

Appendix: TOSRA-2

Scales: Social Implications of Science (S), Normality of Scientists (N), Attitude of Scientific Inquiry (I), Adoption of Scientific Attitudes (A), Enjoyment of Science Lessons (E), Leisure Interest in Science (L), and Career Interest in Science (C).

Pre-Survey

Item (Reverse scored items are in <i>italics</i>)	Scale
1. <i>Too many laboratories are being built at the expense of the rest of education.</i>	S
2. Scientists can have a normal family life.	N
3. <i>I would rather find out things by asking an expert than by doing an experiment.</i>	I
4. <i>I find it boring to hear about new ideas.</i>	A
5. <i>Science lessons are a waste of time.</i>	E
6. <i>Talking to my friends about science after school would be boring.</i>	L
7. I would like to teach science when I leave school.*	C
8. Science helps to make life better.	S
9. <i>Scientists do not care about their working conditions.</i>	N
10. I would rather solve a problem by doing an experiment than be told the answer.	I
11. In science experiments, I like to use new methods which I have not used before.	A
12. I really enjoy going to science lessons.	E
13. I would enjoy having a job in a science laboratory during my school holidays.	L
14. <i>A job as a scientist would be boring.</i>	C
15. <i>This country is spending too much money on science.</i>	S
16. Scientists are just as interested in art and music as other people are.	N
17. <i>It is better to ask a teacher the answer than to find it out by doing experiments.</i>	I
18. <i>I am unwilling to change my ideas when evidence shows that the ideas are poor.</i>	A
19. <i>The material covered in science lessons is uninteresting.</i>	E
20. <i>Listening to talk about science on the radio would be boring.</i>	L
21. A job as a scientist would be interesting.	C

22. Science can help to make the world a better place in the future.	S
23. <i>Few scientists are happily married.</i>	N
24. I would prefer to do an experiment on a topic than to read about it in science magazines.	I
25. In science experiments, I report unexpected results as well as expected ones.	A
26. I look forward to science lessons.	E
27. I would enjoy visiting a science museum on the weekend.	L
28. <i>I would dislike becoming a scientist because it needs too much education.</i>	C
29. <i>Money used on scientific projects is wasted.</i>	S
30. If you met a scientist, he/she would probably look like anyone else you might meet.	N
31. <i>It is better to be told scientific facts than to find them out from experiments.</i>	I
32. <i>I dislike other peoples' opinions.</i>	A
33. <i>I would enjoy school more if there were no science lessons.</i>	E
34. <i>I dislike reading newspaper articles about science.</i>	L
35. I would like to be a scientist when I leave school.	C

Post-Survey

Item (Reverse scored items are in <i>italics</i>)	Scale
1. Money spent on science is well worth spending.	S
2. <i>Scientists usually like to go to their laboratories when they have a day off.</i>	N
3. I would prefer to find out why something happens by doing an experiment than be being told.	I
4. I enjoy reading about things that disagree with my previous ideas.	A
5. Science lessons are fun.	E
6. I would like to belong to a science club.	L
7. <i>I would dislike being a scientist after I leave school.</i>	C
8. <i>Science is man's worst enemy.</i>	S
9. Scientists are about as fit and healthy as other people.	N
10. <i>Doing experiments is not as good as finding out information from teachers.</i>	I
11. <i>I dislike repeating experiments to check that I get the same results.</i>	A

12. <i>I dislike science lessons.</i>	E
13. <i>I get bored when watching science programs on TV at home.</i>	L
14. When I leave school, I would like to work with people who make discoveries in science.	C
15. Public money spent on science in the last few years has been used widely.	S
16. <i>Scientists do not have enough time to spend with their families.</i>	N
17. I would prefer to do experiments rather than to read about them.	I
18. I am curious about the world in which we live.	A
19. School should have more science lessons each week.	E
20. I would like to be given a science book or a piece of science equipment as a present.	L
21. <i>I would dislike a job in a science laboratory after I leave school.</i>	C
22. <i>Scientific discoveries are doing more harm than good.</i>	S
23. Scientists like sports as much as other people do.	N
24. I would rather agree with other people than do an experiment to find out for myself.	I
25. <i>Finding out about new things is unimportant.</i>	A
26. <i>Science lessons bore me.</i>	E
27. <i>I dislike reading books about science during my holidays.</i>	L
28. Working in a science laboratory would be an interesting way to earn a living.	C
29. The government should spend more money on scientific research.	S
30. <i>Scientists are less friendly than other people.</i>	N
31. I would prefer to do my own experiments than to find out information from a teacher.	I
32. I like to listen to people whose opinions are different from mine.	A
33. Science is one of the most interesting school subjects.	E
34. I would like to do science experiments at home.	L
35. <i>A career in science would be dull and boring.</i>	C

*Note: Question 7 was omitted from the pre-survey due to an error in the creation of the online survey.