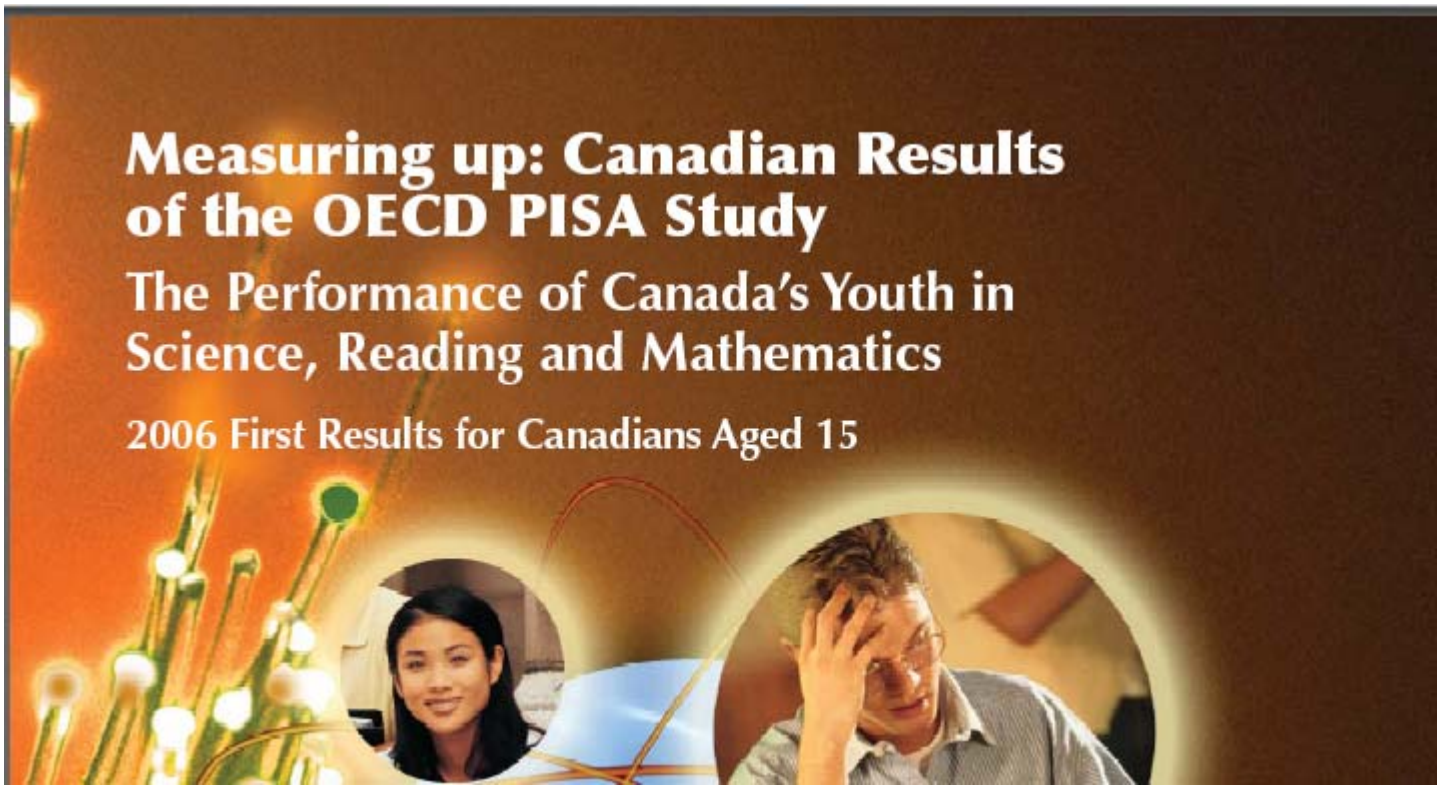
# Interpretation of Manitoba's Results from the Programme for International Student Assessment (PISA) – 2006 Science Study

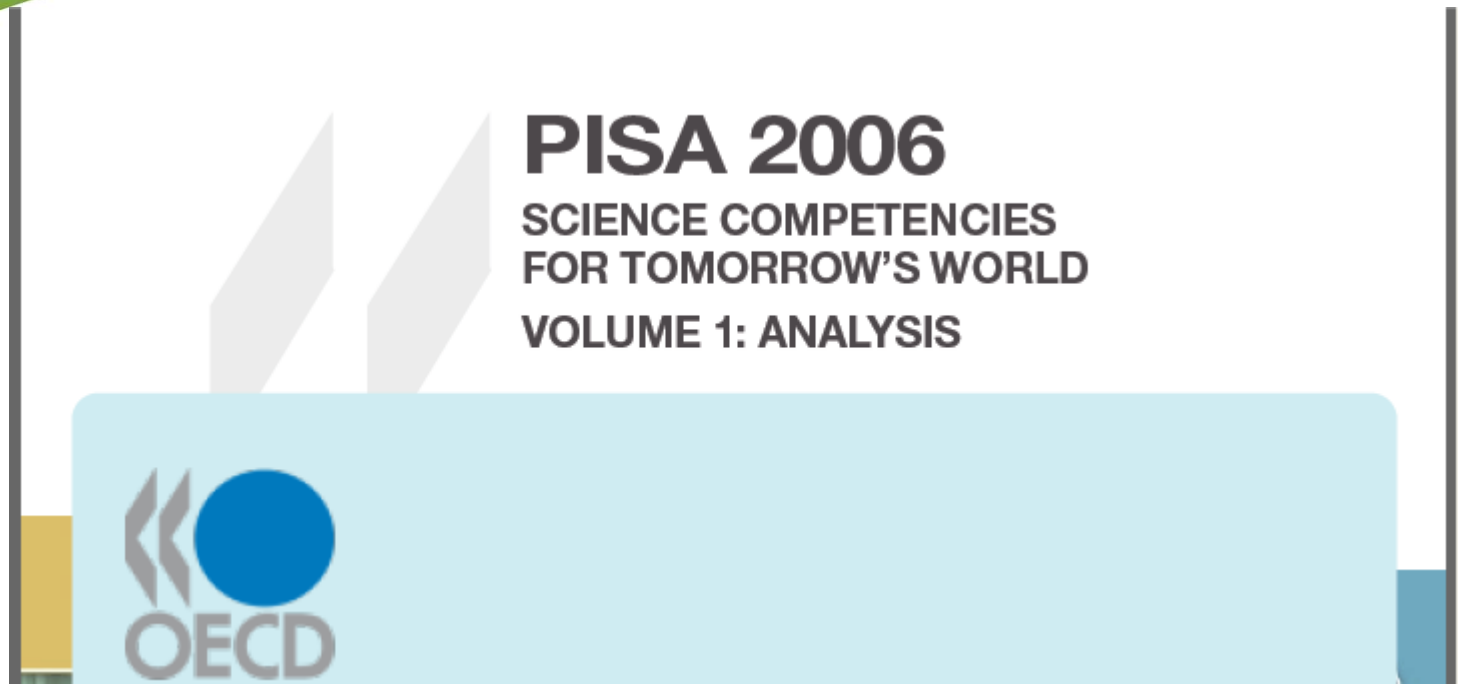
. . . . . .

Manitoba

# Reports Referenced




www.cmec.ca/pisa/2006/indexe.stm




And VOLUME 2: DATA

www.oecd.org/document/2/0,3343,en_32252351_32236191_39718850_1_1_1_1,00.html

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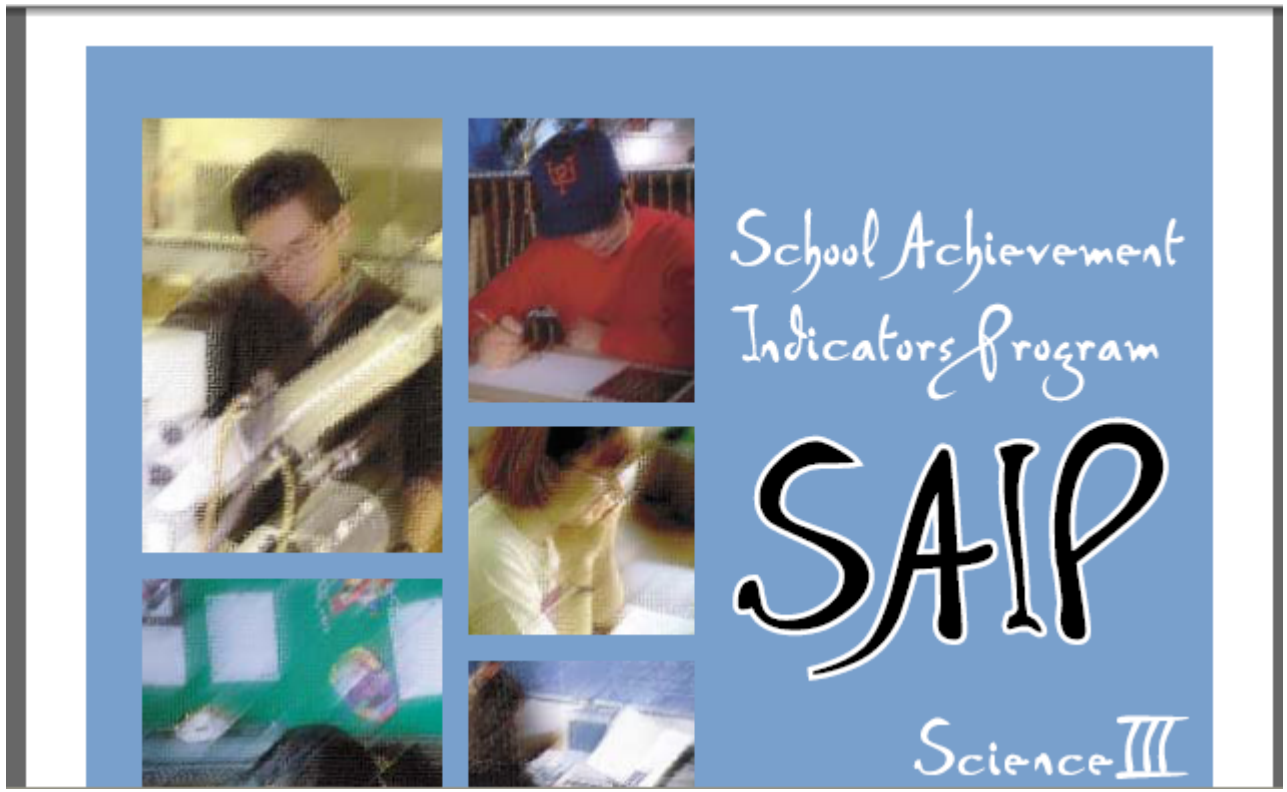
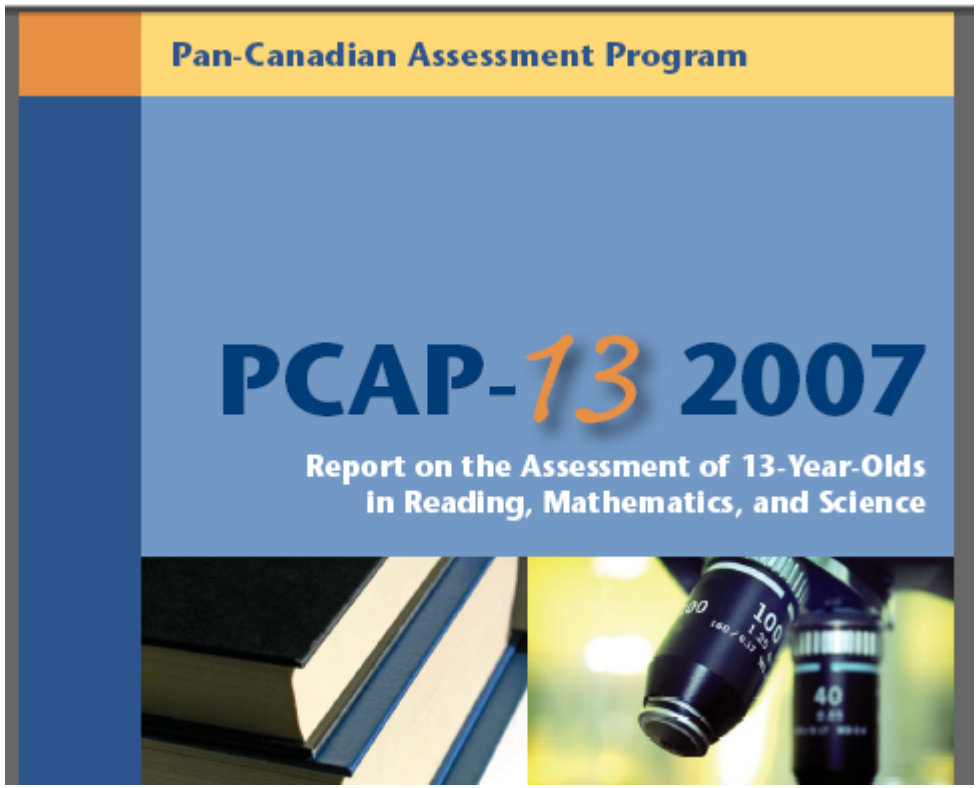



www.cmec.ca/pcap/science3/public/indexe.stm




www.cmec.ca/pcap/2007/report.en.stm

# WHAT IS PISA?

- Organisation for Economic Co-operation and Development (OECD) assessment of 15-year-olds' literacy in reading, mathematics and science administered every three years

- provides policy-oriented international indicators of the skills and knowledge of 15-year-old students and sheds light on a range of factors that contribute to successful students, schools and education systems.

