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Teacher N°:

PCAP – 2013

Teacher Questionnaire

This questionnaire was completed:

Paper copy ①

On-line ②



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PCAP – 2013

Teacher Questionnaire

You may complete this questionnaire either **on-line** or on paper. Please consider an **on-line** submission. The form is available at <http://fluidsurveys.com/s/teacherQ/>

Your school has been selected to participate in the Pan-Canadian Assessment Program (PCAP). PCAP is an assessment of academic achievement in Canada, and its results are important for charting the progress of students in the participating provinces and territories and for shaping curricula and teaching practices.

This questionnaire is addressed to the science teachers of students who have been selected to participate in this assessment. **Please keep those students in mind when answering the questions.** The questionnaire asks about your professional background, instructional practices, the kinds of students you teach, and your attitudes toward the teaching of science. Since your school is part of a pan-Canadian sample, your responses are very important in helping to describe how science is taught in Canada. It is, therefore, important that all questions be answered as carefully and accurately as possible. Please answer the questions as they pertain to the class selected for this assessment and to the 2012-2013 school year.

This questionnaire is confidential. The Council of Ministers of Education, Canada, will not report any result that would allow you, your students, or your school to be identified.

Once you have completed the questionnaire, please return it to your PCAP school coordinator.

**Thank you for your time, effort, and thought
in completing this questionnaire.**

Section 1: Background Questions

1. Are you male or female?

- ① Male
- ② Female

2. Including this year, how many years of teaching experience do you have?

- ① Fewer than 5 years
- ② 5 to 10 years
- ③ 11 to 15 years
- ④ 16 to 20 years
- ⑤ More than 20 years

3. Which of the following degrees or diplomas do you hold?

	Yes	No
B.A. or equivalent	①	②
B.Sc. or equivalent	①	②
B.Ed. or equivalent (e.g., at least one year of teacher training)	①	②
Other bachelor's degree	①	②
M.Ed	①	②
Other master's degree	①	②
Ph.D. or equivalent	①	②
Other degree or diploma	①	②
No degree or diploma	①	②

4. During your postsecondary studies, how many semester courses did you take in science or science-related subjects? (Do not include science teaching-methodology courses. Count a full-year course, at the usual three class hours per week, as two semester courses.)

- ① 1–2 courses
- ② 3–5 courses
- ③ 6–9 courses
- ④ 10 or more courses

5. **Would you consider yourself a specialist in the teaching of science, by ...**

	Yes	No
Education	①	②
Experience	①	②

6. **Approximately what percentage of your total teaching assignment is in science for this school year?**

- ① Less than 20%
- ② 20% to 39%
- ③ 40% to 69%
- ④ 70% or more

7. **How many students are in the science class selected for PCAP-2013?**

- ① Fewer than 15 students
- ② 15 to 19 students
- ③ 20 to 24 students
- ④ 25 to 29 students
- ⑤ 30 or more students

8. **How many grade levels are in the science class selected for PCAP-2013?**

- ① One grade only
- ② Two grade levels
- ③ Three or more grade levels

9. **On average, how many days this year would you say your selected science class has been taught by someone other than yourself (e.g., a substitute teacher)?**

- ① 5 or fewer
- ② 6 to 9
- ③ 10 to 19
- ④ 20 or more

Section 2: Professional Development

10. In the past five years, how many days (or equivalent) of professional development related to the teaching of science have you participated in?

- ① None
- ② 1 to 2 days
- ③ 3 to 4 days
- ④ 5 to 8 days
- ⑤ 9 or more days

11. Have you participated in professional development activities in the past five years?

Yes	No
①	②

If YES, indicate their effect on student learning.

	Effect on student learning		
	Little or none	Some	A lot
(a) Academic courses (e.g., university)	①	②	③
(b) Workshops or conferences	①	②	③
(c) Professional learning communities	①	②	③
(d) Curriculum development	①	②	③
(e) Development of common assessment items	①	②	③
(f) Marking or scoring sessions	①	②	③
(g) On-line (e.g., webinars, videos)	①	②	③
(h) Integrating information technology into science (e.g., SMART Board, probeware, smartphones)	①	②	③
(i) Assessment and evaluation	①	②	③
(j) Differentiating instruction/resources to adapt to students' learning styles, interests and needs	①	②	③

12. Have you participated in professional-development opportunities on the following topics in the past five years?

Yes	No
①	②

If YES, indicate their effect on student learning.

