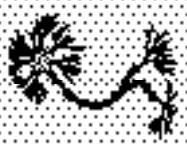
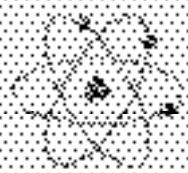
Identification Number

Teacher Questionnaire





School Achievement Indicators Program
Science III Assessment (2004)

Council of Ministers of Education, Canada

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School Achievement Indicators Program

Science III Assessment (2004)

Teacher Questionnaire

Your school has been selected as one of more than 1,000 schools in Canada participating in the School Achievement Indicators Program (SAIP) in science. This program is the only comprehensive assessment of student achievement in Canada, and its results are important in ascertaining the skills and abilities of students in various provinces and territories and in deciding on curriculum change and other matters affecting the teaching of science.

This questionnaire is addressed to the teachers of students who have been selected to participate in this assessment. **Please keep those students in mind when answering the questions.** It asks about your professional background, instructional practices, the kinds of students you teach, and your attitudes toward teaching science. Since your school is part of a national 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 in relation to the 2003–04 school year.

This questionnaire is confidential when completed. Your responses will not be used in any way that will allow you, your students, or your school to be identified.

Once you have completed this questionnaire, please return it to your SAIP school coordinator.

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

GLOSSARY OF TERMS

Subject: mathematics, science, chemistry, social studies, etc

Course: subject offered at a given grade level, e.g., Chemistry 12, Physics 30, Biology 536, Science 8

Class: a group of students meeting regularly for instruction in a course

Block: a regularly scheduled time that a class meets for instruction in a course. A block may be scheduled at different times on different days of a timetable cycle *(e.g., one week, 6 days, 8 days, …)*.

Period: the time length of a scheduled block *(e.g., 40 minutes, one hour, 80 minutes, …).*

1. In each of the following grades, how many blocks are you scheduled to teach science this year?

	number of blocks	
grade 6 or below	__ __	a
grade 7 (Sec.1 - QC,)	__ __	b
grade 8 (Sec. 2 - QC,)	__ __	c
grade 9 (Sec. 3 - QC, NL, Senior I - MB)	__ __	d
grade 10 (Sec. 4 - QC, Senior II - MB, Level I - NL)	__ __	e
grade 11 (Sec. 5 - QC, Senior III - MB, Level II - NL)	__ __	f
grade 12 (Cégep 1 - QC, Senior IV - MB, Level III - NL)	__ __	g
above grade 12	__ __	h

2. How many blocks per year are you scheduled to teach in each of the following subjects? Please indicate also whether the courses are taught over the full year or over a semester.

	number of blocks	semester course	
		Yes	No
(a) biology/life science	__ __	1	2
(b) chemistry	__ __	1	2
(c) computer studies	__ __	1	2
(d) earth science	__ __	1	2
(e) physics	__ __	1	2
(f) technology	__ __	1	2
(g) general/integrated science	__ __	1	2
(h) other science courses	__ __	1	2
(i) other subjects (other than science)	__ __	1	2

3. How many blocks per timetable cycle are scheduled for your planning and preparation during regular school hours (times when classes are in session in your school)?

0 to 0.4	.....	1
0.5 to 1.0	.....	2
1.1 to 1. 4	.....	3
1.5 to 2.0	.....	4
more than 2	.....	5

4. What is the AVERAGE number of students in the science classes you teach this year? …… __ __ students

5. What is your LARGEST number of students in any science class?
…… __ __ students

6. What is your SMALLEST number of students in any science class?
…….. __ __ students

7. ON AVERAGE, about how many <u>hours per week</u> do you spend on each of the following activities outside of formal school hours?

	no time	less than 1 hr	1–2hrs	3–4hrs	5–6hrs	more than 6 hrs
(a) planning and preparation	1	2	3	4	5	6
(b) marking student work	1	2	3	4	5	6
(c) administrative duties	1	2	3	4	5	6
(d) meetings	1	2	3	4	5	6
(e) routine tasks *(e.g., record-keeping, photocopying)*	1	2	3	4	5	6
(f) professional development *(e.g., courses, conferences, professional reading)*	1	2	3	4	5	6
(g) working with students *(e.g., coaching, clubs, tutoring)*	1	2	3	4	5	6
(h) other professional activities related to your teaching	1	2	3	4	5	6
(i) developing individualized education programs	1	2	3	4	5	6
(j) planned parent conferences	1	2	3	4	5	6

8. ON AVERAGE, over a full school year, how many hours of your scheduled teaching time would you estimate is lost because of class cancellations, school closures, or other losses of whole class periods or school days?