- focuses on use of knowledge and skills to meet real life challenges - efficient learning in adulthood and full participation in society.

# SCIENTIFIC LITERACY
## (main domain in 2006)

- use of science knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence-based conclusions about science-related issues
- understanding of the characteristic features of science as a form of human knowledge and how it shapes our material, intellectual, and cultural environments
- willingness to engage in science-related issues, and with the ideas of science, as a reflective citizen.

# LEVEL 2

At Level 2, students have adequate scientific knowledge to provide possible explanations in familiar contexts or draw conclusions based on simple investigations. They are capable of direct reasoning and making literal interpretations of the results of scientific inquiry or technological problem solving.

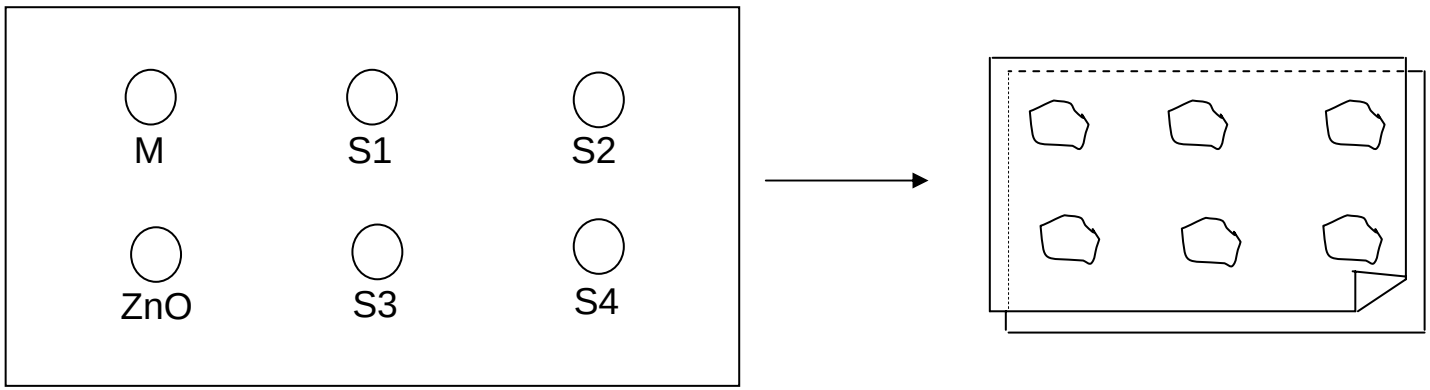
# Sample item - SUNSCREENS

Mimi and Dean wondered which sunscreen product provides the best protection for their skin. Sunscreen products have a Sun Protection Factor (SPF) that shows how well each product absorbs the ultraviolet radiation component of sunlight. A high SPF sunscreen protects skin for longer than a low SPF sunscreen.

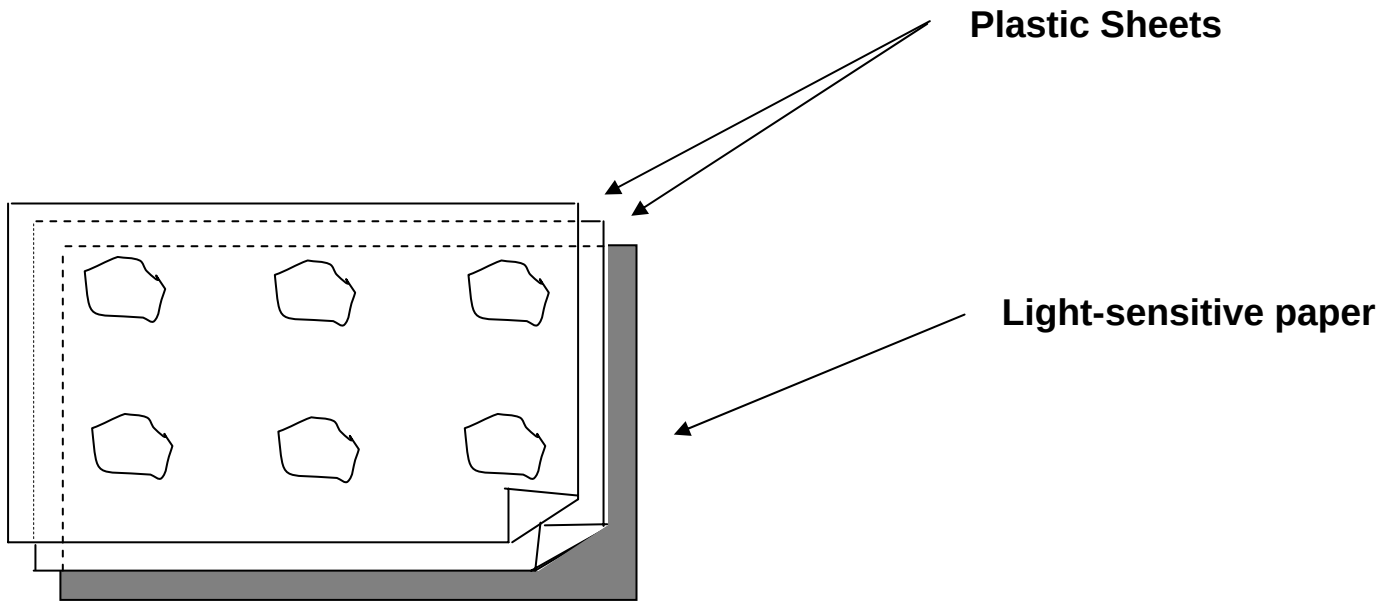
# Mimi thought of a way to compare some different sunscreen products. She and Dean collected the following:

- Two sheets of clear plastic that do not absorb sunlight;
- One sheet of light-sensitive paper;
- Mineral oil (M) and a cream containing zinc oxide (ZnO); and
- Four different sunscreens that they called S1, S2, S3 and S4.

**Dean placed a drop of each substance inside a circle marked on one sheet of plastic, then put the second plastic sheet over the top. He placed a large book on top of both sheets and pressed down.**

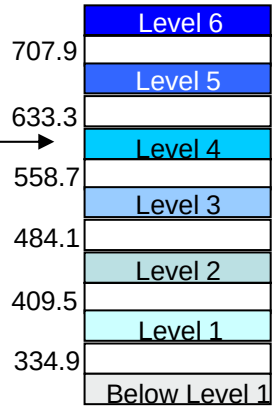


**Mimi then put the plastic sheets on top of the sheet of light-sensitive paper. Light-sensitive paper changes from dark grey to white (or very light grey), depending on how long it is exposed to sunlight. Finally, Dean placed the sheets in a sunny place.**



# SUNSCREENS – Question 2

**Question Type:** Multiple Choice
**Competency:** Identifying scientific issues
**Knowledge Category:** “Scientific enquiry” (knowledge about science)
**Application area:** “Health”
**Setting:** Personal
**Difficulty:** 588
**Percentage of correct answers:** 40.5%




Which one of these statements is a scientific description of the role of the mineral oil and the zinc oxide in comparing the effectiveness of the sunscreens?

A. Mineral oil and zinc oxide are both factors being tested.

B. Mineral oil is a factor being tested and zinc oxide is a reference substance.

C. Mineral oil is a reference substance and zinc oxide is a factor being tested.

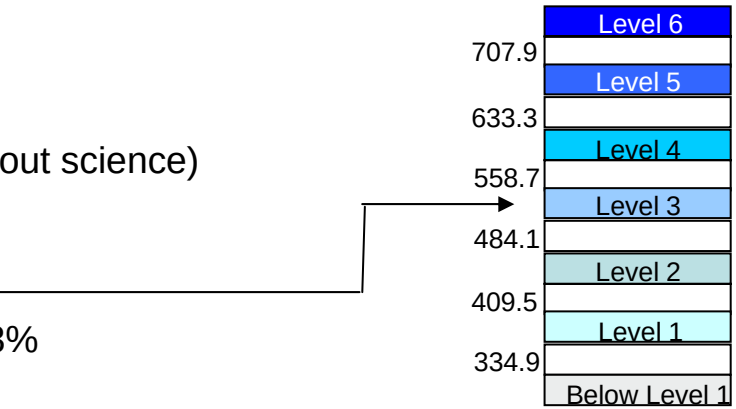
D. Mineral oil and zinc oxide are both reference substances.

Scoring:

Full Credit: D. Mineral oil and zinc oxide are both reference substances.

# SUNSCREENS – Question 3

**Question Type:** Multiple Choice
**Competency:** Identifying scientific issues
**Knowledge Category:** “Scientific enquiry” (knowledge about science)
**Application area:** “Health”
**Setting:** Personal
**Difficulty:** 499
**Percentage of correct answers (OCED countries):** 58.3%



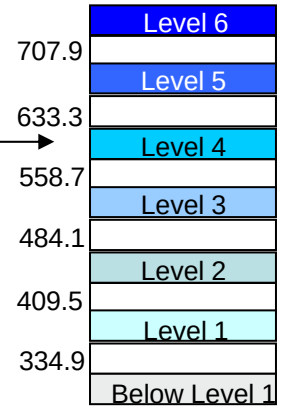

Which one of these questions were Mimi and Dean trying to answer?

A. How does the protection for each sunscreen compare with the others?
B. How do sunscreens protect your skin from ultraviolet radiation?
C. Is there any sunscreen that gives less protection than mineral oil?
D. Is there any sunscreen that gives more protection than zinc oxide?

Scoring:
Full Credit: A. How does the protection for each sunscreen compare with others?

# SUNSCREENS – Question 4

**Question Type:** Multiple Choice
**Competency:** Identifying scientific issues
**Knowledge Category:** “Scientific enquiry” (knowledge about science)
**Application area:** “Health”
**Setting:** Personal
**Difficulty:** 574
**Percentage of correct answers (OCED countries):** 43.0%



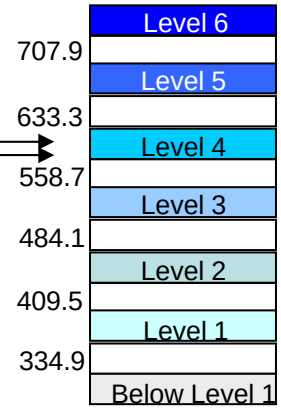

Why was the second sheet of plastic pressed down?

A. To stop the drops from drying out.
B. To spread the drops out as far as possible.
C. To keep the drops inside the marked circles.
D. To make the drops the same thickness.

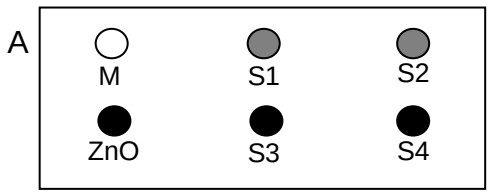
Scoring:
Full Credit: D. To make the drops the same thickness.

