2003, 2006 and 2009) to well above 70% in PISA 2012 and 2015. This positive development may reflect reduced drop-out rates prior to age 15. PISA results and their change over time need to be carefully interpreted when considering countries/economies with a low or changing coverage rate.

Education policies and practices

Resource allocation

Equitable resource allocation means that the schools attended by socio-economically disadvantaged students are at least as well-equipped as the schools attended by advantaged students, to compensate for inequalities in the home environment. However, based on school principals' reports, in 26 countries and economies, including Uruguay, advantaged schools are better equipped than disadvantaged schools (Table II.6.3).

Grade repetition

Grade repetition is more prevalent in school systems where students score lower on the PISA science assessment and where students' socio-economic status is most strongly associated with science performance. Students might have been kept back to repeat course content that they had not fully mastered. In 13 countries and economies, at least 30% of students had repeated a grade at least once in primary or secondary education. The percentage of students in Uruguay who had repeated a grade (35% of students) is one of the largest among countries and economies participating in PISA 2015 (Table II.5.9).

Students in disadvantaged schools are more likely to have repeated a grade almost everywhere, including in Uruguay, where more than 60% of students enrolled in disadvantaged schools had repeated a grade, compared to just 6% of students in advantaged schools (Table II.5.12).

Many people would agree that performance, behaviour and motivation are legitimate reasons for deciding which students repeat a grade; and the data clearly show these associations. What is more troubling is that, even after accounting for students' academic performance, behaviour and motivation, in Uruguay, boys and students from a more disadvantaged socio-economic background are significantly more likely than girls and more advantaged students to have repeated a grade (Table II.5.13 [on line]).

Interpreting trends in performance in PISA

For the first time in 2015, 57 countries and economies conducted the PISA assessment on computers (including all OECD countries and all Latin American countries participating in PISA, except Argentina). In order to reflect the move to computer-based testing, align PISA with progress in scaling methodologies and take advantage of increased computational power, changes were also made to the test design, administration, and scaling (how students answers are assessed in order to produce a comparable score across students taking different tests). The "Readers' Guide" and Annex A5 of the *PISA 2015 Initial Report (Volume I)* (OECD, 2016) explain these changes in detail.

Changes in scaling methodologies, test design and test administration introduce an uncertainty about trend comparisons across PISA cycles. Specifically, the *link error* quantifies the uncertainty around the comparability of PISA scores over time. In PISA 2015, the link error was estimated by computing an *approximate* country mean score for past PISA rounds with as close a methodology as possible to the PISA 2015 methodology. These rescaled results, discussed in Annex A5 of the initial report, do not overwrite existing results for individual countries but are produced for the purpose of quantifying the uncertainty around trend estimates. And because they are produced during a preliminary scaling step, only students who responded to PISA questions for each domain contribute to these means. In countries with high levels of non-response to the PISA test and for years in which a domain was assessed as a minor domain, the preliminary average used to quantify the link error may differ significantly from the final average that also accounts for the non-respondents

All results reported in Chapters 2 (science), 4 (reading) and 5 (mathematics) and in this country note take into account the uncertainty of the link between the PISA 2015 scale and prior PISA results. Changes in performance that are reported as significant are larger than the difference in scores that could be expected as a result of methodological changes and sampling variability alone, when in fact no true change exists. The same criteria for assessing the significance of trends are applied to all countries. The confidence in the trend can also be quantified by looking at the "p-value" for the trend estimate, which represents the probability that a trend reflects statistical noise, rather than true change; the lower the p-value, the higher the confidence that a true change exists. The p-value for the average three-year trend in Uruguay is 58% in science, 3.2% in reading and 8% in mathematics (Tables I.2.4a, I.4.4a and I.5.4a).

Among the changes in scaling methodology, missing responses at the end of the test (so-called "non-reached items") were treated differently in PISA 2015. In past PISA paper-based assessments, items that the student left unanswered at the end of the test were marked wrong, when estimating students' proficiency. But, in 2015, they were not considered part of the test, also reflecting the fact that in computer-based tests students were required to complete the test in the given sequence and did not see these questions they left out at the end. High and varying levels of non-reached items are a major source of uncertainty in trend comparisons. Trend comparisons that appear in Chapters 2, 4 and 5 of the international report and in this country note account for this uncertainty through standard errors that include a link error.

