

Survey of Attitudes Toward Astronomy (Pre)

The questions below are designed to identify your attitudes about astronomy and science. The item scale has 5 possible responses; the responses range from 1 (strongly disagree) through 3 (neither agree nor disagree) to 5 (strongly agree). Please read each question. From the 5-point scale mark the response that most clearly represents your agreement with the statement. Use the entire 5-point scale. Try not to think too deeply about each response; there are no correct or incorrect answers.

1. Astronomy is a subject learned quickly by most people.	1	2	3	4	5
2. I will have trouble understanding astronomy because of how I think.	1	2	3	4	5
3. Astronomy concepts are easy to understand.	1	2	3	4	5
4. Astronomy is irrelevant to my life.	1	2	3	4	5
5. I will get frustrated going over astronomy tests in class.	1	2	3	4	5
6. I will be under stress during astronomy class.	1	2	3	4	5
7. I will understand how to apply analytical reasoning to astronomy.	1	2	3	4	5
8. Learning astronomy requires a great deal of discipline.	1	2	3	4	5
9. I will have no idea of what's going on in astronomy.	1	2	3	4	5
10. I will like astronomy.	1	2	3	4	5
11. What I learn in astronomy will not be useful in my career.	1	2	3	4	5
12. Most people have to learn a new way of thinking to do astronomy.	1	2	3	4	5
13. Astronomy is highly technical.	1	2	3	4	5
14. I will feel insecure when I have to do astronomy homework.	1	2	3	4	5
15. I will find it difficult to understand astronomy concepts.	1	2	3	4	5
16. I will enjoy taking this astronomy course.	1	2	3	4	5
17. I will make a lot of errors applying concepts in astronomy.	1	2	3	4	5
18. Astronomy involves memorizing a massive collection of facts.	1	2	3	4	5
19. Astronomy is a complicated subject.	1	2	3	4	5
20. I can learn astronomy.	1	2	3	4	5
21. Astronomy is worthless.	1	2	3	4	5
22. I am scared of astronomy.	1	2	3	4	5
23. Scientific conclusions are rarely presented in everyday life.	1	2	3	4	5
24. Scientific concepts are easy to understand.	1	2	3	4	5
25. Science is not useful to the typical professional.	1	2	3	4	5
26. The thought of taking a science course scares me.	1	2	3	4	5
27. I like science.	1	2	3	4	5
28. I find it difficult to understand scientific concepts.	1	2	3	4	5
29. I can learn science.	1	2	3	4	5

30. Scientific skills will make me more employable.	1	2	3	4	5
31. Science is a complicated subject.	1	2	3	4	5
32. I use science in my everyday life.	1	2	3	4	5
33. Scientific thinking is not applicable to my life outside my job.	1	2	3	4	5
34. Science should be a required part of my professional training.	1	2	3	4	5

Survey of Attitudes Toward Astronomy (Post)

The questions below are designed to identify your attitudes about astronomy and science. The item scale has 5 possible responses; the responses range from 1 (strongly disagree) through 3 (neither agree nor disagree) to 5 (strongly agree). Please read each question. From the 5-point scale mark the response that most clearly represents your agreement with the statement. Use the entire 5-point scale. Try not to think too deeply about each response; there are no correct or incorrect answers.