__ __ hours

9. About how often do you meet with or speak by telephone to parents to discuss individual students?

	13-year-olds (i)	16-year-olds (ii)
never	1	1
once or twice a year	2	2
about every other month	3	3
about once a month	4	4
about once a week	5	5
two or three times a week	6	6
more than five times a week	7	7

10. Approximately what percentage of parents do you have contact with, over a full school year?

	13-year-olds	16-year-olds
(a) At regularly scheduled parent-teacher interviews	___ Per cent	___ Per cent
(b) At times other than during regularly scheduled interviews	___ Per cent	___ Per cent

11. About how often do you meet with other teachers to plan lessons, units, tests, or discuss other instructional matters?

never 1
once or twice a year 2
about every other month 3
about once a month 4
about once a week 5
two or three times a week 6
almost every day 7

12. When planning science lessons, to what extent do you use ...

	rarely or never	a few times a month	a few times a week	almost every class
(a) your own previously prepared lessons?	1	2	3	4
(b) materials prepared by other teachers or specialists?	1	2	3	4
(c) student textbooks?	1	2	3	4
(d) other textbooks or resource books?	1	2	3	4
(e) teacher guides or teacher editions of textbooks?	1	2	3	4
(f) provincial/territorial curriculum documents?	1	2	3	4
(g) Internet or other computer-based sources?	1	2	3	4
(h) evaluation materials?	1	2	3	4
(i) media-generated materials?	1	2	3	4
(j) other sources?	1	2	3	4

13. To what extent do you agree or disagree with each of the following statements?

	strongly disagree	disagree	agree	strongly agree
(a) Science is primarily a body of knowledge and concepts.	1	2	3	4
(b) Science is primarily a formal way of representing the real world.	1	2	3	4
(c) Learning scientific concepts and principles is more important than learning facts and rules.	1	2	3	4
(d) Science is better thought of as a process than as a body of knowledge and concepts.	1	2	3	4
(e) One of the main goals of science is to develop useful tools and products.	1	2	3	4
(f) A true understanding of science only takes place after students learn basic facts and rules.	1	2	3	4
(g) Science is primarily concerned with finding theories to explain observed events.	1	2	3	4
(h) Some students have a natural talent for science and some do not.	1	2	3	4
(i) Teachers should give students explicit and sequential directions for doing science experiments.	1	2	3	4
(j) Students need natural talent to do well in science courses.	1	2	3	4
(k) Students need to work hard to do well in science courses.	1	2	3	4
(l) Science is generally more difficult than other school subjects.	1	2	3	4
(m) I am often frustrated by students who are not willing to do their best.	1	2	3	4
(n) My teaching is too often disrupted by student misbehaviour.	1	2	3	4
(o) I would quit teaching if another job were available with the same pay and benefits.	1	2	3	4
(p) Society generally appreciates the work of teachers.	1	2	3	4
(q) Students generally appreciate the work of teachers.	1	2	3	4
(r) With proper teaching, most students can do well in science.	1	2	3	4
(s) If students do poorly, it is usually their fault and not the teacher's fault.	1	2	3	4
(t) There are limits to what a teacher can accomplish because student ability has a large influence on achievement.	1	2	3	4
(u) A student's home environment has an influence on achievement.	1	2	3	4
(v) High school students should be streamed into different programs based on their abilities.	1	2	3	4

