

Secondary School Science Questionnaire (Teacher-Pre)

Teacher V5.5b

Date completed: _____ (Please Print)

First & Surname: _____ (Please Print)

I am: Male Female (Please mark an 'X')

School: _____ (Please Print)

Your email address: _____ (Please Print)

Years Taught: 7 8 9 10 11 12 (Please Circle)
Other: _____ (Please specify)

School Name: _____ (Please Print)

Type of School: Government School Catholic Systemic School
 Independent School Catholic Independent School
 Other: _____ (Please specify)

City: _____ **State:** _____ (Please Print)

We are interested in what you think about science lessons at school.

On the following pages are some questions. *There are no right or wrong answers.* We are asking for your **personal opinion**. Please answer these questions as honestly as you can.

Please read each sentence carefully. Answer by putting a circle around the number, or mark an 'X' in the box that is right for you. If you make a mistake with your circle, put a cross over it, and then circle the right number. If you want to change your box response, fill in the original box 'X' instead.

Important: Please choose only **one** of the items on the multiple choice scales (e.g. *do not* write 3.5 or circle two items such as (3) and (4)). We incorporate all comments in the survey into our research, so please leave comments if your single choice of (3) or (4) does not adequately cover your *true* opinion.

Look carefully at the top of each page to see how to choose or write your answer.



Secondary School Science Questionnaire (Teacher-Pre)

For each question, mark an 'X' in the box or write where appropriate

1 What is your age?

<25 25-30 31-35 36-40 41-45 46-50 51-55 >55

2 What position do you hold on the staff?

Principal Deputy Principal/Assistant Principal
 Classroom Teacher Head of Department/Subject Co-ordinator

3 On what basis are you employed?

Full time permanent Part time permanent
 Casual/Relief Teacher Temporary/short term contract

4 Please advise information on *science* qualification(s), if any, you hold.

Bachelor of Science Bachelor of Science (Honours)
 Bachelor of Applied Science Bachelor of Ed. with integrated Science degree
 Bachelor of Engineering Graduate Certificate in Science
 Diploma of Science Post Graduate Research (Masters or PhD)
 Non-Research Masters Other _____

5 Describe the following features of your science degrees (If multiple, please provide clarification)

Major study area/s _____
Minor study area/s _____
University _____ Graduation Year _____

6 Please provide information on the *teaching* qualifications you hold.

Bachelor of Education Diploma of Education
 Graduate Certificate of Education Master of Education, non-Research
 Master of Education, Research Master of Teaching, non-Research
 Doctor of Philosophy Other _____

University _____ Graduation Year _____

7 Describe the following features of your teaching degrees (If multiple, please provide clarification)

Major study area/s _____
Minor study area/s _____
University _____ Graduation Year _____

8 Please provide information on any other tertiary degrees, diplomas or certificates you hold.

Secondary School Science Questionnaire (Teacher-Pre)

9 How many years have you been teaching secondary science, including temporary employment?

<1 year 1-3 4-7 8-12 13-25 >25 years

10 How long have you been teaching at this school?

<1 year 1-3 4-7 8-12 13-25 >25 years

11 Which science courses are you *formally qualified* to teach? (Please mark 'X' to all that apply)

Junior Science Senior Physics Senior Chemistry
 Senior Biology Senior Multi-strand Earth and Environmental Science
 None Other (please specify): _____

12 Please advise the science subjects you've actually taught in the last 6 years.
(If insufficient space, please add details on a separate page)

Course/Subject	Grade Level of Students	Year(s) Taught
<i>Example: Biology</i>	<i>Grade 11</i>	<i>2009 and 2010</i>

13 Have you undertaken any formal units at university/course/professional development activities in astronomy? (If Yes, please tell us what you have done)

Yes No _____

14 Please rate each item of material resource or support personnel for its availability at your school with an 'X'.

	Never	Seldom	Usually	Always
Well equipped science laboratories				
Sufficient laboratory consumables				
Suitable laboratory assistant(s)				
Suitable AV equipment				
Suitable computer resources for teacher use				
Appropriate number of computers for student use				
A reliable Internet connection				
A fast Internet connection (>1 Megabit/second)				
Suitably skilled ICT support staff				
Other computing hardware for teaching and learning science				

Secondary School Science Questionnaire (Teacher-Pre)

15 How many computers are in a typical science lab at your school? _____

16 Please comment on your school's type of Internet connection, quality of connection and any other issues that you may have with ICT access and use.