1. Astronomy is a subject learned quickly by most people.	1	2	3	4	5
2. I had trouble understanding astronomy because of how I think.	1	2	3	4	5
3. Astronomy concepts were easy to understand.	1	2	3	4	5
4. Astronomy is irrelevant to my life.	1	2	3	4	5
5. I got frustrated going over astronomy tests in class.	1	2	3	4	5
6. I was under stress during astronomy class.	1	2	3	4	5
7. I understood how to apply analytical reasoning to astronomy.	1	2	3	4	5
8. Learning astronomy required a great deal of discipline.	1	2	3	4	5
9. I had no idea of what's going on in astronomy.	1	2	3	4	5
10. I like astronomy.	1	2	3	4	5
11. What I learned in astronomy will not be useful in my career.	1	2	3	4	5
12. Most people have to learn a new way of thinking to do astronomy.	1	2	3	4	5
13. Astronomy was highly technical.	1	2	3	4	5
14. I felt insecure when I have to do astronomy homework.	1	2	3	4	5
15. I found it difficult to understand astronomy concepts.	1	2	3	4	5
16. I enjoyed taking this astronomy course.	1	2	3	4	5
17. I made a lot of errors applying concepts in astronomy.	1	2	3	4	5
18. Astronomy involved memorizing a massive collection of facts.	1	2	3	4	5
19. Astronomy was a complicated subject.	1	2	3	4	5
20. I can learn astronomy.	1	2	3	4	5
21. Astronomy is worthless.	1	2	3	4	5
22. I was scared of astronomy.	1	2	3	4	5
23. Scientific conclusions are rarely presented in everyday life.	1	2	3	4	5
24. Scientific concepts are easy to understand.	1	2	3	4	5
25. Science is not useful to the typical professional.	1	2	3	4	5
26. The thought of taking a science course scares me.	1	2	3	4	5
27. I like science.	1	2	3	4	5
28. I find it difficult to understand scientific concepts.	1	2	3	4	5
29. I can learn science.	1	2	3	4	5

30. Scientific skills will make me more employable.	1	2	3	4	5
31. Science is a complicated subject.	1	2	3	4	5
32. I use science in my everyday life.	1	2	3	4	5
33. Scientific thinking is not applicable to my life outside my job.	1	2	3	4	5
34. Science should be a required part of my professional training.	1	2	3	4	5

Survey of Attitudes Toward Astronomy

The questions below are designed to identify your attitudes about astronomy and science. The item scale has 5 possible responses; the responses range from 1 (strongly disagree) through 3 (neither agree nor disagree) to 5 (strongly agree). Please read each question. From the 7-point scale mark the response that most clearly represents your agreement with the statement. Use the entire 5-point scale. Try not to think too deeply about each response; there are no correct or incorrect answers.

(Note: subscale indications were not given to or seen by the students. A “R” indicates that the item was reversed scored [1 becomes 5, 2 becomes 4, and so on] so that higher scores on all items corresponded to more positive attitudes.)

1. Astronomy is a subject learned quickly by most people. D
- 2R. I will have trouble understanding astronomy because of how I think. CC
3. Astronomy concepts are easy to understand. CC
- 4R. Astronomy is irrelevant to my life. V
- 5R. I will get frustrated going over astronomy tests in class. A
- 6R. I will be under stress during astronomy class. A
7. I will understand how to apply analytical reasoning to astronomy. CC
- 8R. Learning astronomy requires a great deal of discipline. D
- 9R. I will have no idea of what's going on in astronomy. CC
10. I will like astronomy. A
- 11R. What I learn in astronomy will not be useful in my career. V
- 12R. Most people have to learn a new way of thinking to do astronomy. D
- 13R. Astronomy is highly technical. D
- 14R. I will feel insecure when I have to do astronomy homework. A
- 15R. I will find it difficult to understand astronomy concepts. CC
16. I will enjoy taking this astronomy course. A
- 17R. I will make a lot of errors applying concepts in astronomy. CC
- 18R. Astronomy involves memorizing a massive collection of facts. D
- 19R. Astronomy is a complicated subject. D
20. I can learn astronomy. CC
- 21R. Astronomy is worthless. V
- 22R. I am scared of astronomy. A
- 23R. Scientific conclusions are rarely presented in everyday life. V
24. Scientific concepts are easy to understand. D
- 25R. Science is not useful to the typical professional. V
- 26R. The thought of taking a science course scares me. A
27. I like science. A
- 28R. I find it difficult to understand scientific concepts. CC
29. I can learn science. CC
30. Scientific skills will make me more employable. V
- 31R. Science is a complicated subject. D
32. I use science in my everyday life. V
- 33R. Scientific thinking is not applicable to my life outside my job. V
34. Science should be a required part of my professional training. V

The subscales with number of items are:

- A. Affect (A): Positive and negative feelings concerning astronomy/science.
- B. Cognitive Competence (CC): attitudes about intellectual knowledge and skills when applied to astronomy/science.
- C. Value (V): Attitudes about the usefulness, relevance, and worth of astronomy/science in personal and professional life.
- D. Difficulty (D): Attitudes about the difficulty of astronomy/science as a subject.