



**N**ature of

**S**cientific

**K**nowledge

**S**cale



This instrument was developed in the course of research for the Doctor of Education degree at the School of Education, Indiana University, Bloomington, Indiana. © 1976, by Peter A. Rubba Jr.

## NATURE OF SCIENTIFIC KNOWLEDGE SCALE

This instrument assesses your opinions about the nature of scientific knowledge.

Each of the statements in the instrument describes a view about scientific knowledge. You may agree with some of the statements; you may disagree with other statements; or your feelings about statements may be some degree of agreement or disagreement.

After you carefully read each statement, decide whether you strongly agree, agree, are neutral, disagree, or strongly disagree with it. Then, find the number of the statement on your answer sheet and blacken in the appropriate space with a pencil:

- A strongly agree
- B agree
- C neutral
- D disagree
- E strongly disagree

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### Example Statement:

00. The term of office for the President of the United States should be increased to six years.

### Answer Sheet:

00.    A    B    C    D    E  
      ||    ||    ||    ||    ||  
      ||    ■    ||    ||    ||

(This individual agreed with the statement, and so blackened in the space below the letter B.)

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Respond to the following statements in a similar manner. Blacken in only one space on the answer sheet for each statement. If you change your mind, erase your first mark completely.

PLEASE DO NOT MARK ON THIS TEST BOOKLET.

Strongly  
Agree

Agree

Neutral

Disagree

Strongly  
Disagree

A

B

C

D

E

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1. Scientific laws, theories and concepts do not express creativity.
2. Scientific knowledge is stated as simply as possible.
3. The laws, theories and concepts of biology, chemistry and physics are related.
4. The applications of scientific knowledge can be judged good or bad, but the knowledge itself cannot.
5. It is incorrect to judge a piece of scientific knowledge as being good or bad.
6. If two scientific theories explain a scientist's observations equally well, the simpler theory is chosen.
7. Certain pieces of scientific knowledge are good and others are bad.
8. Even if the applications of a scientific theory are judged to be good, we should not judge the theory itself.
9. Scientific knowledge need not be capable of experimental test.
10. The laws, theories and concepts of biology, chemistry and physics are not linked.
11. Consistency among test results is not a requirement for the acceptance of scientific knowledge.
12. A piece of scientific knowledge will be accepted if the evidence can be obtained by other investigators working under similar conditions.
13. The evidence for scientific knowledge need not be open to public examination.
14. Scientific laws, theories and concepts are not stated as simply as possible.
15. There is an effort in science to build as great a number of laws, theories and concepts as possible.
16. We accept scientific knowledge even though it may contain error.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
A	B	C	D	E

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17. Scientific knowledge expresses the creativity of scientists.
18. Moral judgement can be passed on scientific knowledge.
19. The laws, theories and concepts of biology, chemistry and physics are not related.
20. Scientific laws, theories and concepts express creativity.
21. It is meaningful to pass moral judgement on both the applications of scientific knowledge and the knowledge itself.
22. The evidence for scientific knowledge must be repeatable.
23. Scientific knowledge is not a product of human imagination.
24. Relationships among the laws, theories and concepts of science do not contribute to the explanatory and predictive power of science.
25. The truth of scientific knowledge is beyond doubt.
26. Today's scientific laws, theories and concepts may have to be changed in the face of new evidence.
27. We do not accept a piece of scientific knowledge unless it is free of error.
28. A scientific theory is similar to a work of art in that they both express creativity.
29. There is an effort in science to keep the number of laws, theories and concepts at a minimum.
30. The various sciences contribute to a single organized body of knowledge.
31. Scientific beliefs do not change over time.
32. Scientific knowledge is a product of human imagination.

Strongly  
Agree

Agree

Neutral

Disagree

Strongly  
Disagree

A

B

C

D

E

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33. The evidence for a piece of scientific knowledge does not have to be repeatable.
34. Scientific knowledge does not express the creativity of scientists.
35. Biology, chemistry and physics are similar kinds of knowledge.
36. If the applications of a piece of scientific knowledge are generally considered bad, then the piece of knowledge is also considered to be bad.
37. Scientific knowledge is subject to review and change.
38. Scientific laws, theories and concepts are tested against reliable observations.
39. If two scientific theories explain a scientist's observations equally well, the more complex theory is chosen.
40. Scientific knowledge is specific as opposed to comprehensive.
41. Scientific theories are discovered, not created by man.
42. Those scientific beliefs which were accepted in the past, and since have been discarded, should be judged in their historical context.
43. Scientific knowledge is unchanging.
44. Biology, chemistry and physics are different kinds of knowledge.
45. Consistency among test results is a requirement for the acceptance of scientific knowledge.
46. Scientific knowledge is comprehensive as opposed to specific.
47. The laws, theories and concepts of biology, chemistry and physics are interwoven.
48. A piece of scientific knowledge should not be judged good or bad.