14. How often do the following activities happen in your science classes?

		rarely or never	a few times a month	a few times a week	almost every class
(a)	I give notes.	1	2	3	4
(b)	I show students how to do problems.	1	2	3	4
(c)	Students work on long-term science projects.	1	2	3	4
(d)	Students work in pairs or small groups.	1	2	3	4
(e)	Students do laboratory experiments.	1	2	3	4
(f)	I demonstrate an experiment.	1	2	3	4
(g)	I assign homework.	1	2	3	4
(h)	I check homework.	1	2	3	4
(i)	We discuss a coming quiz or test or one just finished.	1	2	3	4
(j)	Students work alone on assigned work.	1	2	3	4
(k)	Students study the textbook.	1	2	3	4
(l)	I read from or summarize the textbook.	1	2	3	4
(m)	I ask questions of individuals or the class. .	1	2	3	4
(n)	We go outdoors or on a field trip.	1	2	3	4
(o)	The class is disrupted by noise or disorder.	1	2	3	4
(p)	We lose 5 or 10 minutes because of other disruptions.	1	2	3	4
(q)	I work with individual students.	1	2	3	4
(r)	We get off the topic and onto other aspects of science.	1	2	3	4
(s)	We get onto other topics unrelated to science.	1	2	3	4
(t)	I help students develop general learning strategies.	1	2	3	4

15. How often are the following resources used in your science classes?

	never	a few times a year	a few times a month	almost every class
(a) Science books and magazines.	1	2	3	4
(b) Teacher uses a computer for instruction. ...	1	2	3	4
(c) Students use appropriate electronic technology for gathering data.	1	2	3	4
(d) Students use electronic technology for data analysis.	1	2	3	4
(e) Students use computers for writing reports	1	2	3	4
(f) Graphing calculators.	1	2	3	4
(g) Overhead projector.	1	2	3	4
(h) Slides, films or videos.	1	2	3	4
(i) Teacher uses the Internet or World Wide Web.	1	2	3	4
(j) Students use the Internet or World Wide Web.	1	2	3	4
(k) A laboratory.	1	2	3	4
(l) A computer lab.	1	2	3	4
(m) Museums, zoos, conservation areas, and similar non-school sites.	1	2	3	4
(n) Provincial/territorial curriculum guides.	1	2	3	4
(o) Laboratory apparatus, specimens, or other resources not mentioned above.	1	2	3	4
(p) Experts within the community.	1	2	3	4

16. How often do you or your students use the following questioning techniques in your science classes?

	rarely or never	once or twice a class	several times a class	many times a class
I ask questions…				
(a) of individual students by name.	1	2	3	4
(b) of the class as a whole.	1	2	3	4
(c) specifically of students I feel are not paying attention.	1	2	3	4
(d) of the best students to make it more likely to get a good answer.	1	2	3	4
(e) of reticent students to help improve their participation.	1	2	3	4
(f) requiring brief responses *(e.g., a word or phrase)*.	1	2	3	4
(g) requiring more elaborated responses *(e.g., a few sentences)*.	1	2	3	4
(h) intended to stimulate a general discussion.	1	2	3	4
Students ask questions…				
(i) requiring a brief response by the teacher.	1	2	3	4
(j) requiring an elaborated response by the teacher.	1	2	3	4
(k) requiring responses by other students.	1	2	3	4
(l) that stimulate general discussion.	1	2	3	4

17. To what extent do the following limit or restrict how you teach your science classes?

	not at all	a little	quite a lot	a great deal
(a) the range of student abilities in the class	1	2	3	4
(b) the range of differences in students' backgrounds *(e.g., economic, language)*.....	1	2	3	4
(c) the presence of students with special needs *(e.g., mental or emotional disorders, physical disabilities)*	1	2	3	4
(d) uninterested students.....	1	2	3	4
(e) disruptive students	1	2	3	4
(f) pressure from parents.....	1	2	3	4
(g) shortage of computer hardware or software	1	2	3	4
(h) shortage of materials or equipment	1	2	3	4
(i) inadequate physical facilities	1	2	3	4
(j) large class size	1	2	3	4
(k) low morale in the school	1	2	3	4
(l) concerns with personal safety or the safety of students.....	1	2	3	4
(m) inadequate resource material for lesson planning	1	2	3	4
(n) external examinations or standardized tests	1	2	3	4
(o) limits in my own background in the subject	1	2	3	4
(p) inadequate curriculum design.....	1	2	3	4
(q) lack of in-service with respect to the curriculum	1	2	3	4

18. How often do you usually assign homework in your science classes?

never 1
less than once a week 2
once or twice a week 3
3 or 4 times a week 4
every class 5

If you do not assign homework, please go to question 22.