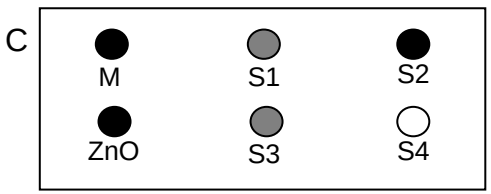
# SUNSCREENS – Question 5

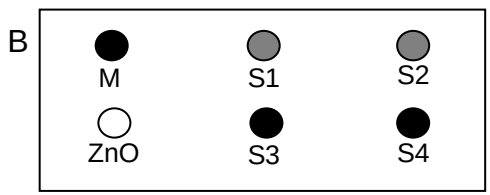
**Question Type:** Multiple Choice
**Competency:** Identifying scientific issues
**Knowledge Category:** “Scientific enquiry” (knowledge about science)
**Application area:** “Health”
**Setting:** Personal
**Difficulty:** Full Credit 629, Partial Credit 616
**Percentage of correct answers (OECD countries):** 27.1%

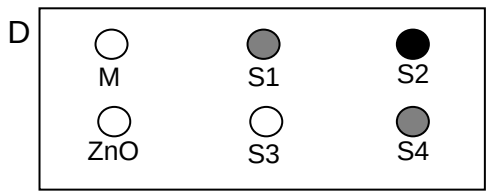



The light-sensitive paper is dark grey and fades to a lighter grey when it is exposed to some sunlight, and to white when exposed to a lot of sunlight. Which one of these diagrams shows a pattern that might occur? Explain why you chose it.



# SUNSCREENS – Question 5 con't

Scoring:

**Full Credit:** A. With explanation that the ZnO spot has stayed dark grey (because it blocks sunlight) and the M spot has gone white (because mineral oil absorbs very little sunlight).

*[It is not necessary (though it is sufficient) to include the further explanations that are shown in parentheses.]*

A. ZnO has blocked the sunlight as it should and M has let it through.

*I chose A because the mineral oil needs to be the lightest shade while the zinc oxide is the darkest.*

**Partial Credit:** A. Gives a correct explanation for either the ZnO spot or the M spot, but not both.

- Mineral oil provides the lowest resistance against UVL. So with other substances the paper would not be white.

A. Zinc oxide absorbs practically all rays and the diagram shows this.

*A because ZnO blocks the light and M absorbs it.*

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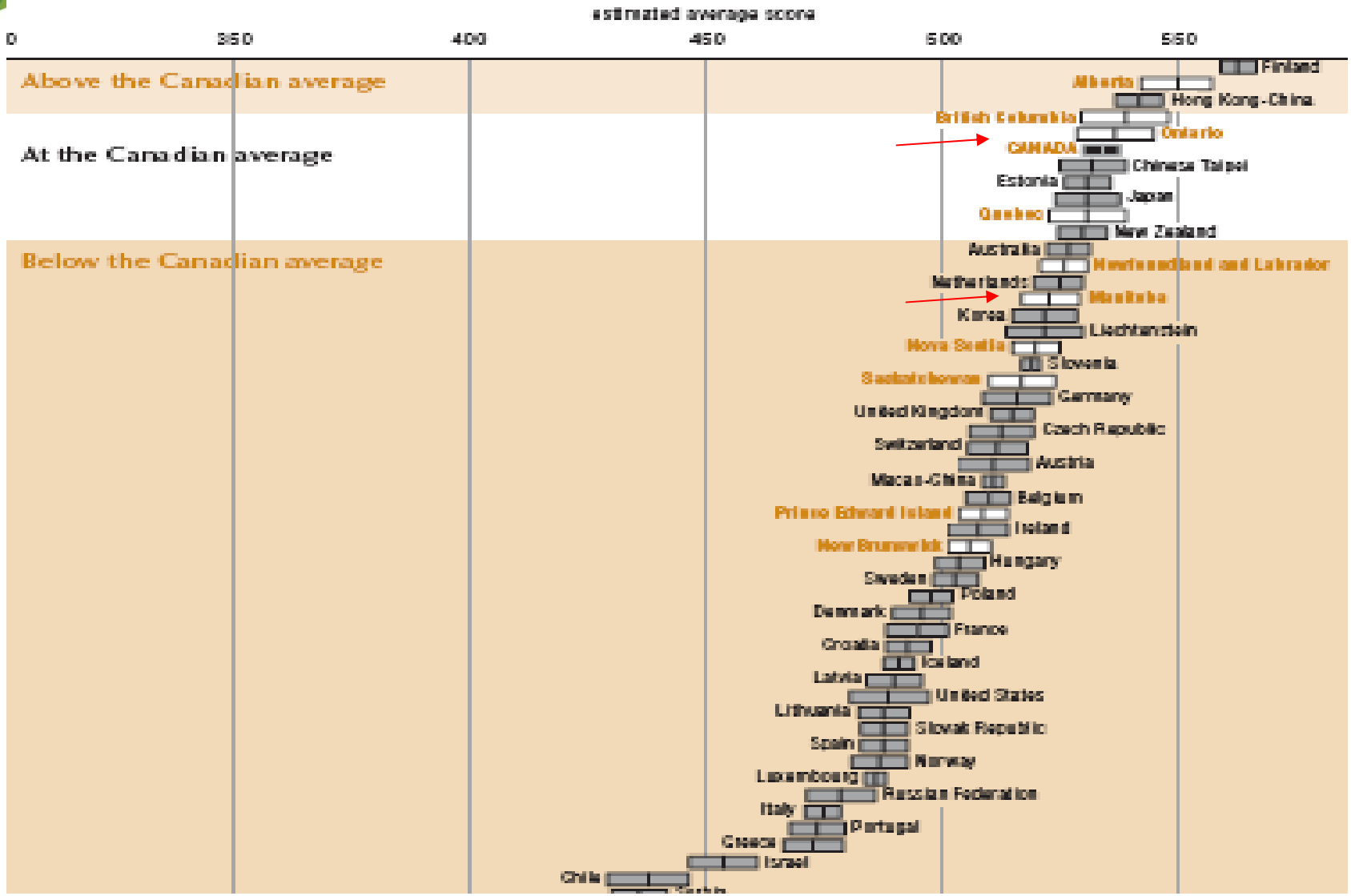
## Average scores and confidence intervals for provinces and countries: Combined science



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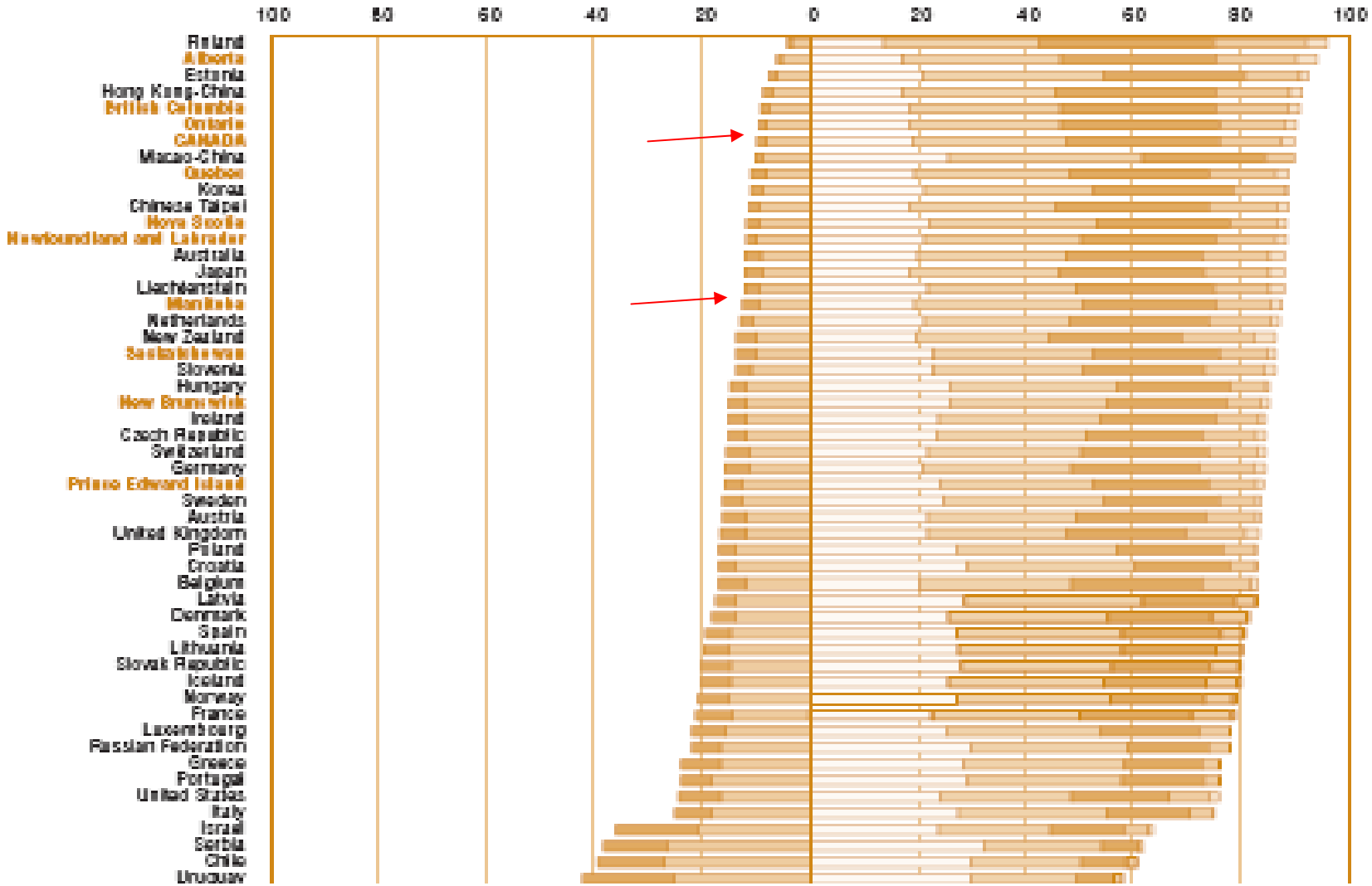
## Percentage of students at each level of proficiency on the combined science scale



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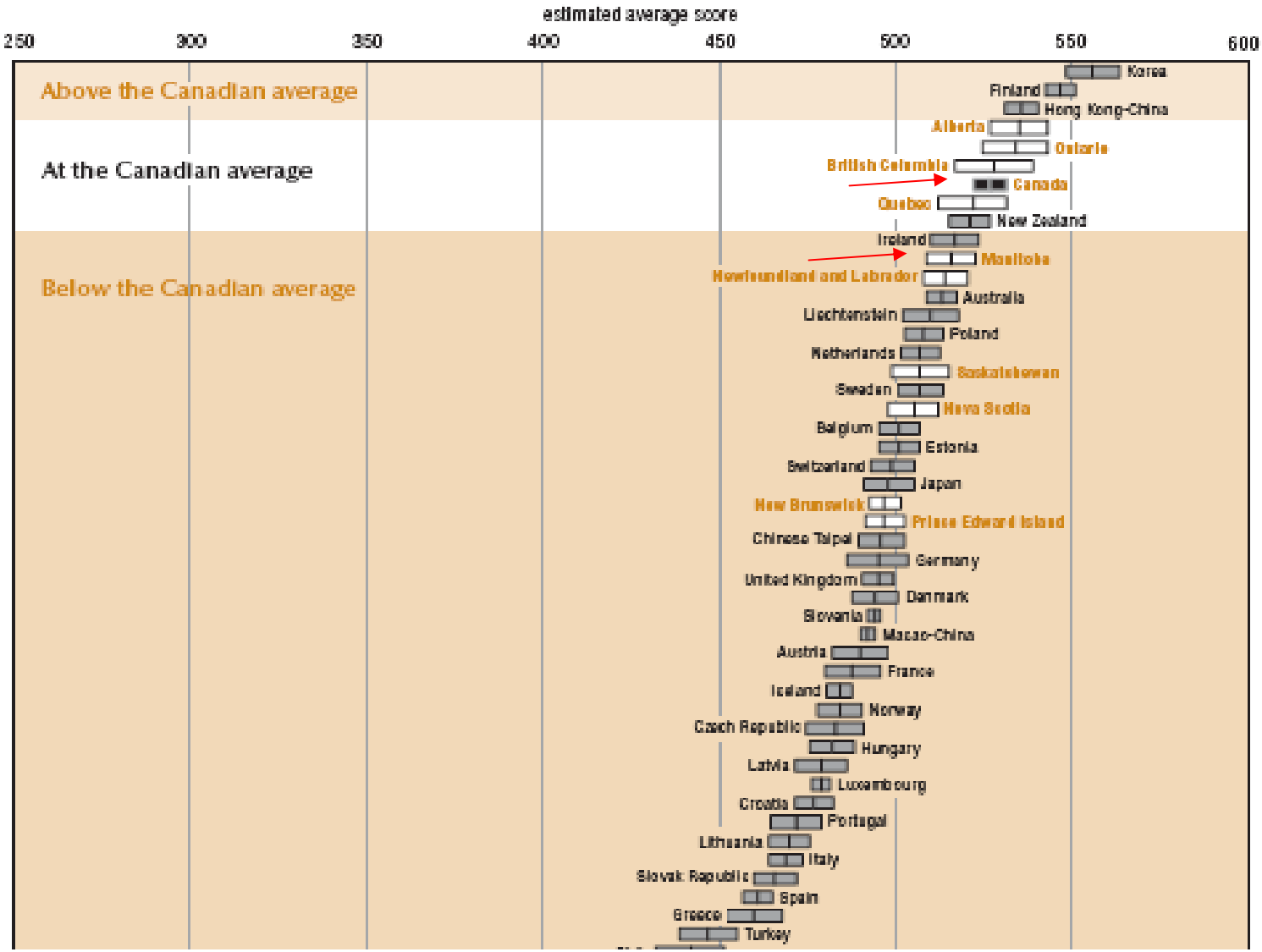
## Average scores and confidence intervals for provinces and countries: Reading