In past rounds, many students in Uruguay were not able to finish the test; perhaps as a result of the changes in test design and administration, the share of students in Uruguay who did not complete the test was significantly reduced in 2015 in comparison to previous rounds. Table 1 shows how the percentage of non-reached items has changed over time. All figures are computed on trend items only – i.e. items that are common across multiple assessments and that were considered equivalent across paper – and computer-based administration in 2015. Panel A, which compares 2015 to the last time each domain was a major focus of the PISA assessment, shows that the proportion of non-reached items dropped, in all domains, from over 8% in prior cycles (meaning that, on average, 8% of the questions at the end of the test were left unanswered by students) to less than 2.5%. This average masks significant variation among students, with low-achieving students usually having higher-than-

average shares of non-reached items.

Table 1 also shows how the percentage of correct answers in the PISA test changed over time. This change can be assessed in two ways: Method A counts non-reached items as incorrect, as is the typical practice in school exams; Method B considers, instead, non-reached items as if they were not administered. In method B, students are not penalised if they do not reach the end of the PISA test. The values computed with Method A, which is analogous to the scaling rule applied in PISA until 2012, closely match the trends reported for Uruguay in this country note and in Chapters 2, 4 and 5 of *PISA 2015 Results (Volume I): Excellence and Equity in Education*. In particular, they confirm the improvements observed in student performance in reading, and show that science performance improved over 2012 levels and returned to the 2006 levels. Mathematics results, in contrast, are stable between 2012 and 2015 when considering the larger set of items in Panel A. It is important to note that the increase in the percentage of correct answers in reading (compared to 2009, in Panel A) and in science (compared to 2012, in Panel B) is larger than what could be expected if the reduction in non-reached items was due solely to students providing guess answers to multiple-choice questions.

Table 1: Percentage of correct and non-reached trend items in the PISA 2003-2015 tests (Uruguay).

Panel A: major-to-2015 changes

Correct answers (%)	Science (58 trend items)			Reading (50 trend items)			Mathematics (41 trend items)		
	Correct answers (%)		Non-reached items (%)	Correct answers (%)		Non-reached items (%)	Correct answers (%)		Non-reached items (%)
	Method A	Method B		Method A	Method B		Method A	Method B	
2006	37.7	40.9	8.5						
2009				49.4	53.4	8.8			
2012							30.1	32.6	8.6
2015	37.5	38.3	2.4	52.1	53.2	2.3	30.9	31.5	2.3

Panel B:cycle-to-cycle changes

Correct answers (%)	Science (36 trend items)			Reading (23 trend items)			Mathematics (13 trend items)		
	Correct answers (%)		Non-reached items (%)	Correct answers (%)		Non-reached items (%)	Correct answers (%)		Non-reached items (%)
	Method A	Method B		Method A	Method B		Method A	Method B	
2003							34.1	38.3	13.0
2006	38.4	41.8	9.2				32.8	36.0	11.0
2009	38.2	41.2	7.9	42.3	45.9	9.2	33.9	35.8	6.7
2012	36.2	39.5	9.1	40.6	44.2	9.5	31.5	33.8	8.4
2015	39.0	39.8	2.2	44.8	45.6	2.0	34.3	34.7	1.3

Note: Method A includes "non-reached" items in the computation of the percentage of correct answers (PISA 2003-2012 approach); Method B ignores "non-reached items" (PISA 2015 approach). The number of items in each panel and for each domain corresponds to the largest number of trend items common to all assessments for which results are reported.

Snapshot of performance in science, reading and mathematics

Countries/economies with a mean performance/share of top performers **above** the OECD average
Countries/economies with a share of low achievers **below** the OECD average

Countries/economies with a mean performance/share of top performers/
share of low achievers not significantly different from the OECD average

Countries/economies with a mean performance/share of top performers **below** the OECD average
Countries/economies with a share of low achievers **above** the OECD average