19. If you do assign science homework, how many minutes would you expect an average student to spend doing it?

less than 15 minutes 1
15–30 minutes 2
31–60 minutes 3
more than 60 minutes 4
varies widely from assignment to assignment 5

20. If you assign science homework, how often do you assign each of the following tasks as homework?

	never	a few times a month	a few times a week	almost every class
(a) worksheet or workbook	1	2	3	4
(b) problems/questions in textbook	1	2	3	4
(c) reading in text or supplementary materials ...	1	2	3	4
(d) writing definitions or other short writing assignment	1	2	3	4
(e) working individually on long-term projects or experiments	1	2	3	4
(f) preparing oral presentations	1	2	3	4
(g) working in groups on long-term projects or experiments	1	2	3	4

21. If you assign written science homework, how often do you do the following?

	never	a few times a month	a few times a week	almost every class
(a) record whether or not the homework is completed	1	2	3	4
(b) collect, correct, and keep assignments	1	2	3	4
(c) collect, correct, and return assignments to students	1	2	3	4
(d) give feedback on homework to whole class	1	2	3	4
(e) have students correct their own homework in class	1	2	3	4
(f) have students exchange assignments and correct them in class	1	2	3	4
(g) use homework to contribute toward students' grades or marks	1	2	3	4

22. In assessing the work of students in your science courses, how much weight do you give to each of the following?

	none	a little	quite a lot	a great deal
(a) standardized tests produced outside the school	1	2	3	4
(b) teacher-made short-answer or essay tests that require students to explain their reasoning ...	1	2	3	4
(c) teacher-made multiple-choice, true-false, or matching tests	1	2	3	4
(d) homework assignments.....	1	2	3	4
(e) projects or laboratory experiments	1	2	3	4
(f) portfolios of student work	1	2	3	4
(g) observations or interviews of students	1	2	3	4
(h) attendance in class.....	1	2	3	4
(i) participation of students in class activities.....	1	2	3	4
(j) effort	1	2	3	4
(k) improvement over the year or term	1	2	3	4
(l) student self-assessment.....	1	2	3	4
(m) peer evaluation	1	2	3	4
(n) other _____	1	2	3	4

23. ON AVERAGE, how many different scores or grades do you use in computing final marks for your science students?

one to four 1
five to nine 2
ten to fourteen 3
fifteen or more 4

24. Are you female or male?

Female 1
Male 2

25. Counting this year, how many years of teaching experience do you have in total? ..... ____ **years**

26. Counting this year, how many years of teaching experience have you had?

(a) in your current school? ..... __ __ **years**
(b) in the province or territory in which you are now located? ..... __ __ **years**
(c) teaching 13-year-old students? ..... __ __ **years**
(d) teaching 16-year-old students? ..... __ __ **years**
(e) teaching science? ..... __ __ **years**

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

(Check all that apply)

B.A. or equivalent ..... ☐ a
B.Sc. or equivalent ..... ☐ b
B.Ed. or equivalent *(e.g., at least one year of teacher training)* ..... ☐ c
Trade or technical diploma or equivalent ..... ☐ d
Master degree in education ..... ☐ e
Master of science degree ..... ☐ f
Master degree in another subject ..... ☐ g
Ph.D. or equivalent ..... ☐ h
Other degree or diploma ..... ☐ i
No degree or diploma ..... ☐ j

28. If you hold a B.Sc. degree or higher degree in SCIENCE, in which subject(s) did you major or concentrate?

(Check all that apply)

Biology *(e.g. zoology, botany, ecology)* ☐ a

Chemistry or biochemistry ☐ b

Computer science or equivalent ☐ c

Earth Science ☐ d

Mathematics ☐ e

Physics ☐ f

Other science *(e.g., environmental science)* ☐ g

29. In the past two years, have you completed any in-service, professional development, or other courses dealing with the teaching of science?

Yes 1

No 2

30. Which of the following statements best describes your own comfort level in teaching science?

I consider myself a specialist in this area and prefer to teach mainly in this area. 1

I consider myself quite capable of teaching science, but would prefer to teach other subjects. 2

I am not particularly comfortable with science, but teach it when necessary. 3

I will teach science only as a last resort. 4

Thank you again for taking the time from your busy schedule to complete this questionnaire.