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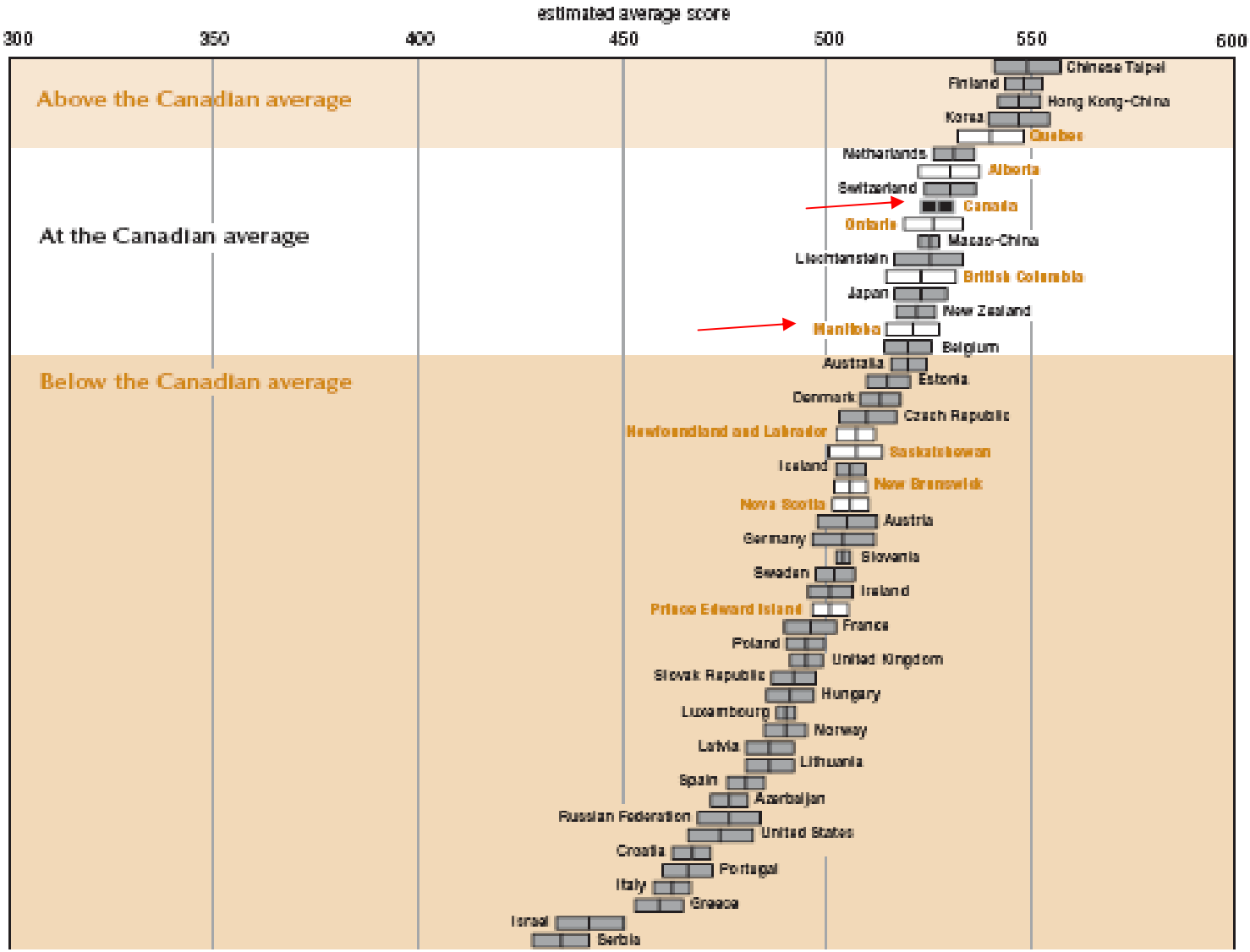
## Average scores and confidence intervals for provinces and countries: Mathematics



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## Table A.1

### PISA 2006 school and student response rates

| Provinces | Total number of selected schools (participating and not participating) | School response rate before replacement | | School response rate after replacement | | Total number of students sampled (participating and not participating) | | Total number of students participating | | Weighted student participation rate after replacement (percent) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | number | weighted percentage[1] | number | weighted percentage[1] | un-weighted | weighted | un-weighted | weighted | |
| Newfoundland and Labrador | 75 | 74 | 99.8 | 75 | 100 | 1,960 | 6,167 | 1,741 | 5,481 | 88.9 |
| Prince Edward Island | 26 | 26 | 100 | 26 | 100 | 1,863 | 1,863 | 1,573 | 1,573 | 84.4 |
| Nova Scotia | 87 | 86 | 100 | 86 | 100 | 2,441 | 10,097 | 2,114 | 8,682 | 86.0 |
| New Brunswick | 68 | 67 | 100 | 67 | 100 | 2,671 | 8,331 | 2,443 | 7,641 | 91.7 |
| Québec | 187 | 159 | 82.9 | 159 | 83.2 | 4,942 | 72,201 | 3,695 | 53,243 | 73.7 |
| Ontario | 151 | 112 | 72.2 | 120 | 78.5 | 3,573 | 130,409 | 2,928 | 105,095 | 80.6 |
| Manitoba | 92 | 84 | 93.9 | 84 | 94.2 | 2,285 | 12,358 | 1,990 | 10,695 | 86.5 |
| Saskatchewan | 87 | 83 | 95.3 | 83 | 95.7 | 2,046 | 11,788 | 1,851 | 10,715 | 90.9 |
| Alberta | 90 | 86 | 96.0 | 87 | 97.6 | 2,349 | 37,460 | 1,984 | 31,676 | 84.6 |
| British Columbia | 78 | 73 | 94.6 | 73 | 94.9 | 2,198 | 46,911 | 1,884 | 40,238 | 85.8 |
| **Canada** | **941** | **850** | **83.2** | **860** | **86.2** | **26,328** | **337,585** | **22,203** | **275,038** | **81.5** |

1. School response rates were weighted based on 15-year-old enrolment.

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## Science Achievement Results

Results for Canada in Science – PISA 2006

| Domain (Canadian mean score) | Rank of Can. | Countries significantly (statistically) outperforming Canada | Countries tied with Canada (accounting for statistical significance) |
|---|---|---|---|
| Science overall (534) | 3 | 2 (Finland – 563, Hong-Kong China*) | 4 (Chinese Tapei*, Estonia*, Japan, New Zealand) |
| Identifying scientific issues (532) | 5 | 1 (Finland – 555) | 4 (New Zealand, Australia, Netherlands, Hong-Kong China*) |
| Explaining phenomena scientifically (531) | 5 | 4 (Finland – 566, Hong-Kong China* – 549, Chinese Taipei* – 545, Estonia* – 541) | 2 (Czech Republic, Japan) |
| Using scientific evidence (542) | 3 | 1 (Finland 567) | 5 (Japan, Hong-Kong China*, Korea, New Zealand, Liechtenstein) |

* Non-OECD PISA 'partner countries'

Manitoba

Results for Manitoba in Science – PISA 2006

| Domain (Manitoba mean score) | Rank of MB in Canada | Provinces significantly (statistically) outperforming MB | Provinces tied with Manitoba (accounting for margins of error) |
|---|---|---|---|
| Science overall (523) | 6 | 3 (AB – 550, BC – 539, ON – 537) | 3 (NL, NS, SK) |
| Identifying scientific issues (519) | 6 | 4 (AB – 546, BC – 536, ON – 533, QC – 531) | 3 (NL, NS, SK) |
| Explaining phenomena scientifically (522) | 5 | 3 (AB – 553, BC – 538, ON – 533) | 4 (QC, NS, NL, SK) |
| Using scientific evidence (530) | 6 | 4 (AB – 552, ON – 546, C – 542, BC – 541) | 1 (NL) |

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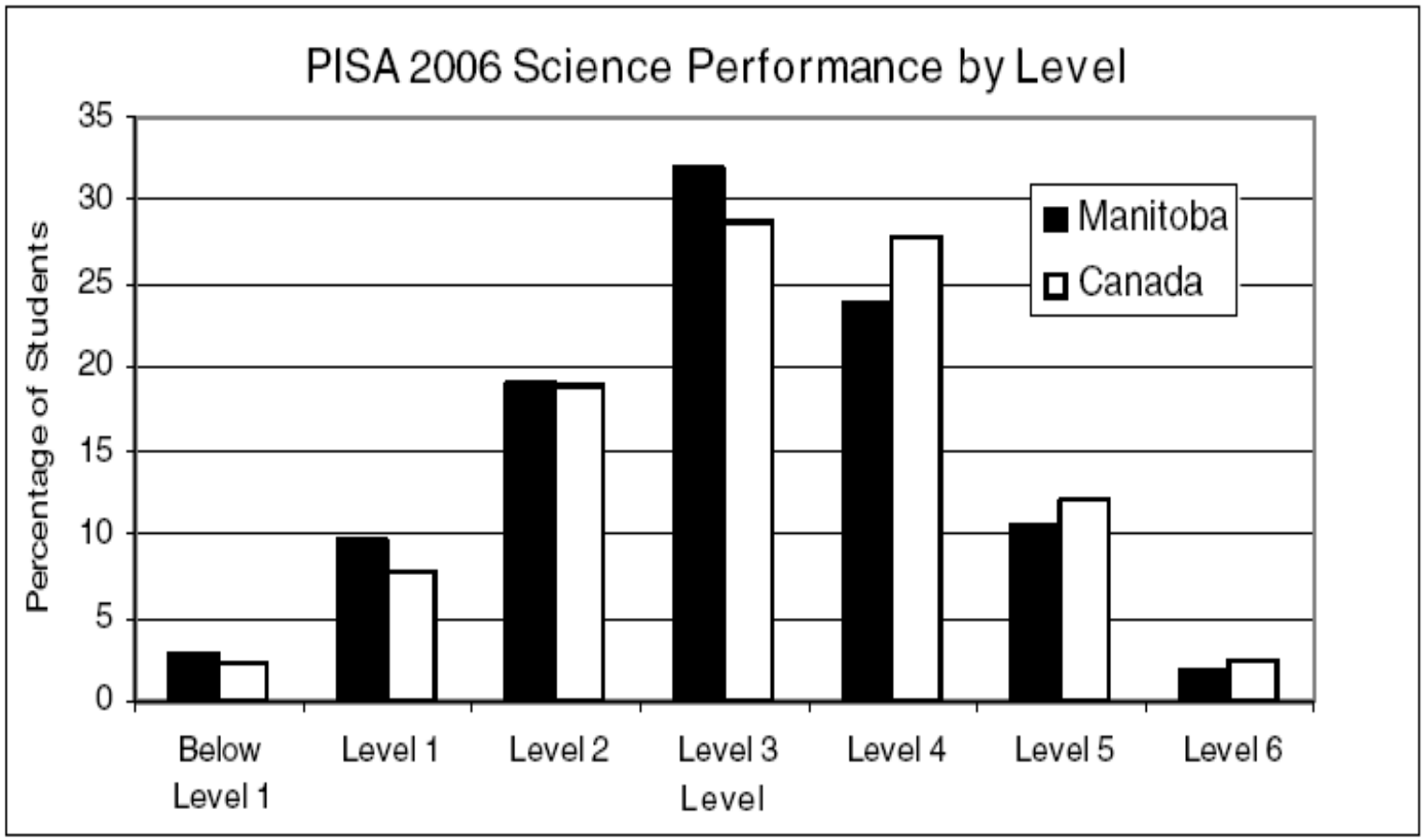
## Results for Manitoba and Canada in Science by Level – PISA 2006