	Science		Reading		Mathematics		Science, reading and mathematics	
	Mean score in PISA 2015	Average three-year trend	Mean score in PISA 2015	Average three-year trend	Mean score in PISA 2015	Average three-year trend	Share of top performers in at least one subject (Level 5 or 6)	Share of low achievers in all three subjects (below Level 2)
	Mean	Score dif.	Mean	Score dif.	Mean	Score dif.	%	%
OECD average	493	-1	493	-1	490	-1	15.3	13.0
Singapore	556	**7**	535	**5**	564	1	39.1	4.8
Japan	538	3	516	-2	532	1	25.8	5.6
Estonia	534	2	519	**9**	520	2	20.4	4.7
Chinese Taipei	532	0	497	1	542	0	29.9	8.3
Finland	531	**-11**	526	**-5**	511	**-10**	21.4	6.3
Macao (China)	529	**6**	509	**11**	544	**5**	23.9	3.5
Canada	528	-2	527	1	516	**-4**	22.7	5.9
Viet Nam	525	-4	487	**-21**	495	**-17**	12.0	4.5
Hong Kong (China)	523	**-5**	527	-3	548	1	29.3	4.5
B-S-J-G (China)	518	m	494	m	531	m	27.7	10.9
Korea	516	-2	517	**-11**	524	-3	25.6	7.7
New Zealand	513	**-7**	509	**-6**	495	**-8**	20.5	10.6
Slovenia	513	-2	505	**11**	510	2	18.1	8.2
Australia	510	**-6**	503	**-6**	494	**-8**	18.4	11.1
United Kingdom	509	-1	498	2	492	-1	16.9	10.1
Germany	509	-2	509	**6**	506	2	19.2	9.8
Netherlands	509	**-5**	503	-3	512	**-6**	20.0	10.9
Switzerland	506	-2	492	-4	521	-1	22.2	10.1
Ireland	503	0	521	**13**	504	0	15.5	6.8
Belgium	502	-3	499	-4	507	**-5**	19.7	12.7
Denmark	502	2	500	3	511	-2	14.9	7.5
Poland	501	3	506	3	504	**5**	15.8	8.3
Portugal	501	**8**	498	4	492	**7**	15.6	10.7
Norway	498	3	513	**5**	502	1	17.6	8.9
United States	496	2	497	-1	470	-2	13.3	13.6
Austria	495	**-5**	485	-5	497	-2	16.2	13.5
France	495	0	499	2	493	**-4**	18.4	14.8
Sweden	493	**-4**	500	1	494	**-5**	16.7	11.4
Czech Republic	493	**-5**	487	5	492	**-6**	14.0	13.7
Spain	493	2	496	**7**	486	1	10.9	10.3
Latvia	490	1	488	2	482	0	8.3	10.5
Russia	487	3	495	**17**	494	**6**	13.0	7.7
Luxembourg	483	0	481	**5**	486	-2	14.1	17.0
Italy	481	2	485	0	490	**7**	13.5	12.2
Hungary	477	**-9**	470	**-12**	477	**-4**	10.3	18.5
Lithuania	475	-3	472	2	478	-2	9.5	15.3
Croatia	475	**-5**	487	**5**	464	0	9.3	14.5
CABA (Argentina)	475	**51**	475	**46**	456	**38**	7.5	14.5
Iceland	473	**-7**	482	**-9**	488	**-7**	13.2	13.2
Israel	467	**5**	479	2	470	**10**	13.9	20.2
Malta	465	2	447	3	479	**9**	15.3	21.9
Slovak Republic	461	**-10**	453	**-12**	475	**-6**	9.7	20.1
Greece	455	**-6**	467	**-8**	454	1	6.8	20.7
Chile	447	2	459	5	423	4	3.3	23.3
Bulgaria	446	4	432	1	441	**9**	6.9	29.6
United Arab Emirates	437	**-12**	434	-8	427	-7	5.8	31.3
Uruguay	435	1	437	**5**	418	-3	3.6	30.8
Romania	435	**6**	434	4	444	**10**	4.3	24.3
Cyprus[1]	433	-5	443	-6	437	-3	5.6	26.1
Moldova	428	**9**	416	**17**	420	**13**	2.8	30.1
Albania	427	**18**	405	**10**	413	**18**	2.0	31.1
Turkey	425	2	428	**-18**	420	2	1.6	31.2
Trinidad and Tobago	425	**7**	427	**5**	417	2	4.2	32.9
Thailand	421	2	409	**-6**	415	1	1.7	35.8
Costa Rica	420	-7	427	**-9**	400	-6	0.9	33.0
Qatar	418	**21**	402	**15**	402	**26**	3.4	42.0
Colombia	416	**8**	425	6	390	**5**	1.2	38.2
Mexico	416	2	423	-1	408	**5**	0.6	33.8
Montenegro	411	1	427	**10**	418	**6**	2.5	33.0
Georgia	411	**23**	401	**16**	404	**15**	2.6	36.3
Jordan	409	**-5**	408	2	380	-1	0.6	35.7
Indonesia	403	3	397	-2	386	**4**	0.8	42.3
Brazil	401	3	407	-2	377	**6**	2.2	44.1
Peru	397	**14**	398	**14**	387	**10**	0.6	46.7
Lebanon	386	m	347	m	396	m	2.5	50.7
Tunisia	386	0	361	**-21**	367	**4**	0.6	57.3
FYROM	384	m	352	m	371	m	1.0	52.2
Kosovo	378	m	347	m	362	m	0.0	60.4
Algeria	376	m	350	m	360	m	0.1	61.1
Dominican Republic	332	m	358	m	328	m	0.1	70.7

1. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Notes: Values that are statistically significant are marked in bold (see Annex A3).
The average trend is reported for the longest available period since PISA 2006 for science, PISA 2009 for reading, and PISA 2003 for mathematics.
Countries and economies are ranked in descending order of the mean science score in PISA 2015.

Source: OECD, PISA 2015 Database, Tables I.2.4a, I.2.6, I.2.7, I.4.4a and I.5.4a.
StatLink http://dx.doi.org/10.1787/888933431961

Snapshot of students' science beliefs, engagement and motivation

Countries/economies with values **above** the OECD average
Countries/economies with values not significantly different from the OECD average
Countries/economies with values **below** the OECD average

		Beliefs about the nature and origin of scientific knowledge		Share of students with science-related career expectations				Motivation for learning science		
	Mean science score	Index of epistemic beliefs (support for scientific methods of enquiry)	Score-point difference per unit on the index of epistemic beliefs	All students	Boys	Girls	Increased likelihood of boys expecting a career in science	Index of enjoyment of learning science	Score-point difference per unit on the index of enjoyment of learning science	Gender gap in enjoyment of learning science (Boys - Girls)
	Mean	Mean index	Score dif.	%	%	%	Relative risk	Mean index	Score dif.	Dif.
OECD average	493	0.00	**33**	24.5	25.0	23.9	**1.1**	0.02	**25**	**0.13**
Singapore	556	0.22	**34**	28.0	31.8	23.9	**1.3**	0.59	**35**	**0.17**
Japan	538	-0.06	**34**	18.0	18.5	17.5	1.1	-0.33	**27**	**0.52**
Estonia	534	0.01	**36**	24.7	28.9	20.3	**1.4**	0.16	**24**	0.05
Chinese Taipei	532	0.31	**38**	20.9	25.6	16.0	**1.6**	-0.06	**28**	**0.39**
Finland	531	-0.07	**38**	17.0	15.4	18.7	**0.8**	-0.07	**30**	0.04
Macao (China)	529	-0.06	**26**	20.8	22.0	19.6	**1.1**	0.20	**21**	**0.16**
Canada	528	0.30	**29**	33.9	31.2	36.5	**0.9**	0.40	**26**	**0.15**
Viet Nam	525	-0.15	**31**	19.6	21.2	18.1	**1.2**	0.65	**14**	**0.06**
Hong Kong (China)	523	0.04	**23**	23.6	22.9	24.2	0.9	0.28	**20**	**0.26**
B-S-J-G (China)	518	-0.08	**37**	16.8	17.1	16.5	1.0	0.37	**28**	**0.14**
Korea	516	0.02	**38**	19.3	21.7	16.7	**1.3**	-0.14	**31**	**0.32**
New Zealand	513	0.22	**40**	24.8	21.7	27.9	**0.8**	0.20	**32**	0.03
Slovenia	513	0.07	**33**	30.8	34.6	26.8	**1.3**	-0.36	**22**	-0.03
Australia	510	0.26	**39**	29.2	30.3	28.2	**1.1**	0.12	**33**	**0.16**
United Kingdom	509	0.22	**37**	29.1	28.7	29.6	1.0	0.15	**30**	**0.18**
Germany	509	-0.16	**34**	15.3	17.4	13.2	**1.3**	-0.18	**29**	**0.43**
Netherlands	509	-0.19	**46**	16.3	16.9	15.7	1.1	-0.52	**30**	**0.25**
Switzerland	506	-0.07	**34**	19.5	19.8	19.1	1.0	-0.02	**30**	**0.17**
Ireland	503	0.21	**36**	27.3	28.0	26.6	1.1	0.20	**32**	**0.09**
Belgium	502	0.00	**34**	24.5	25.3	23.6	1.1	-0.03	**28**	**0.20**
Denmark	502	0.17	**32**	14.8	11.8	17.7	**0.7**	0.12	**26**	**0.09**
Poland	501	-0.08	**27**	21.0	15.4	26.8	**0.6**	0.02	**18**	**-0.10**
Portugal	501	0.28	**33**	27.5	26.7	28.3	0.9	0.32	**23**	**0.08**