	Effect on student learning		
	Little or none	Some	A lot
(a) Science content	①	②	③
(b) Science pedagogy/instruction (e.g., inquiry)	①	②	③
(c) Science curriculum	①	②	③
(d) Professional science reading materials	①	②	③
(e) Science teacher collaboration	①	②	③
(f) Improving students' critical thinking or inquiry skills	①	②	③
(g) Science assessment	①	②	③

Section 3: Time Management

13. On average, how much time PER WEEK do you expect the students in the science class selected for PCAP-2013 to spend on science homework?

- ① I do not assign science homework.
- ② Less than 30 minutes
- ③ 30 minutes to one hour
- ④ One to two hours
- ⑤ More than two hours

14. On average, how many FULL instructional days in a school year, in your selected class, are used for the following? (Do not report partial days here. Report those under question 15.)

	0 to 2 days	3 to 5 days	6 to 9 days	10 to 14 days	15 to 20 days	More than 20 days
(a) Tests/exams taken outside of regular class sessions (include marking days)	①	②	③	④	⑤	⑥
(b) Field trips or excursions (music, cultural, etc.)	①	②	③	④	⑤	⑥
(c) Sports activities	①	②	③	④	⑤	⑥
(d) School-spirit days	①	②	③	④	⑤	⑥
(e) Closings due to weather	①	②	③	④	⑤	⑥
(f) Other non-instructional activities	①	②	③	④	⑤	⑥

15. Out of the total number of instructional hours you have in a given school year, on average, what percentage is lost due to class cancellations or other losses of whole class periods (other than whole school days, which should be reported in question 14)? (e.g., assemblies, fundraising, etc.)

- ① 0–1%
- ② 2–5%
- ③ 6–10%
- ④ 11–15%
- ⑤ 16–20%
- ⑥ > 20%

16. How often is time lost because of the following in your science class?

	Never	Rarely	Sometimes	Often
(a) Student misbehaviour	①	②	③	④
(b) Other disruptions (e.g., announcements, assemblies, visits)	①	②	③	④
(c) Discussions unrelated to the science lesson	①	②	③	④

Section 4: Assessment Practices

17. Are the results of any tests or assessments external to the school used as part of students' final grades or evaluations in the science class selected for PCAP-2013?

- ① Yes
- ② No

18. In the science class selected for PCAP-2013, how often are students assessed in the following ways?

	Never	Rarely	Sometimes	Often
(a) Common school-wide tests or assessments	①	②	③	④
(b) Teacher-developed classroom tests	①	②	③	④
(c) Student portfolios and/or journals	①	②	③	④
(d) Individual student assignments/projects	①	②	③	④
(e) Group assignments/projects	①	②	③	④
(f) Homework	①	②	③	④
(g) Performance assessment (e.g., design a research project, an investigation or a machine)	①	②	③	④

19. In the science class selected for PCAP-2013, do you assign marks or value to the following?

	Never	Rarely	Sometimes	Often
(a) Attendance	①	②	③	④
(b) Participation	①	②	③	④
(c) Effort	①	②	③	④
(d) Improvement	①	②	③	④
(e) Behaviour	①	②	③	④
(f) Group collaboration	①	②	③	④

20. In your teacher-developed science tests/examinations, how often do you use the following kinds of items or questions?

	Never	Rarely	Sometimes	Often
(a) Selected-response items (e.g., true/false, multiple choice)	①	②	③	④
(b) Short-response items (e.g., one or two words, facts, short sentences)	①	②	③	④
(c) Extended-response items requiring an explanation or justification	①	②	③	④
(d) Performance assessment (e.g., design a research project, an investigation or a machine)	①	②	③	④

21. In your classroom assessment, how often do you include questions to measure the following levels of thinking?

	Never	Rarely	Sometimes	Often
(a) Knowledge of facts and concepts (e.g., recall, identify, label)	①	②	③	④
(b) Ability to apply knowledge and understanding (e.g., solve a problem, apply information to a new context)	①	②	③	④
(c) Ability to develop hypotheses and design scientific investigations (e.g., create, design, perform)	①	②	③	④
(d) Ability to explain, justify, evaluate	①	②	③	④

22. Have you met the needs of your students with the following accommodations (adaptations), or modifications?

	Yes	No
(a) Program modifications (e.g., alter course expectations)	①	②
(b) More time in which to accomplish a task	①	②
(c) Adapted teaching methods	①	②
(d) Withdrawal of student from science class (assignment to a special class)	①	②
(e) Medical attention	①	②
(f) Special assistance with speaking, listening, reading, or writing	①	②
(g) Assistive technologies	①	②
(h) Help of an education assistant (e.g., teaching aide, interpreter)	①	②
(i) Help of a medical assistant (e.g., counsellor, speech pathologist, therapist)	①	②
(j) Help of a lab assistant	①	②

23. In your science class, approximately how often is another adult present to assist you?

- ① Never
- ② Up to one-quarter of the time
- ③ Up to one-half of the time
- ④ Most or all of the time

Section 5: Teaching Strategies

24. To what extent do you teach in the following ways?

	Not at all	A little	More than a little	A lot
(a) To the whole class	①	②	③	④
(b) To small groups	①	②	③	④
(c) To individual students	①	②	③	④

25. To what extent do you use the following strategies during science instruction in the science class selected for PCAP-2013?