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PISA Science results – historical

| | 2000 (31 countries) | | | 2003 (41 countries) | | | 2006 (57 countries) | | | Score Summary 2000 – 2006 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Score | List Rank* | # Prov. above** | Score | List Rank | # Prov. above | Score | List Rank | # Prov. above | Average Change | Total Change |
| Canada | 529 | 5 | | 519 | 11 | | **534** | 3 | | 2.5 | 5 |
| Manitoba | 527 | 4 | 2 | 512 | 6 | 2 | **523** | 6 | 3 | -2 | -4 |
| Manitoba-Eng | 527 | | | 513 | | | **524** | | | -1.5 | -3 |
| Manitoba-Fre*** | 500 | 2/5 | 1/5 | 490 | 2/5 | 1/5 | **495** | 3/5 | 1/5 | -2.5 | -5 |
| OECD**** | 500 | | | 500 | | | **500** | | | 0 | 0 |

* Out of 10 provinces

*** x/5 indicates out of the five provinces reporting separately by language including Quebec which consistently ranks first

****OECD scale with mean of 500 first established and fixed where results are in bold. No conclusions of an absolute nature about trends in science literacy over time are possible before this point.

Science Results by Gender for Canada – PISA 2006

| Domain | Canada | | Manitoba |
|---|---|---|---|
| | All students | Observations – jurisdictions | |
| Science overall | No difference | Girls average higher than boys' – NF | No difference |
| Using scientific evidence | No difference | Girls average higher than boys' – NF, SK | No difference |
| Explaining phenomena scientifically | Boys scored average 17 points higher | Boys' average higher than girls' – PE, NS, NB, QC, ON, MB, AB, BC | Boys scored average 15 points higher |
| Identifying scientific issues | Girls scored average 14 points higher | Girls' average higher than boys' – all provinces | Girls scored average 15 points higher |

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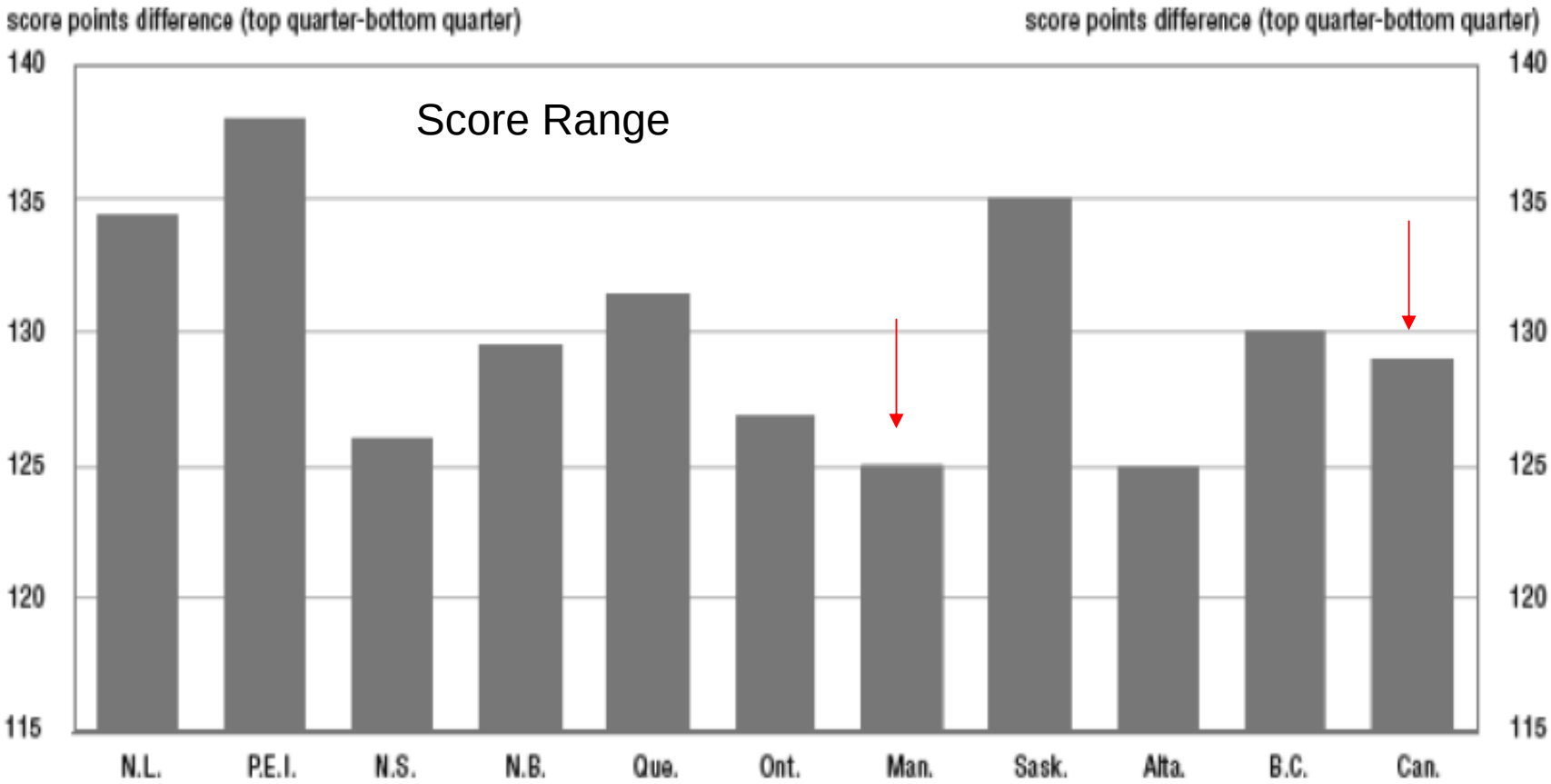
## Difference in average scores in science between students who performed in the bottom quarter of performance and students who performed in the top quarter of performance



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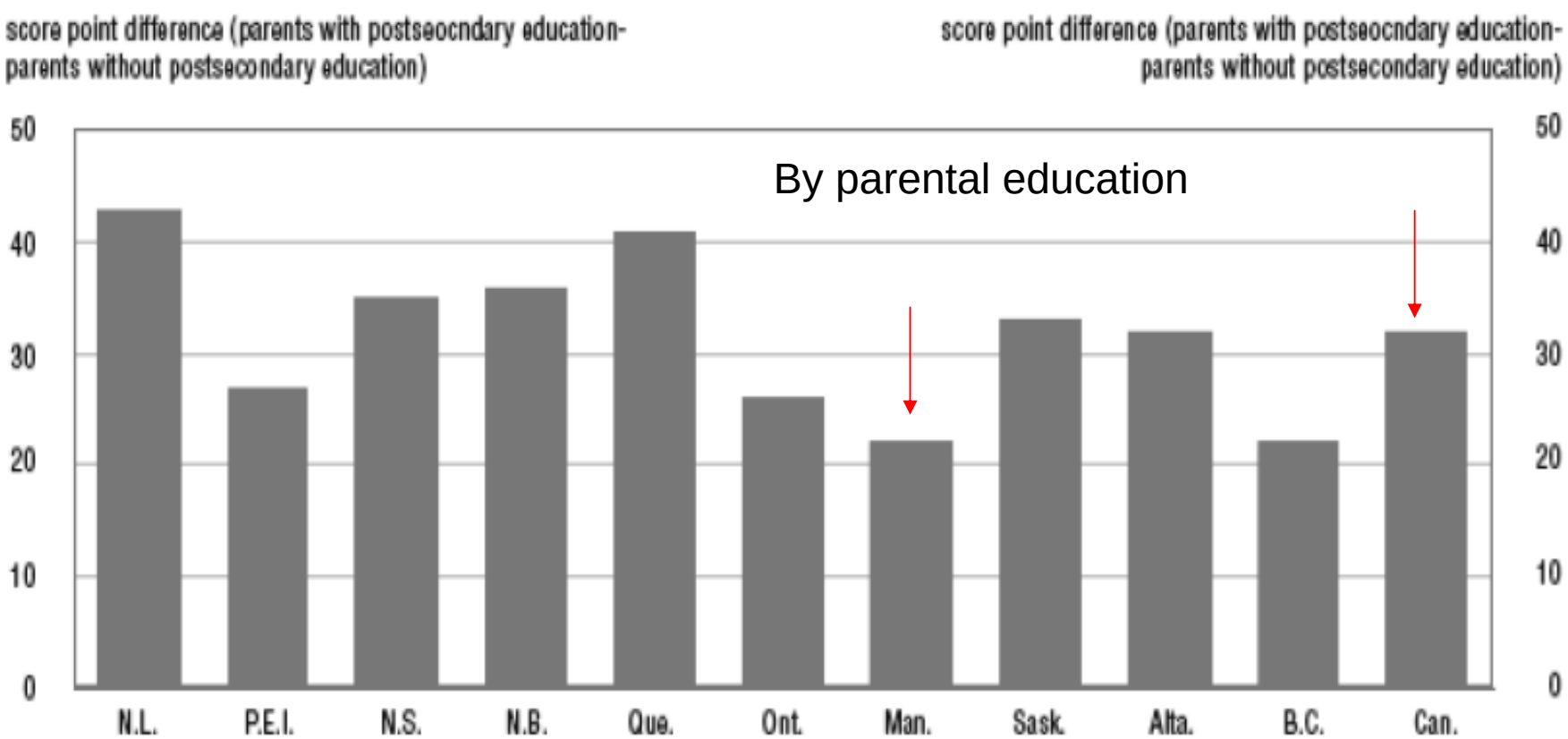
## Difference in score points of the combined science scale between students whose parents had some post secondary education and students whose parents had high school or less



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Variation in student performance, Canada and other top-performing countries

| Country | PISA Science Literacy Achievement Score | Standard deviation of science score | Difference in mean score between students whose parents have completed a post-secondary degree and those whose parents completed lower secondary or less |
|---|---|---|---|
| Finland | 563 | 86 | 39 |
| Hong-Kong China* | 542 | 92 | 52 |
| **Canada** | **534** | **94** | **71** |
| Chinese Taipei* | 532 | 94 | 98 |
| Estonia* | 531 | 84 | — |
| Japan | 531 | 100 | — |
| New Zealand | 530 | 107 | 82 |
| OECD | 500 | 95 | 79 |

* Non-OECD PISA 'partner countries'