Norway	498	-0.01	**35**	28.6	28.9	28.4	1.0	0.12	**29**	**0.27**
United States	496	0.25	**32**	38.0	33.0	43.0	**0.8**	0.23	**26**	**0.21**
Austria	495	-0.14	**36**	22.3	26.6	18.0	**1.5**	-0.32	**25**	**0.23**
France	495	0.01	**30**	21.2	23.6	18.7	**1.3**	-0.03	**30**	**0.31**
Sweden	493	0.14	**38**	20.2	21.8	18.5	**1.2**	0.08	**27**	**0.22**
Czech Republic	493	-0.23	**41**	16.9	18.6	15.0	**1.2**	-0.34	**27**	-0.06
Spain	493	0.11	**30**	28.6	29.5	27.8	1.1	0.03	**28**	**0.11**
Latvia	490	-0.26	**27**	21.3	21.1	21.5	1.0	0.09	**18**	0.03
Russia	487	-0.26	**27**	23.5	23.2	23.8	1.0	0.00	**16**	0.07
Luxembourg	483	-0.15	**35**	21.1	24.3	18.0	**1.4**	0.10	**26**	**0.14**
Italy	481	-0.10	**34**	22.6	24.7	20.6	**1.2**	0.00	**22**	**0.24**
Hungary	477	-0.36	**35**	18.3	23.9	12.8	**1.9**	-0.23	**20**	-0.02
Lithuania	475	0.11	**22**	23.9	22.5	25.4	**0.9**	0.36	**20**	**-0.14**
Croatia	475	0.03	**32**	24.2	26.8	21.8	**1.2**	-0.11	**22**	0.05
CABA (Argentina)	475	0.09	**28**	27.8	26.2	29.3	0.9	-0.20	**15**	**-0.14**
Iceland	473	0.29	**28**	23.8	20.1	27.3	**0.7**	0.15	**24**	**0.26**
Israel	467	0.18	**38**	27.8	26.1	29.5	**0.9**	0.09	**20**	0.06
Malta	465	0.09	**54**	25.4	30.2	20.4	**1.5**	0.18	**48**	**0.11**
Slovak Republic	461	-0.35	**36**	18.8	18.5	19.0	1.0	-0.24	**25**	-0.02
Greece	455	-0.19	**36**	25.3	25.7	24.9	1.0	0.13	**27**	**0.12**
Chile	447	-0.15	**23**	37.9	36.9	39.0	0.9	0.08	**15**	**-0.09**
Bulgaria	446	-0.18	**34**	27.5	28.8	25.9	1.1	0.28	**17**	**-0.16**
United Arab Emirates	437	0.04	**33**	41.3	39.9	42.6	**0.9**	0.47	**22**	-0.02
Uruguay	435	-0.13	**27**	28.1	23.8	31.9	**0.7**	-0.10	**16**	**-0.07**
Romania	435	-0.38	**27**	23.1	23.3	23.0	1.0	-0.03	**17**	-0.05
Cyprus*	433	-0.15	**33**	29.9	29.3	30.5	1.0	0.15	**29**	0.06
Moldova	428	-0.14	**37**	22.0	22.5	21.3	1.1	0.33	**22**	**-0.17**
Albania	427	-0.03	m	24.8	m	m	m	0.72	m	m
Turkey	425	-0.17	**18**	29.7	34.5	24.9	**1.4**	0.15	**12**	0.01
Trinidad and Tobago	425	-0.02	**28**	27.8	24.6	31.0	**0.8**	0.19	**24**	-0.01
Thailand	421	-0.07	**35**	19.7	12.4	25.2	**0.5**	0.42	**18**	-0.05
Costa Rica	420	-0.15	**16**	44.0	43.8	44.2	1.0	0.35	**4**	-0.03
Qatar	418	-0.10	**33**	38.0	36.3	39.9	**0.9**	0.36	**25**	0.00
Colombia	416	-0.19	**21**	39.7	37.1	42.0	**0.9**	0.32	**7**	-0.02
Mexico	416	-0.17	**17**	40.7	45.4	35.8	**1.3**	0.42	**12**	0.01
Montenegro	411	-0.32	**23**	21.2	20.1	22.4	**0.9**	0.09	**14**	**-0.07**
Georgia	411	0.05	**42**	17.0	16.4	17.7	0.9	0.34	**23**	**-0.13**
Jordan	409	-0.13	**28**	43.7	44.6	42.8	1.0	0.53	**23**	**-0.25**
Indonesia	403	-0.30	**16**	15.3	8.6	22.1	**0.4**	0.65	**6**	**-0.06**
Brazil	401	-0.07	**27**	38.8	34.4	42.8	**0.8**	0.23	**19**	**-0.04**
Peru	397	-0.16	**23**	38.7	42.7	34.6	**1.2**	0.40	**9**	0.01
Lebanon	386	-0.24	**35**	39.7	41.0	38.5	1.1	0.38	**32**	-0.04
Tunisia	386	-0.31	**18**	34.4	28.5	39.5	**0.7**	0.52	**15**	**-0.12**
FYROM	384	-0.18	**30**	24.2	20.0	28.8	**0.7**	0.48	**17**	**-0.29**
Kosovo	378	0.03	**22**	26.4	24.7	28.1	**0.9**	0.92	**14**	**-0.16**
Algeria	376	-0.31	**16**	26.0	23.1	29.2	**0.8**	0.46	**14**	**-0.12**
Dominican Republic	332	-0.10	**13**	45.7	44.7	46.8	1.0	0.54	**6**	-0.05

