

Survey on Science—Instructor’s Key

This survey contains statements about science. For each, think about how you feel about the statement. **Do you agree or disagree with the statement?** Your answers will be confidential and will not affect your grade; however, the class results may influence what we will study in this course, in order to help you develop a more accurate understanding of science.

For each of the following statements, choose one of the following:

- A = TRUE, or you AGREE with the statement**
B = NOT TRUE or you DISAGREE with the statement

- 1) A Science is primarily concerned with understanding how the natural world works.
- 2) A Science can be done poorly.
- 3) A Science involves dealing with many uncertainties.
- 4) B Astrology (predicting your future from the arrangement of stars and planets) is a science.
It is a pseudoscience.
- 5) A Science involves creative activity.
Absolutely; figuring out new ways to test hypotheses, along with coming up with clever hypotheses in the first place, are very creative endeavors.
- 6) A Evolution is a scientifically valid theory.
- 7) A Science is limited to investigation of the natural (as opposed to supernatural) world.
By the definition of science, supernatural explanations are not scientific.
- 8) B Science provides certain answers to questions.
- 9) B Science is most concerned with collecting facts.
Science is most concerned with developing hypotheses and theories to explain facts.
- 10) A Scientific concepts and discoveries can cause new problems for people.
- 11) A A hypothesis must be capable of being tested in order for it to be in the realm of science.
- 12) B Scientists have solved most of the major mysteries of nature.

Not by a long shot! Many investigations provide more questions than answers.

- 13) A Scientists can study things and events from millions of years ago.
- 14) B Scientific experimentation usually involves trying something just to see what will happen, without predicting beforehand a likely outcome.
All hypotheses make predictions about what will happen if such-and-such occurs. Experiments are explicit tests of the predictions of hypotheses.
- 15) B A fact in science is a truth that can never be changed.
- 16) B Anything done scientifically can be relied upon to be accurate and reliable.
- 17) A Scientists must be willing to change their ideas when new evidence becomes known.
- 18) B Science can prove anything or solve any problem.
- 19) B The theory of evolution must deny the existence of a creator-God.
- 20) A Scientists assume that nature follows the same “rules” throughout the universe and throughout the history of the universe.
- 21) A Scientific facts are subject to change or revision.
- 22) B Only scientists can do science.
...and get paid for it! Anybody can do science.
- 23) A Science can be influenced by the race, gender, nationality, or religion of the scientist.
- 24) B Disagreement between scientists is one of the weaknesses of science.
I would argue that it is one of its strengths.
- 25) A Scientists can believe in God or a supernatural being and still do good science.
Many scientists are people of faith.