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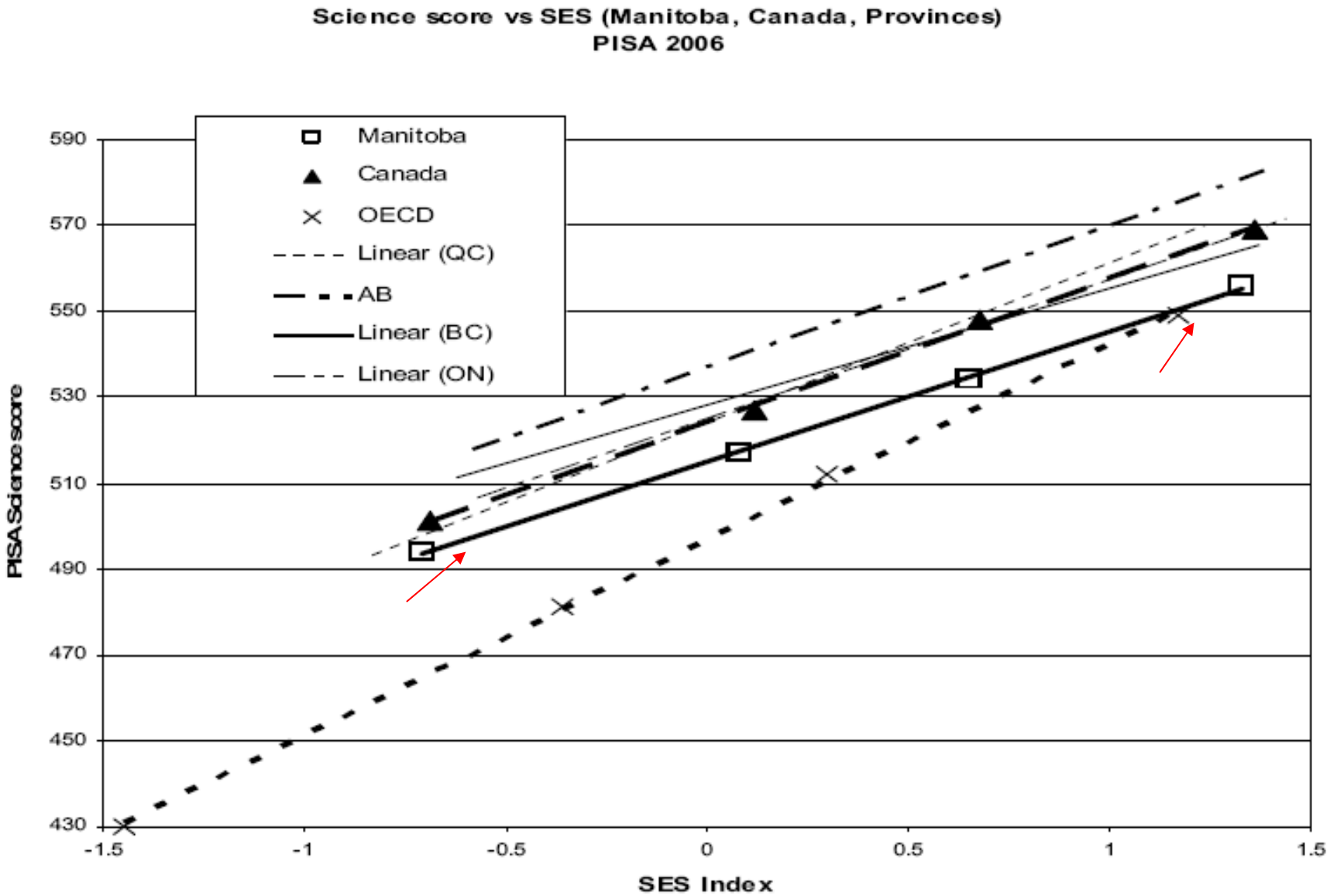
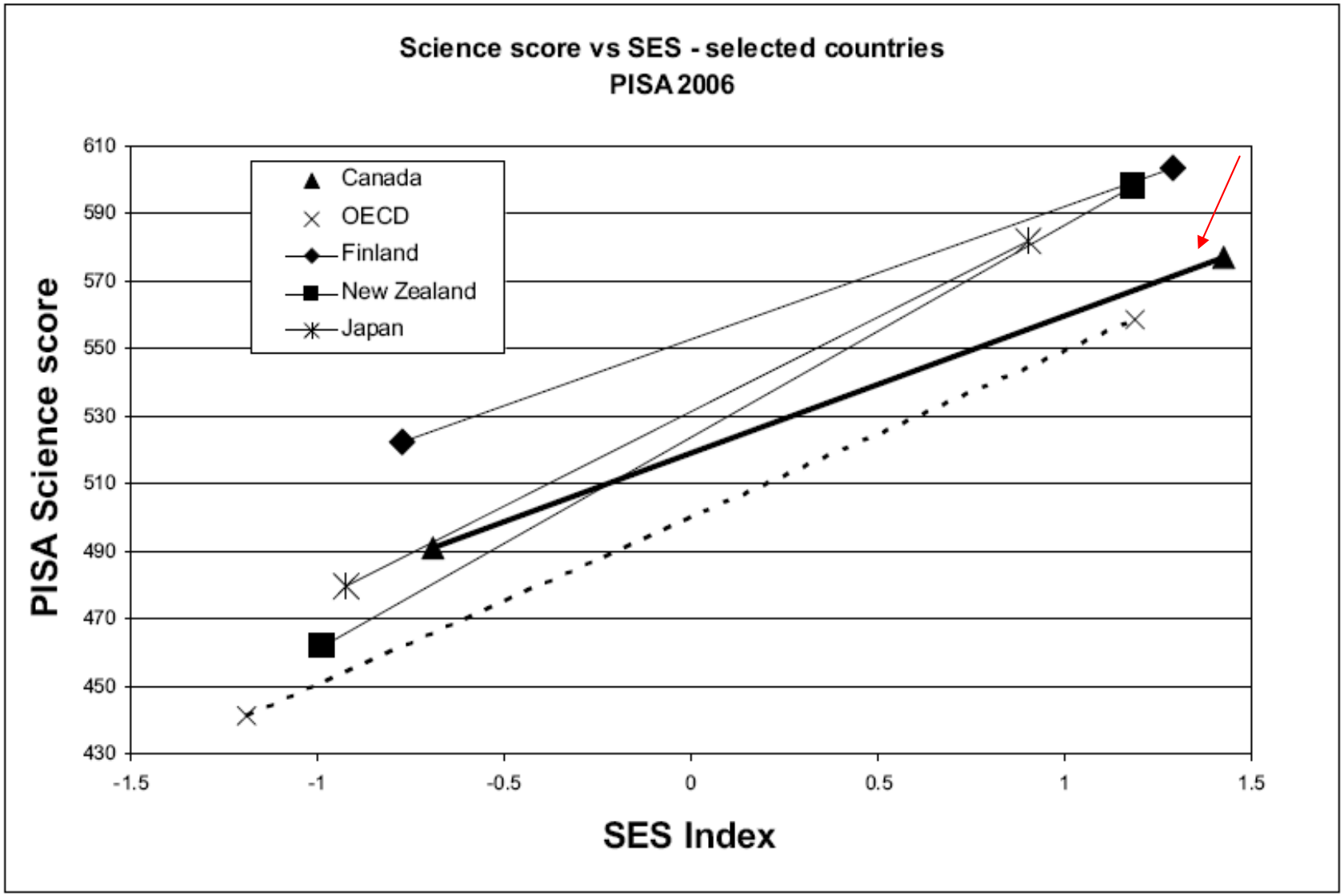

Science score vs SES (Manitoba, Canada, Provinces)
PISA 2006
Manitoba
Canada
OECD
Linear (QC)
AB
Linear (BC)
Linear (ON)
590
570
550
530
510
490
470
450
430
PISA Science score
-1.5
-1
-0.5
0
0.5
1
1.5
SES Index


Science score vs SES - selected countries
PISA 2006
PISA Science score
610
590
570
550
530
510
490
470
450
430
-1.5
-1
-0.5
0
0.5
1
1.5
SES Index
Canada
OECD
Finland
New Zealand
Japan

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Language and Immigrant Status of Students countries out-performing or tied with Canada

| Country | PISA Science Literacy Achievement Score | Proportion non-native born, % | Proportion whose language spoken at home is different from the assessment, % |
|---|---|---|---|
| Finland | 563 | 1.5 | 1.3 |
| Hong-Kong China* | 542 | 43.8 | 2.7 |
| **Canada** | **534** | **21.1** | **10.6** |
| Chinese Taipei* | 532 | 0.6 | 0.6 |
| Estonia* | 531 | 11.6 | 0.5 |
| Japan | 531 | 0.4 | 0.3 |
| New Zealand | 530 | 21.3 | 8.7 |

* Non-OECD PISA 'partner countries'

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## Science Results by Immigration Status, Canada – PISA Science 2006

| Jurisdiction | % non-immigrant | % 2nd generation | % 1st generation | PISA average score difference (non-immigrant score higher) | |
|---|---|---|---|---|---|
| | Percent of population | | | 2nd generation | 1st generation |
| Manitoba | 88 | 7 | 5 | 20 | 33 |
| QC, ON, AB, BC | 69 (ON) to 87 (QC) | 7 (QC) to 16 (ON) | 6 (QC) to 15 (ON) | 11 (AB) to 39 (QC) | 5 (AB) to 57 (QC) |
| Canada | 79 | 11 | 10 | 12 | 22 |

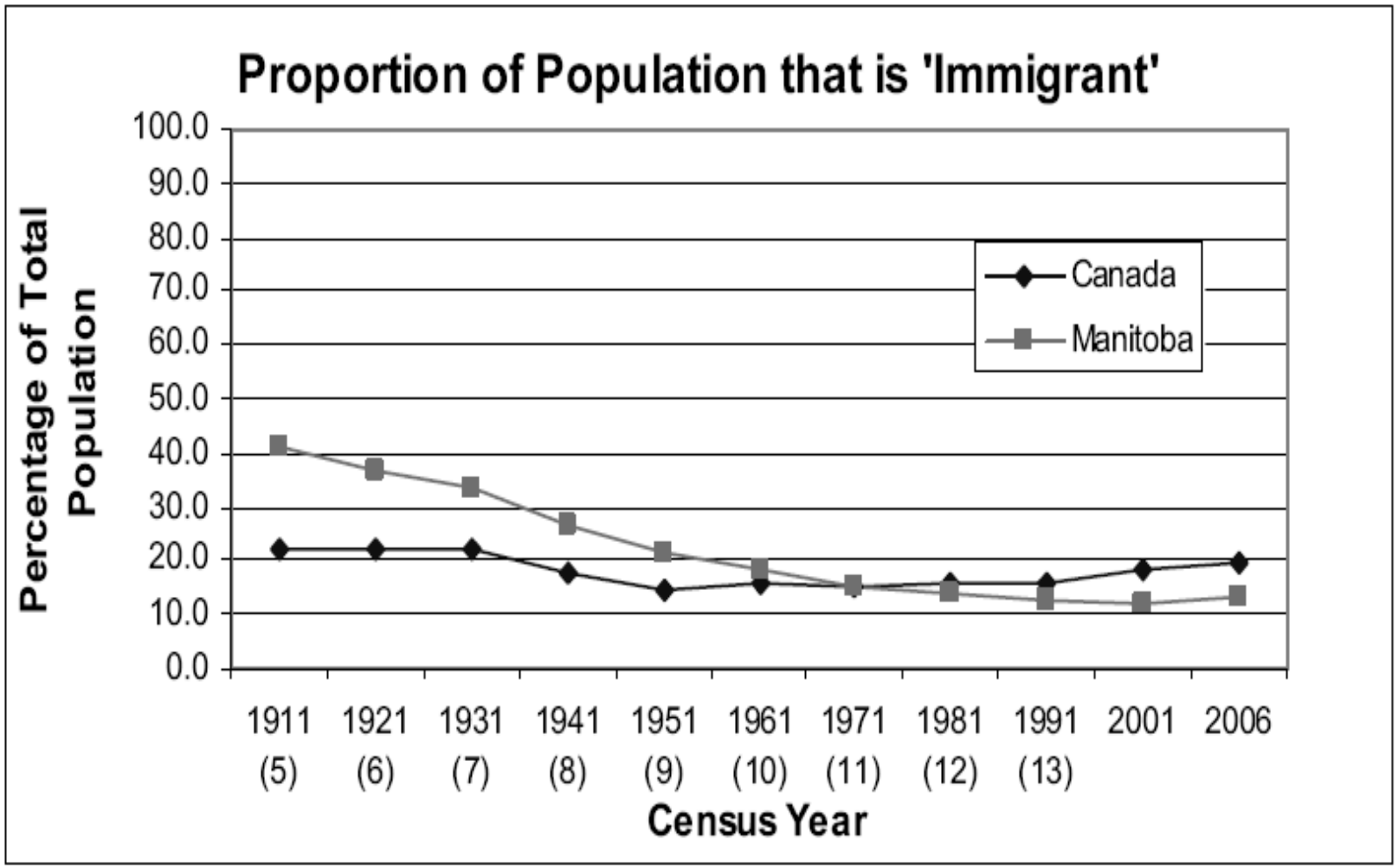
Manitoba

Science Results by Immigration Status, Top-performing Countries – PISA Science 2006

| Jurisdiction | % non-immigrant | % 2nd generation | % 1st generation | PISA average score difference (non-immigrant score higher) | |
|---|---|---|---|---|---|
| | Percent of population | | | 2nd generation | 1st generation |
| Finland | 98.5 | 0.2 | 1.3 | — | — |
| Hong-Kong China* | 56.2 | 24.6 | 19.2 | -4.0** | 26 |
| **Canada** | **78.9** | **11.2** | **9.9** | **13.0** | **22** |
| Chinese Taipei* | 99.4 | 0.4 | 0.2 | — | — |
| Estonia* | 88.4 | 10.5 | 1.1 | 32 | — |
| Japan | 99.6 | 0.1 | 0.3 | — | — |
| New Zealand | 78.7 | 6.9 | 14.3 | 28 | 10 |
| OECD | 90.7 | 5.1 | 3.9 | 34 | 45 |

* Non-OECD PISA 'partner countries'

** Negative sign indicates the non-immigrant average score was lower




Source: Statistics Canada – 2006 Census. Catalogue Number 97-557-XCB2006006.