* See note 1 under Figure I.1.1.
Note: Values that are statistically significant are indicated in bold (see Annex A3).
Countries and economies are ranked in descending order of the mean science score in PISA 2015.
Source: OECD, PISA 2015 Database, Tables I.2.12a-b, I.3.1a-c and I.3.10a-b.
StatLink http://dx.doi.org/10.1787/888933431979

What is PISA?

The Programme for International Student Assessment (PISA) is an ongoing triennial survey that assesses the extent to which 15-year-olds students near the end of compulsory education have acquired key knowledge and skills that are essential for full participation in modern societies. The assessment does not just ascertain whether students can reproduce knowledge; it also examines how well students can extrapolate from what they have learned and apply that knowledge in unfamiliar settings, both in and outside of school. This approach reflects the fact that modern economies reward individuals not for what they know, but for what they can do with what they know.
PISA offers insights for education policy and practice, and helps monitor trends in students' acquisition of knowledge and skills across countries and in different demographic subgroups within each country. The findings allow policy makers around the world to gauge the knowledge and skills of students in their own countries in comparison with those in other countries, set policy targets against measurable goals achieved by other education systems, and learn from policies and practices applied elsewhere.

Key features of PISA 2015

- The PISA 2015 survey focused on science, with reading, mathematics and collaborative problem-solving as minor areas of assessment. For the first time, PISA 2015 delivered the assessment of all subjects via computer. Paper-based assessments were provided for countries that chose not to test their students by computer, but the paper-based assessment was limited to questions that could measure trends in science, reading and mathematics performance.