How often do these things happen in your science class? (Please circle)

17 As a science teacher I ...

Never Once a
 term
 or less About
 once a About
 month once a
 week Nearly
 every
 lesson

tell students how to improve their work.	1	2	3	4	5
give students quizzes that they self-correct so that they can see how they are going.	1	2	3	4	5
talk to students and give them feedback on how they are getting on in science.	1	2	3	4	5
allow students to choose their own topics to investigate	1	2	3	4	5

18 In my science class ...

students copy notes that I give them.	1	2	3	4	5
I give my students the opportunity to work out explanations in science individually.	1	2	3	4	5
I give my students the opportunity to work out explanations in science with peers.	1	2	3	4	5
I provide opportunities for my students to explain their ideas.	1	2	3	4	5
my students read a science textbook.	1	2	3	4	5
I demonstrate experiments.	1	2	3	4	5
I give instructions to my students to follow when completing experiments.	1	2	3	4	5
I allow students to plan and do their own experiments.	1	2	3	4	5
I provide opportunities for class discussions.	1	2	3	4	5
I provide learning experiences for students to learn about scientists and what they do.	1	2	3	4	5
students work in groups.	1	2	3	4	5
students use computers to do science work.	1	2	3	4	5
students look for information on the Internet at school.	1	2	3	4	5
students investigate to see if their ideas are right.	1	2	3	4	5

Secondary School Science Questionnaire (Teacher-Pre)

Indicate how often these things happen in your science class by writing an appropriate number in the space provided, or circle as required.

19 In my science class, I plan for students to...

participate in practical work outside the classroom e.g. schoolyard, other outdoor areas, library or computer lab.	_____	day(s) a term.	_____	day(s) a year
have excursions to the museum, science centre, Questacon or similar places.	_____	day(s) a term.	_____	day(s) a year
listen to visiting speakers who talk to them about science.	_____	day(s) a term.	_____	day(s) a year

20 As a science teacher I... (Please circle one each)

	Never	Once a term or less	About once a month	About once a week	Nearly every lesson
mark students' work and give it back quickly	1	2	3	4	5
make it clear what students have to do to get good marks	1	2	3	4	5
use language that students easily understand	1	2	3	4	5
take notice of students' ideas	1	2	3	4	5
show students how new work relates to what we have already done.	1	2	3	4	5

21 During science lessons I feel students...

	Never	Once a term or less	About once a month	About once a week	Nearly every lesson
get excited about what we do.	1	2	3	4	5
have enough time to think about what we are doing.	1	2	3	4	5
are curious about the science we do.	1	2	3	4	5
are bored.	1	2	3	4	5
don't understand the science we do.	1	2	3	4	5
find science too easy.	1	2	3	4	5
find science challenging.	1	2	3	4	5
think science is too hard.	1	2	3	4	5

21 The science I teach at school ...

	Almost never	Some- times	Often	Very often	Almost always
is relevant to my students' future.	1	2	3	4	5
is useful in my students' every day life.	1	2	3	4	5
deals with things that my students are concerned with.	1	2	3	4	5
helps my students make decisions about their health.	1	2	3	4	5
helps my students understand environmental issues.	1	2	3	4	5

Secondary School Science Questionnaire (Teacher-Pre)

23 To what extent do you agree with the following statements? (Please circle)

	Strongly disagree	Disagree	Some-times	Agree	Strongly agree
I enjoy science <i>in general</i> .	1	2	3	4	5
I enjoy science <i>teaching</i> .	1	2	3	4	5
I enjoy the science I teach at <i>this school</i> .	1	2	3	4	5
(If applicable) I enjoy the science in <i>Space to Grow materials</i> that I am planning on teaching for that unit in my class/es.	1	2	3	4	5

24 A science teacher has many tasks to perform, many roles to fulfill and many pressures placed upon them. Below are only five of these roles. We are interested in your perception of these tasks/roles/pressures. All are important facets of a teacher's job. From your perspective, please *rank* them in order from 1 to 5 in level of personal importance from your perception as a science teacher.

