ENGLISH

#### Appendix J

# What do YOU think about science?

This survey is completely confidential. Your participation is voluntary.

Gender:	_Male_	Female	Age:	Ethnicity:A	African American,		Asian, _	White,	
				Hispanic or La	atino,	Native Am	nerican, _	_ Pacific Islander,	Other.

Please indicate whether you Strongly Agree, Agree, are Not Sure, Disagree, Strongly Disagree with each statement by marking the best response.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	1	Money spent on science is well worth spending.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	2	Scientists usually like to go to their laboratories when they have a day off.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	3	I would rather find out why something happens by doing an experiment than by being told how it works.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	4	I find it boring to hear about new ideas.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	5	Science lessons are fun.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	6	I would like to belong to a science club.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	7	I would dislike being a scientist.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	8	Science is man's worst enemy.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	9	Scientists are about as fit and healthy as other people.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	10	Doing experiments does not help me learn as much as finding out information from instructors.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	11	In science experiments, I like to use methods which I have not tried before.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	12	I dislike science lessons.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	13	I get bored watching science programs on TV.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	14	I would like to work with people who make discoveries in science.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	15	Public money spent on science in the last few years has been used wisely.

Ledbetter, C.E. & Nix, R.K. (2002). Adapted from

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Fraser, B.J. (1981). Test of Science Related Skills. The Australian Council for Educational Research Limited: Hawthorn, Victoria.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	16	Scientists do not have enough time to spend with their families.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	17	I would rather do experiments than read about them.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	18	I am unwilling to change my ideas even when evidence shows that my ideas are faulty.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	19	School should have more science lessons each week.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	20	I would like to be given a science book or a piece of scientific equipment as a present.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	21	I would dislike a job in a science laboratory.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	22	Scientific discoveries are doing more harm than good.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	23	Scientists like sports as much as other people do.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	24	I would rather agree with other people than do an experiment to find out the information for myself.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	25	In science experiments, I report unexpected results as well as expected ones.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	26	Science lessons bore me.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	27	I dislike reading books about science in my leisure time.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	28	Working in a science laboratory would be an interesting way to earn a living.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	29	The government should spend more money on scientific research.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	30	Scientists are less friendly than other people.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	31	I would rather do my own experiments than find out information from instructors.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	32	I dislike listening to other people's opinions.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	33	Science is one of the most interesting school subjects.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	34	I would like to do science experiments at home.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	35	A career in science would be dull and boring.

## What do YOU think about science?

This survey is completely confidential. Your participation is voluntary.

Gender:	_Male_	Female	Age:	Ethnicity:	_African A	merican,	_Asian, _	_White,	
				Hispanic of	or Latino, _	_Native An	nerican, _	_ Pacific Islander, _	_ Other.

Please indicate whether you Strongly Agree, Agree, are Not Sure, Disagree, Strongly Disagree with each statement by marking the best response.

Agree	Not Sure	Disagree	Strongly Disagree	1	Too many laboratories are being built at the expense of the rest of education.
Agree	Not Sure	Disagree	Strongly Disagree	2	A scientist can have a normal family life.
Agree	Not Sure	Disagree	Strongly Disagree	3	I would rather find out about things by asking an expert than by doing an experiment.
Agree	Not Sure	Disagree	Strongly Disagree	4	I enjoy reading about things which disagree with my previous ideas.
Agree	Not Sure	Disagree	Strongly Disagree	5	Science lessons are a waste of time.
Agree	Not Sure	Disagree	Strongly Disagree	6	Talking to friends about science outside of school would be boring.
Agree	Not Sure	Disagree	Strongly Disagree	7	I would like a career teaching science.
Agree	Not Sure	Disagree	Strongly Disagree	8	Science helps make life better.
Agree	Not Sure	Disagree	Strongly Disagree	9	Scientists do not care about their working conditions.
Agree	Not Sure	Disagree	Strongly Disagree	10	I would rather solve problems by doing an experiment than be told the answer.
Agree	Not Sure	Disagree	Strongly Disagree	11	I dislike repeating experiments to check that I got the same results.
Agree	Not Sure	Disagree	Strongly Disagree	12	I enjoy doing science lessons.
Agree	Not Sure	Disagree	Strongly Disagree	13	I would enjoy having a job in science during my school break.
Agree	Not Sure	Disagree	Strongly Disagree	14	A job as a scientist would be boring.
Agree	Not Sure	Disagree	Strongly Disagree	15	This country is spending too much money on science.
	Agree   Agree	AgreeSureAgreeNot Sure	AgreeSureDisagreeAgreeNot SureDisagree	AgreeSureDisagreeDisagreeAgreeNot SureDisagreeStrongly DisagreeAgreeNot SureDisagree<	AgreeSureDisagreeDisagree1AgreeNot SureDisagreeStrongly Disagree2AgreeNot SureDisagreeStrongly Disagree3AgreeNot SureDisagreeStrongly Disagree4AgreeNot SureDisagreeStrongly Disagree4AgreeNot SureDisagreeStrongly Disagree5AgreeNot SureDisagreeStrongly Disagree6AgreeNot SureDisagreeStrongly Disagree7AgreeNot SureDisagreeStrongly Disagree7AgreeNot SureDisagreeStrongly Disagree9AgreeNot SureDisagreeStrongly Disagree9AgreeNot SureDisagreeStrongly Disagree10AgreeNot SureDisagreeStrongly Disagree12AgreeNot SureDisagreeStrongly Disagree13AgreeNot SureDisagreeStrongly Disagree14AgreeNot SureDisagreeStrongly Disagree14