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## Attitudes towards Science in Canada – PISA 2006

| Attitude | | Attitude Index | | | Attitude change index | |
|---|---|---|---|---|---|---|
| | | MB | Canada Mean | Provinces high on the index | MB | Canada mean |
| Belief in self | Can do science | 0.16 | 0.21 | AB (0.39), NF (0.30), BC (0.27), ON (0.26) | 36.9 | 39.0 |
| | Can learn science | 0.17* | 0.27 | PE (0.34), QC (0.33), AB,BC,NB (0.28) | 36.1 | 34.3 |
| Value of Science | To society | 0.10 | 0.14 | AB (0.20), NF, BC (0.18), ON (0.15) | 22.0 | 25.3 |
| | To self | 0.21 | 0.20 | NF (0.36), AB (0.34), PE (0.33) | 24.0 | 24.8 |
| Interest in science | In learning | 0.0* (lowest) | 0.11 | NB (0.18), NF (0.17), AB (0.14) | 22.2 | 23.6 |
| | Enjoyment | 0.04* (2nd lowest) | 0.17 | NF (0.27), BC (0.25), NB, AB (0.22), | 30.6 | 32.6 |
| | Usefulness | 0.39 | 0.32 | NF (0.59), PE (0.57), NB (0.50), AB (0.48) | 23.8 | 22.8 |
| | Future work | 0.22 | 0.20C | PE (0.45), NF (0.43), NB, AB (0.33) | 24.1 | 25.0 |
| | Out-of-school | -0.29* (lowest) | -0.15 | NB, QC (-0.09C), NF (-0.1) | 20.8 | 21.1 |

* statistically significantly below Canadian mean

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Attitudes towards Science, Canada and other nations – PISA 2006

| Attitude | | Attitude Index | | Attitude change index | |
|---|---|---|---|---|---|
| | | Canada | Other top-performing OECDcountries | Canada[15] | OECD, Finland, Japan, New Zealand |
| Belief in self | Can do science | 0.21* | Finland (0.02) Japan (-0.53) New Zealand (-0.02) | 39.0 | 33.1, 41.0, 32.8, 53.2 |
| | Can learn science | 0.27* | Finland (0.06) Japan (-0.87) New Zealand (-0.06) | 34.3 | 14.9, 41.3, 25.2, 41.2 |
| Value of Science | To society | 0.14* | Finland (0.07) Japan (-0.18) New Zealand (-0.13) | 25.3 | 21.8, 31.5, 27.5, 35.4 |
| | To self | 0.20* | Finland (-0.09) Japan (-0.23) New Zealand (0.04) | 24.8 | 12.6, 29.0, 25.4, 32.3 |
| Interest in science | In learning | 0.11 | Finland (-0.25) Japan (-0.13) New Zealand (-0.10) | 23.6 | 13.0, 31.5, 34.4, 26.2 |
| | Enjoyment | 0.17* | Finland (0.11) Japan (-0.26) New Zealand (-0.01) | 32.6 | 19.8, 32.1, 33.4, 40.3 |
| | Usefulness | 0.32** | Finland (-0.22) Japan (-0.43) New Zealand (0.17) | 22.8 | 9.3, 30.5, 27.5, 29.2 |
| | Future work | 0.20 | Finland (-0.17) Japan (-0.24) New Zealand (-0.00) | 25.0 | 8.3, 32.4, 28.6, 29.5 |
| | Out-of-school | -0.15* | Finland (-0.16) Japan (-0.62) New Zealand (-0.26) | 21.1 | 4.4, 25.5, 22.8, 25.0 |

* boys' average attitude score more positive than girls' average

** girls' average attitude score more positive than boys' average

Choice, design

e.g., debates, discuss

## Index of Science Teaching Strategies and Relationship to PISA score – Canada

| | Interaction | | Hands-on | | Investigations | | Models/Applns | |
|---|---|---|---|---|---|---|---|---|
| | Index | Change index | Index | Change index | Index | Change index | Index | Change index |
| Manitoba | 0.22 | -7.9 | 0.36 | -15 | 0.17 | -31.6 | 0.40 | 4.3 |
| **Canada** | 0.17 | -2.7 | 0.46 | -1.3 | 0.13 | -25.1 | 0.39 | 7.5 |
| Canada range | -0.07 QC) to 0.35 (NL) | -7.9 (MB) to 4.7(NL) | 0.14 (NL) to 0.53 (ON) | -15(MB) to 6.5 (QC) | -0.02 (QC) to 0.25 (PE) | -31.6 (MB) to -18.8(AB) | 0.31 (NS,SK) to 0.40 (MB, ON) | 1.6(BC) to 13.5(QC) |
| OECD | 0 | -8.5 | 0 | -1.1 | 0 | -23.9 | 0 | 5.1 |

Manitoba

## Index of Science Teaching Strategies and Relationship to PISA score – Top Performing Nations

| | Interaction | | Hands-on | | Investigations | | Models/Applns | |
|---|---|---|---|---|---|---|---|---|
| | Index | Change index | Index | Change index | Index | Change index | Index | Change index |
| **Canada** | 0.17 | -2.7 | 0.46 | -1.3 | 0.13 | -25.1 | 0.39 | 7.5 |
| Finland | -0.13 | -6.6 | 0.0 | 13.5 | -0.26 | -22.7 | -0.13 | 13.8 |
| Japan | -1.13 | -22.2 | -0.53 | 2.5 | -0.24 | -11.9 | -0.93 | 0.79 |
| New Zealand | 0.14 | 6.5 | 0.31 | 1.3 | 0.02 | -26.3 | 0.18 | 8.0 |
| OECD | 0 | -8.5 | 0 | -1.1 | 0 | -23.9 | 0 | 5.1 |

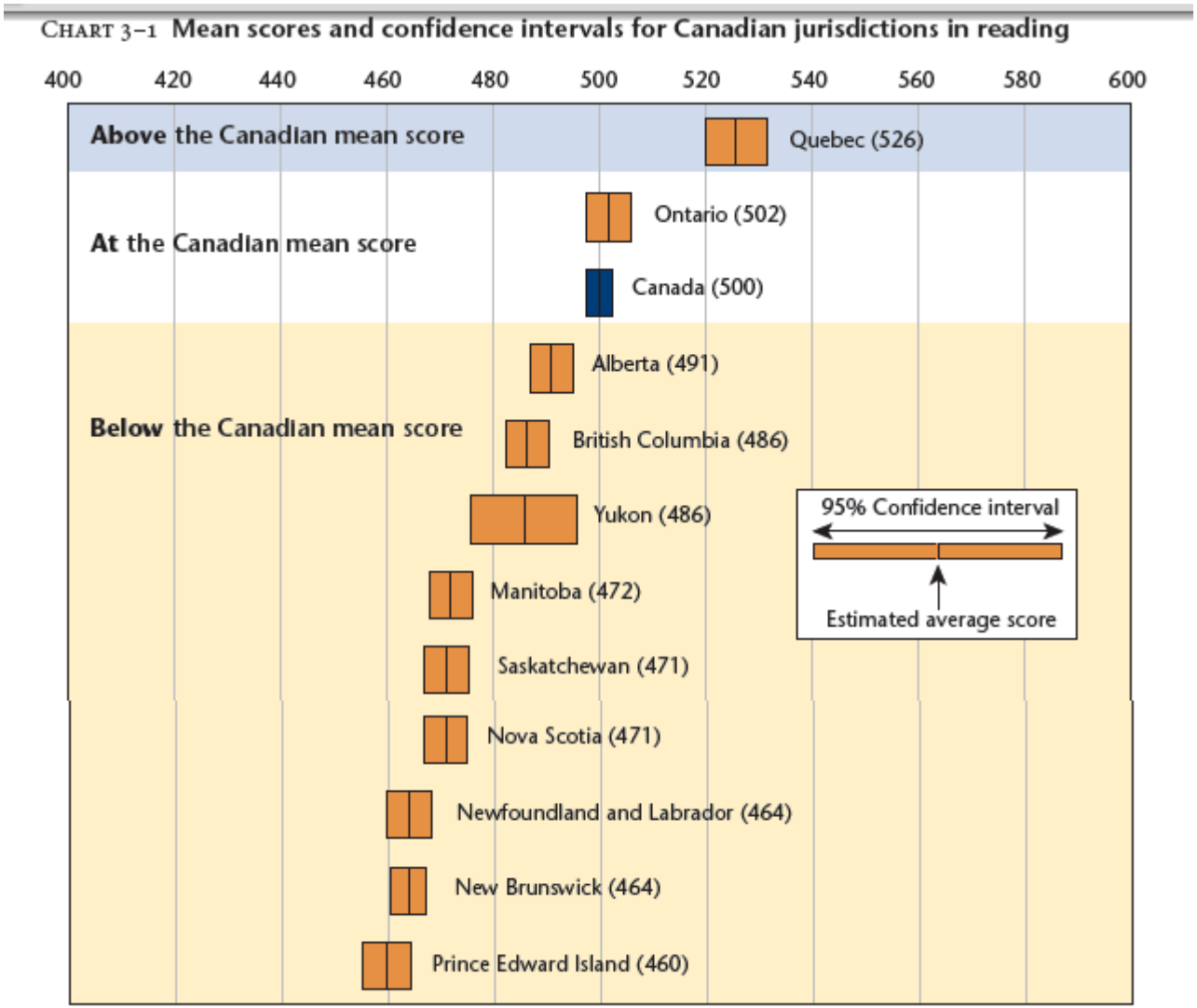
Manitoba

SAIP Science results – Percentages of students achieving at or above Level 2 for 13-year-olds, Level 3 for 16-year-olds

| Jurisdiction | 13-year-olds at or above Level 2 (percent) | | | 16-year-olds at or above Level 3 (percent) | | |
|---|---|---|---|---|---|---|
| | 1996 | 1999 | 2004 | 1996 | 1999 | 2004 |
| Manitoba-Eng | 72.9 | 72.8 → | 67.6 | 67.8 | 79.8 → | 59.3* |
| Manitoba-Fre | 59.8* | 61.2* → | 58.4* | 67.8 | 76.2 → | 58.2* |
| Canada | 71.9 | 73.3 → | 71.0 | 69.0 | 76.1 → | 64.0 |
| Alberta | 83.0 | 82.5 | 77.9 | 78.6 | 85.8 | 72.4 |
| Canada-Eng | NA | NA | 70.8 | NA | NA | 64.0 |
| Canada-Fre | NA | NA | 71.6 | NA | NA | 63.9 |