My role as a science teacher is to ... (Please rank 1 as highest to 5 as lowest)

- teach students.
- report student outcomes to relevant stakeholders.
- facilitate students learning.
- assess students' learning outcomes.
- help students understand science.

25 In my science class, I really like the way I ... (Please mark 'X' to all that apply)

- incorporate practical work.
 - demonstrate experiments.
 - incorporate group work.
 - relate scientific content to students' everyday life
 - promote class discussion.
 - facilitate scientific inquiry.
 - incorporate technology.
 - cater for individual differences.
 - allow students to conduct their own investigations.
 - Other (please specify): _____
-

Secondary School Science Questionnaire (Teacher-Pre)

26 What are the things, if any, that you don't like about the way you teach and the way students learn in your science class? (Please mark 'X' to all that apply)

- Lessons are too teacher-directed.
- Little time for preparation.
- Limited amount of time to cover the scientific content.
- Lessons mainly involve students copying notes
- Lack of resources/equipment.
- Insufficient facilities for conducting practical work.
- Limited access to technology.
- Little opportunity for outside experiences (e.g. excursions)
- Lack of resources/equipment.
- The theory-laden way in which the scientific content is covered.
- The focus placed on assessment and meeting assessment deadlines.
- My lack of content/background knowledge in some science topics I teach.
- My lack of confidence in using technology in science classes.
- Student behavior problems that have to be dealt with in lessons.
- Other (please specify): _____

27 My science class could be improved by ... (Please mark 'X' to all that apply)

- making lessons more student-centered.
 - having access to more resources/equipment.
 - incorporating more group work.
 - having better access to, and use of, technology.
 - incorporating more practical work.
 - having more time to cover the scientific content.
 - having smaller class sizes.
 - incorporating more inquiry-based lessons.
 - having more time for lesson preparation.
 - having more opportunities for teacher professional development.
 - making the science content more relevant to students' everyday life.
 - Other (please specify): _____
-

Secondary School Science Questionnaire (Teacher-Pre)

28 I think the declining number of students pursuing the sciences in Years 11 and 12 and beyond is related to ... (Please mark 'X' to all that apply)

- the lack of relevance to students.
 - the perceived difficulty associated with science subjects.
 - the lack of well paid jobs in science (little financial reward).
 - the fact that there are more options for students in terms of subject selection.
 - stereotypes associated with scientists and science subjects (e.g., science is for nerds).
 - a negative experience in Year 7-10 science (found science boring).
 - the low profile science has in society.
 - gender differences in subject selection (fewer females selecting science subjects).
 - Other (please specify): _____
-

29 At your school, approximately what number of Year 10 students select Physics as one of their Year 11 subjects? (Please mark with an 'X')

- <10 students
- 10-15 students
- 16-20 students
- 21-25 students
- 26-30 students
- 31-35 students
- 36-40 students
- >40 students

30 Approximately what percentage does the number of students selecting Physics in Year 11 from question 29 represent? (Please mark with an 'X')

- = <10% representation of the whole Year 10 cohort at my school
- = 10-20% representation of the whole Year 10 cohort at my school
- = 20-30% representation of the whole Year 10 cohort at my school
- = 30-40% representation of the whole Year 10 cohort at my school
- = 40-50% representation of the whole Year 10 cohort at my school
- = 50-60% representation of the whole Year 10 cohort at my school
- = >60% representation of the whole Year 10 cohort at my school



Thank you for filling in this questionnaire!