	Not at all	A little	More than a little	A lot
(a) Re-teach concepts and skills that should have been mastered earlier	①	②	③	④
(b) Differentiate instruction/resources to adapt to students' learning styles, interests and needs	①	②	③	④
(c) Provide enrichment for advanced students	①	②	③	④

26. To what extent do you provide opportunities for students to do the following in the science class selected for PCAP-2013?

	Never	Rarely	Sometimes	Often
(a) Give oral explanations	①	②	③	④
(b) Give written explanations	①	②	③	④
(c) Use correct scientific language	①	②	③	④
(d) Justify their reasoning	①	②	③	④
(e) Make generalizations and conjectures	①	②	③	④
(f) Use multiple representations	①	②	③	④
(g) Make connections among concepts	①	②	③	④

27. To what extent do you ask the students to do the following during science instruction in the science class selected for PCAP-2013?

	Not at all	A little	More than a little	A lot
(a) Observe natural phenomena and describe what they see	①	②	③	④
(b) Watch you demonstrate an experiment or investigation	①	②	③	④
(c) Formulate their own questions for investigations	①	②	③	④
(d) Design ways to seek answers to their own questions	①	②	③	④
(e) Design or plan experiments or investigations	①	②	③	④
(f) Conduct experiments or investigations	①	②	③	④
(g) Work together in small groups on experiments or investigations	①	②	③	④
(h) Read their textbooks or other resource materials	①	②	③	④
(i) Memorize facts and principles	①	②	③	④
(j) Use scientific formulae, laws, or theory to solve routine problems	①	②	③	④
(k) Relate what they are learning in science to their daily lives	①	②	③	④
(l) Learn through exploration	①	②	③	④
(m) Be inventive or creative	①	②	③	④
(n) Learn process skills in context	①	②	③	④
(o) Interact with their peers	①	②	③	④
(p) Experience something new	①	②	③	④
(q) Make connections to other disciplines	①	②	③	④

Section 6: Science Teaching Efficacy and Beliefs

28. This question is the validated teacher efficacy survey developed by Riggs and Enochs (1990) in its entirety and is protected by copyright. The reference is given below.

Riggs, I. M., & Enochs, L. G. (1990). Toward the development of an elementary teacher's science teaching efficacy belief instrument. *Science Education* 74(6), 625–637.

29. To what extent do the following present challenges to your ability to teach science?

	No challenge	Little or no challenge	Some challenge	A great challenge
(a) The range of student abilities in the class	①	②	③	④
(b) Students coming from a wide variety of backgrounds (e.g., socioeconomic, linguistic, cultural, etc.)	①	②	③	④
(c) Uninterested students	①	②	③	④
(d) Disruptive students	①	②	③	④
(e) Pressure from parents/guardians	①	②	③	④
(f) Curriculum inappropriate for grade level	①	②	③	④
(g) Shortage of computer hardware or software	①	②	③	④
(h) Shortage of consumable materials	①	②	③	④
(i) Shortage of equipment (e.g., microscopes, glassware)	①	②	③	④

	No challenge	Little or no challenge	Some challenge	A great challenge
(j) Inadequate physical facilities	①	②	③	④
(k) Too much content in curriculum	①	②	③	④
(l) Too few instructional minutes assigned to science	①	②	③	④
(m) Large class sizes	①	②	③	④
(n) Low morale in the school	①	②	③	④
(o) Concerns for personal safety or the safety of students	①	②	③	④
(p) Inadequate resources for lesson planning	①	②	③	④
(q) Lack of time for planning	①	②	③	④
(r) Limitations in the subject in my own background	①	②	③	④
(s) Inadequate Internet access	①	②	③	④
(t) External assessments or standardized tests	①	②	③	④
(u) Lack of professional development	①	②	③	④
(v) Inadequate collegial support	①	②	③	④

Thank you for taking the time to complete this questionnaire.