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Fraser, B.J. (1981). Test of Science Related Skills. The Australian Council for Educational Research Limited: Hawthorn, Victoria.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	16	Scientists are just as interested in art and music as other people are.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	17	It is better to ask teachers the answer than to find it out by doing experiments.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	18	I am curious about the world in which we live.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	19	The material covered in science lessons is uninteresting.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	20	Listening to science reports on the radio is boring.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	21	A job as a scientist would be interesting.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	22	Science can help to make the world a better place in the future.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	23	Few scientists are happily married.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	24	I would rather do an experiment on a topic than read about it in science magazines.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	25	Finding out about new things is unimportant.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	26	I look forward to science lessons.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	27	I enjoy visiting science museums during my leisure time.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	28	I would dislike being a scientist because it requires too much education.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	29	Money used on scientific projects is wasted.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	30	If you met a scientist, he/she would look like anyone else you might meet.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	31	It is better to be told scientific facts than to find them out from experiments.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	32	I like to listen to people whose opinions are different from mine.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	33	I would enjoy school more if there were no science lessons.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	34	I dislike reading newspaper articles about science.
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	35	I would like a career as a scientist.

#### **Pre-Test**

S Social	Ν	I Attitude	Α	Ε	L Leisure	C Career
Implications	Normality	to	Adoption	Enjoyment	Interest in	Interest in
of Science	of	Scientific	of	of Science	Science	Science
	Scientists	Inquiry	Scientific	Lessons		
			Attitudes			
01 (+)	02 (-)	03 (+)	04 (-)	05 (+)	06 (+)	07 (-)
08 (-)	09 (+)	10 (-)	11 (+)	12 (-)	13 (-)	14 (+)
15 (+)	16 (-)	17 (+)	18 (-)	19 (+)	20 (+)	21 (-)
22 (-)	23 (+)	24 (-)	25 (+)	26 (-)	27 (-)	28 (+)
29 (+)	30 (-)	31 (+)	32 (-)	33 (+)	34 (+)	35 (-)

### **Scale Allocation and Scoring for Each Item**

For positive items (+), responses SA, A, N, D, SD are scored 5, 4, 3, 2, 1, respectively. For negative items (-), responses SA, A, N, D, SD are scored 1, 2, 3, 4, 5, respectively. Omitted or invalid responses are scored 3.

#### Post test

### Scale Allocation and Scoring for Each Item

S Social	Ν	I Attitude	Α	Е	L Leisure	C Career
Implications	Normality	to	Adoption	Enjoyment	Interest in	Interest in
of Science	of	Scientific	of	of Science	Science	Science
	Scientists	Inquiry	Scientific	Lessons		
			Attitudes			
01 (-)	02 (+)	03 (-)	04 (+)	05 (-)	06 (-)	07 (+)
08 (+)	09 (-)	10 (+)	11 (-)	12 (+)	13 (+)	14 (-)
15 (-)	16 (+)	17 (-)	18 (+)	19 (-)	20 (-)	21 (+)
22 (+)	23 (-)	24 (+)	25 (-)	26 (+)	27 (+)	28 (-)
29 (-)	30 (+)	31 (-)	32 (+)	33 (-)	34 (-)	35 (+)

For positive items (+), responses SA, A, N, D, SD are scored 5, 4, 3, 2, 1, respectively. For negative items (-), responses SA, A, N, D, SD are scored 1, 2, 3, 4, 5, respectively. Omitted or invalid responses are scored 3.

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