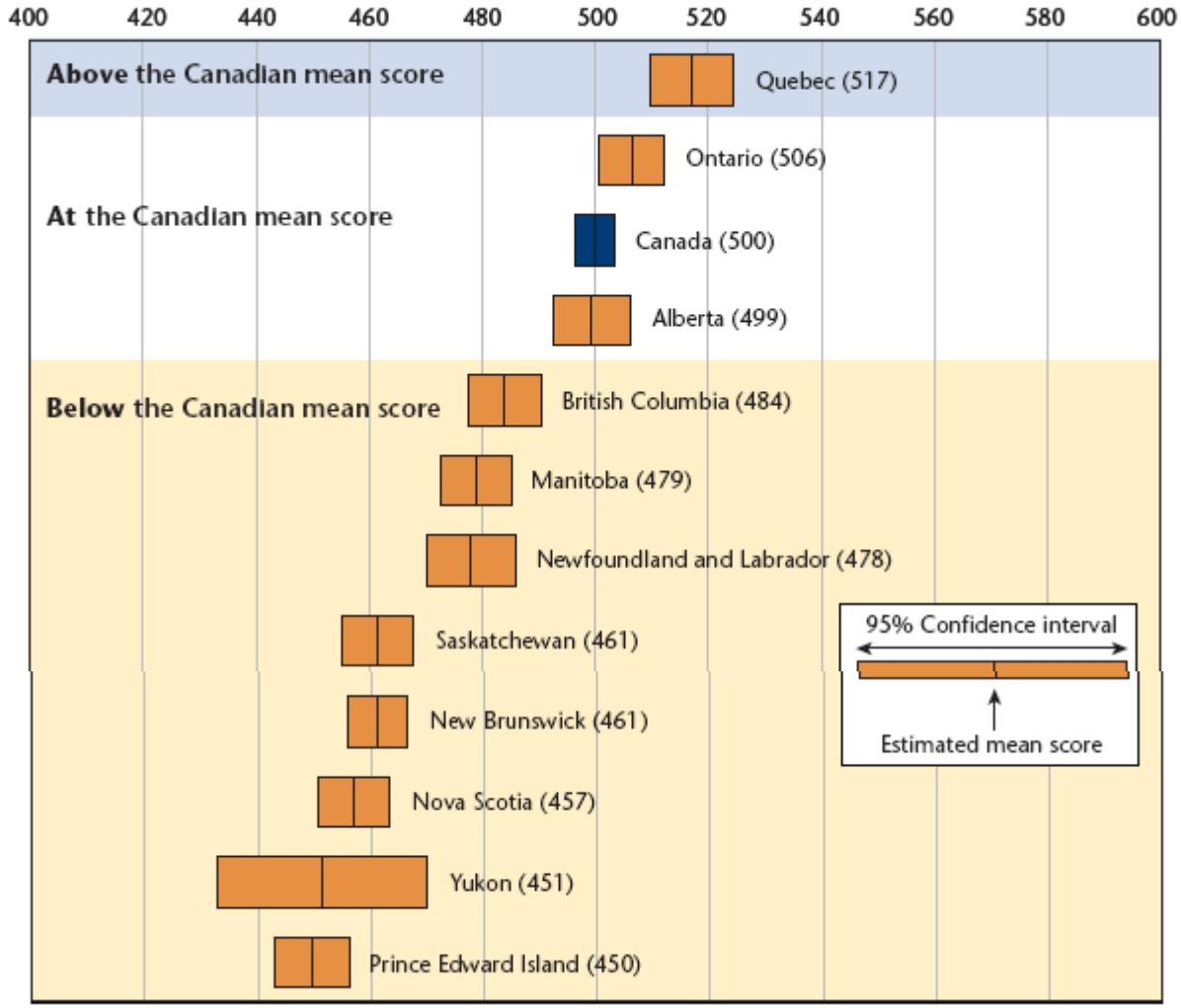
* Statistically below the Canadian average.

# Pan-Canadian Assessment Program – 2007: Reading



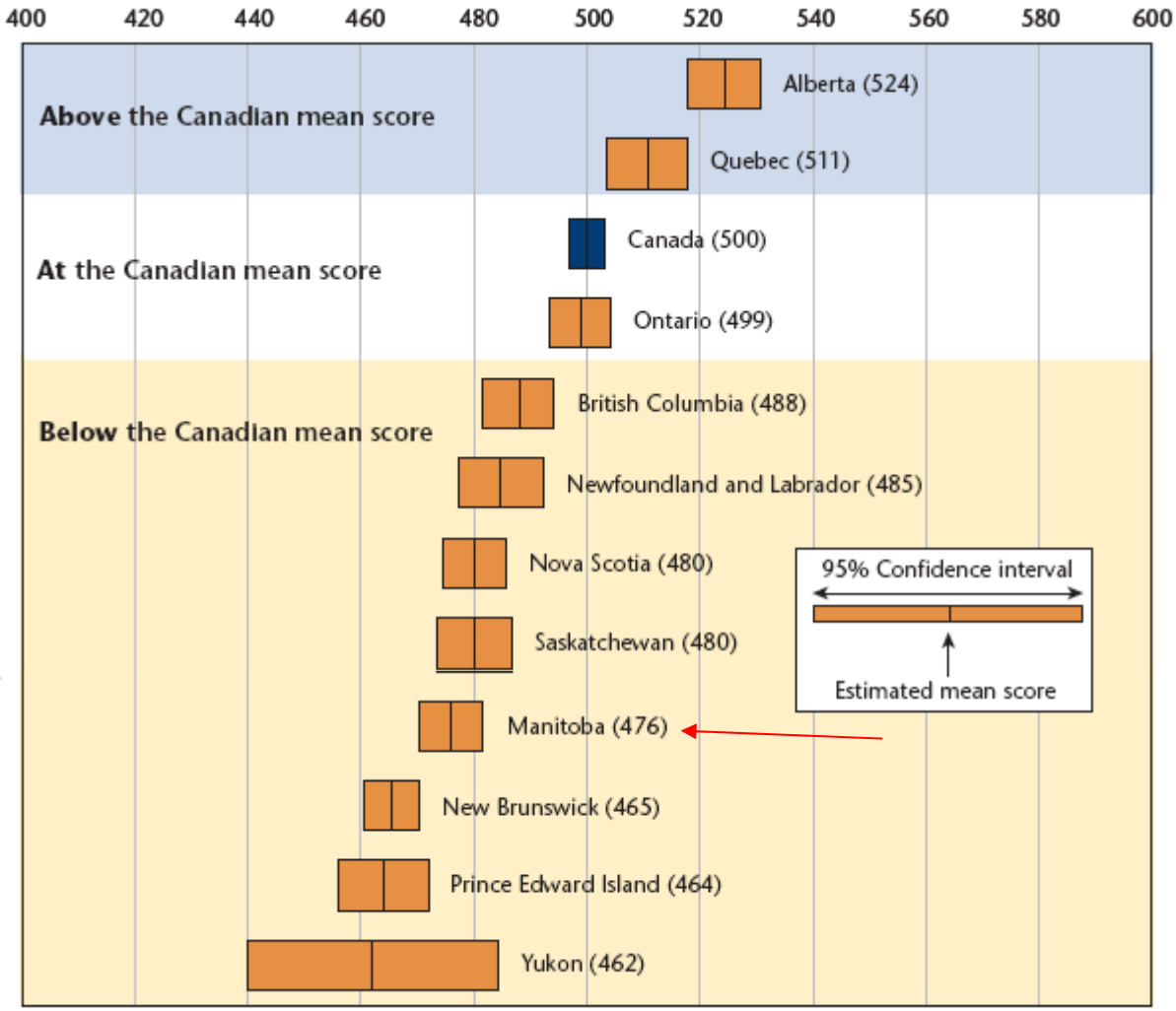
# PCAP 2007 - Mathematics

CHART 4-1 Mean scores and confidence intervals for Canadian jurisdictions in mathematics



# PCAP 2007 - Science

CHART 4-2 Mean scores and confidence intervals for Canadian jurisdictions in science



# PCAP 2007 Participation

Manitoba

TABLE A-29 Students' participation and exemption

| | Absent | | Students participating in the assessment | | Students exempted because of low abilities | | Student and Parent Refusal | | Other* | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | n | % | n | % |
| British Columbia (E) | 212 | 7.0 | 2,488 | 82.7 | 111 | 3.7 | 67 | 2.2 | 132 | 4.4 | 3,010 | 100 |
| British Columbia (F) | 15 | 8.6 | 138 | 78.9 | 14 | 8.0 | 2 | 1.1 | 6 | 3.4 | 175 | 100 |
| Alberta (E) | 170 | 5.6 | 2,604 | 85.2 | 107 | 3.5 | 49 | 1.6 | 127 | 4.2 | 3,057 | 100 |
| Alberta (F) | 12 | 3.9 | 268 | 86.7 | 14 | 4.5 | 6 | 1.9 | 9 | 2.9 | 309 | 100 |
| Saskatchewan (E) | 127 | 4.6 | 2,417 | 88.1 | 89 | 3.2 | 15 | 0.5 | 94 | 3.4 | 2,742 | 100 |
| Saskatchewan (F) | 3 | 5.3 | 54 | 94.7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 57 | 100 |
| Manitoba (E) | 142 | 5.2 | 2,310 | 85.0 | 124 | 4.6 | 32 | 1.2 | 111 | 4.1 | 2,719 | 100 |
| Manitoba (F) | 24 | 3.2 | 707 | 93.6 | 12 | 1.6 | 6 | 0.8 | 6 | 0.8 | 755 | 100 |
| Ontario (E) | 117 | 4.2 | 2,476 | 89.7 | 71 | 2.6 | 39 | 1.4 | 57 | 2.1 | 2,760 | 100 |
| Ontario (F) | 112 | 4.7 | 2,132 | 90.1 | 62 | 2.6 | 27 | 1.1 | 34 | 1.4 | 2,367 | 100 |
| Quebec (E) | 108 | 5.1 | 1,531 | 72.6 | 11 | 0.5 | 401 | 19.0 | 59 | 2.8 | 2,110 | 100 |
| Quebec (F) | 129 | 4.7 | 1,775 | 64.7 | 40 | 1.5 | 753 | 27.4 | 47 | 1.7 | 2,744 | 100 |
| New Brunswick (E) | 153 | 5.5 | 2,315 | 83.9 | 160 | 5.8 | 20 | 0.7 | 111 | 4.0 | 2,759 | 100 |
| New Brunswick (F) | 123 | 4.8 | 2,189 | 85.5 | 128 | 5.0 | 46 | 1.8 | 75 | 2.9 | 2,561 | 100 |
| Nova Scotia (E) | 179 | 6.3 | 2,400 | 83.8 | 169 | 5.9 | 54 | 1.9 | 62 | 2.2 | 2,864 | 100 |
| Nova Scotia (F) | 22 | 6.9 | 286 | 89.7 | 4 | 1.3 | 2 | 0.6 | 5 | 1.6 | 319 | 100 |
| Prince Edward Island (E) | 105 | 5.6 | 1,659 | 89.1 | 66 | 3.5 | 5 | 0.3 | 28 | 1.5 | 1,863 | 100 |
| Prince Edward Island (F) | 0 | 0.0 | 21 | 87.5 | 3 | 12.5 | 0 | 0.0 | 0 | 0.0 | 24 | 100 |
| Newfoundland and Labrador (E) | 95 | 4.3 | 1,967 | 89.4 | 73 | 3.3 | 22 | 1.0 | 42 | 1.9 | 2,199 | 100 |
| Newfoundland and Labrador (F) | 0 | 0.0 | 7 | 100.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 7 | 100 |
| Yukon (E) | 31 | 9.1 | 252 | 74.3 | 20 | 5.9 | 2 | 0.6 | 34 | 10.0 | 339 | 100 |
| Yukon (F) | 2 | 6.5 | 26 | 83.9 | 0 | 0.0 | 0 | 0.0 | 3 | 9.7 | 31 | 100 |
| Total | 1,881 | 5.3 | 30,022 | 83.9 | 1,278 | 3.6 | 1,548 | 4.3 | 1,042 | 2.9 | 35,771 | 100 |