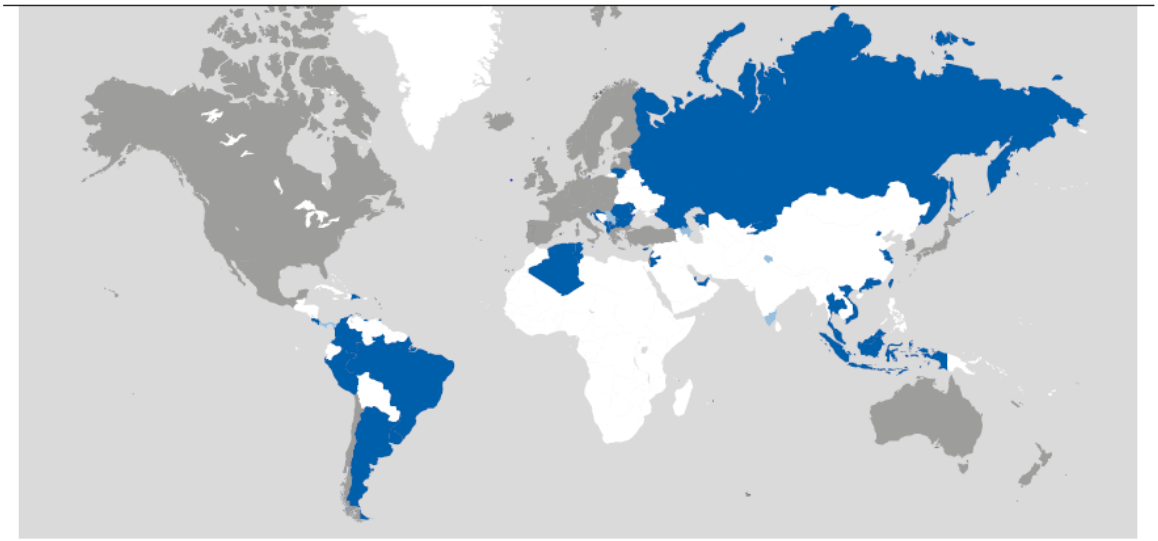
The students

- Around 540 000 students completed the assessment in 2015, representing about 29 million 15-year-olds in the schools of the 72 participating countries and economies.

The assessment

- Computer-based tests were used, with assessments lasting a total of two hours for each student.
- Test items were a mixture of multiple-choice questions and questions requiring students to construct their own responses. The items were organised in groups based on a passage setting out a real-life situation. About 810 minutes of test items were covered, with different students taking different combinations of test items.
- Students also answered a background questionnaire, which took 35 minutes to complete. The questionnaire sought information about the students themselves, their homes, and their school and learning experiences. School principals completed a questionnaire that covered the school system and the learning environment. For additional information, some countries/economies decided to distribute a questionnaire to teachers. It was the first time that this optional teacher questionnaire was offered to PISA-participating countries/economies. In some countries/economies, optional questionnaires were distributed to parents, who were asked to provide information on their perceptions of and involvement in their child's school, their support for learning in the home, and their child's career expectations, particularly in science. Countries could choose two other optional questionnaires for students: one asked students about their familiarity with and use of information and communication technologies (ICT); and the second sought information about students' education to date, including any interruptions in their schooling, and whether and how they are preparing for a future career.

Map of PISA countries and economies



OECD countries

Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

Partner countries and economies in PISA 2015

Albania, Algeria, Argentina, Brazil, B-S-J-G (China)*, Bulgaria, Colombia, Costa Rica, Croatia, Cyprus[1], Dominican Republic, Former Yugoslav Republic of Macedonia, Georgia, Hong Kong (China), Indonesia, Jordan, Kazakhstan, Kosovo, Lebanon, Lithuania, Macao (China), Malaysia, Malta, Moldova, Montenegro, Peru, Qatar, Romania, Russian Federation, Singapore, Chinese Taipei, Thailand, Trinidad and Tobago, Tunisia, United Arab Emirates, Uruguay, Viet Nam

Partner countries and economies in previous cycles

Azerbaijan, Himachal Pradesh-India, Kyrgyzstan, Liechtenstein, Mauritius, Miranda-Venezuela, Panama, Serbia, Tamil Nadu-India

* B-S-J-G (China) refers to the four PISA participating China provinces: Beijing, Shanghai, Jiangsu, Guangdong.

1. Note by Turkey: The information in this document with reference to « Cyprus » relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

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For more information on the Programme for International Student Assessment and to access the full set of PISA 2015 results, visit:

www.oecd.org.edu/pisa