

Table SPSS-16

Americans' understanding of the scientific method: 2020

(Standard error)

Indicator of scientific method understanding	Total
Understanding that science is iterative ($n = 12,648$)	
Believe the scientific method produces findings meant to be continually tested and updated over time	0.7
Believe the scientific method identifies unchanging core principles and truths ^a	0.7
Understanding that science yields accurate results ^b ($n = 12,648$)	
Believe the scientific method generally produces accurate conclusions	0.7
Believe the scientific method can be used to produce any conclusion the researcher wants	0.7
Understanding of the use of control groups in a hypothetical scientific study about the effectiveness of a medication ($n = 12,648$)	
Create a control group that does not receive the medication	0.8
Other responses ^a	0.8
Understanding what a hypothesis is ($n = 12,648$)	
Selected "hypothesis" as answer	0.7
Selected answer other than "hypothesis"	0.7

 n = number of survey responses.^a Includes "not sure" responses and refusals.^b Refusals are not shown.**Note(s):**

Responses are to the following:

- Based on what you have heard or read, which of the following statements best describes the scientific method?

*The scientific method produces findings meant to be continually tested and updated over time.**The scientific method identifies unchanging core principles and truths.**Not sure*

- Which of the following best describes what you think about the scientific method?

*The scientific method generally produces accurate conclusions.**The scientific method can be used to produce any conclusion the research wants.*

- A scientist is conducting a study to determine how well a new medication treats ear infections. The scientist tells the participants to put 10 drops in their infected ear each day. After 2 weeks, all participants' ear infections had healed. Which of the following changes to the design of this study would most improve the ability to test if the new medication effectively treats ear infections?

*Create a second group of participants with ear infections who do not use any ear drops.**Create a second group of participants with ear infections who use 15 drops a day.**Have participants use ear drops for only 1 week.**Have participants put ear drops in both their infected ear and healthy ear.**Not sure*

- The time a computer takes to start has increased dramatically. One possible explanation for this is that the computer is running out of memory. This explanation is a scientific...

*Hypothesis**Conclusion**Experiment**Observation**Not sure*

Source(s):

Pew Research Center, American Trends Panel (2020), Wave 79, conducted 18–29 November 2020. Data provided to the authors by the center prior to public release.

Science and Engineering Indicators