

# This Report was prepared by two adjunct instructors at NYIT:

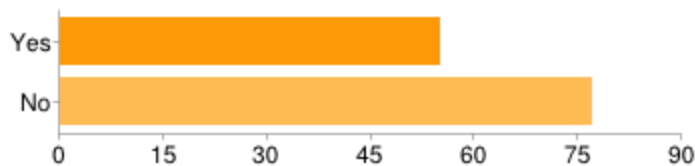
## Dr Vinh Pham

## Dr Joby Jacob

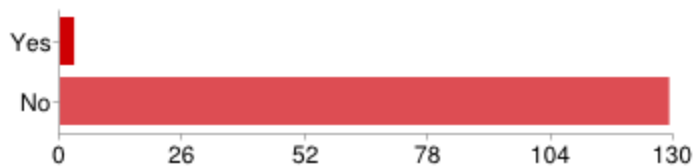
Fall 2012 Semester Scientific Process Assessment  
132 Students Responded between 12/04/2012 and 12/11/2012

### What is science?

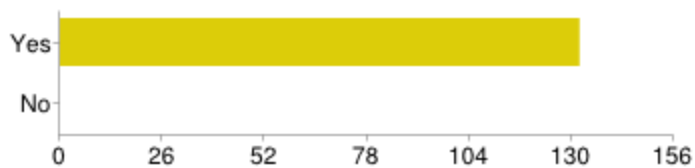
Science is a collection of facts about nature.



Science is absolute and unchanging.



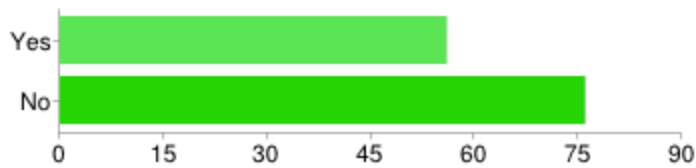
Science is an ongoing process to better understand the natural world.



Science is a complete body of knowledge about nature.

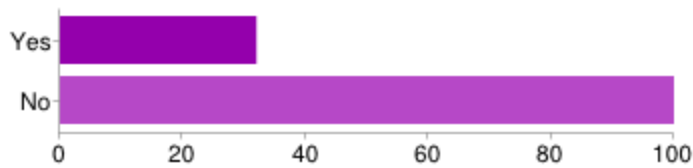
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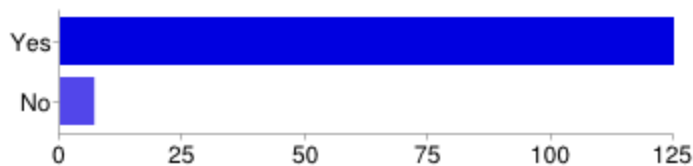


## Which of the following is true regarding scientific knowledge and nature?

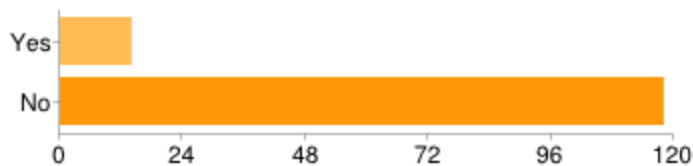
If an observation is made correctly, its meaning is straightforward.



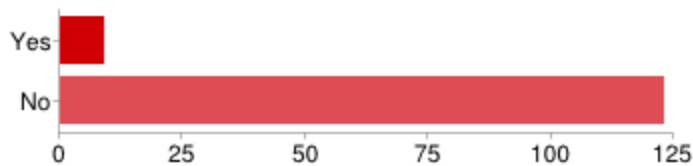
Scientific knowledge is built on observations of nature.



If an observation is made correctly, it is not subject to interpretation.

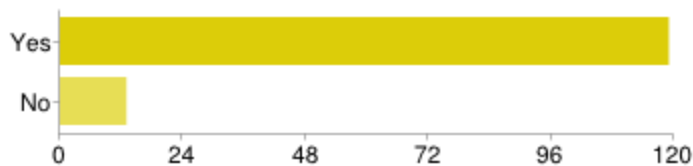


Measurements in science can be made perfectly.

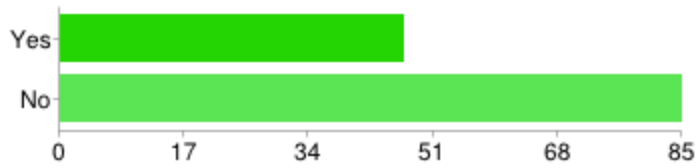


## Which of the following is true about scientific hypotheses, theories, and laws?

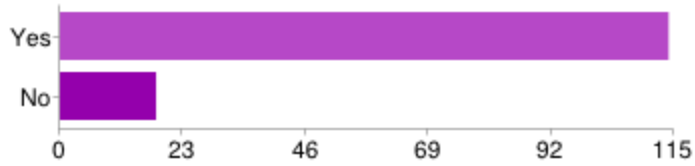
Scientific theories change when existing evidence are reinterpreted.



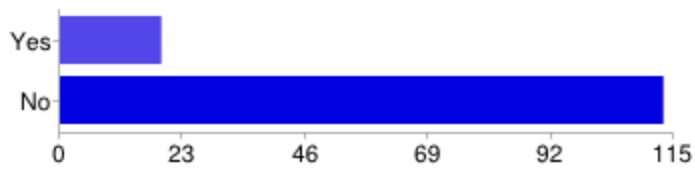
Science is concerned with definitively proving or disproving hypotheses.



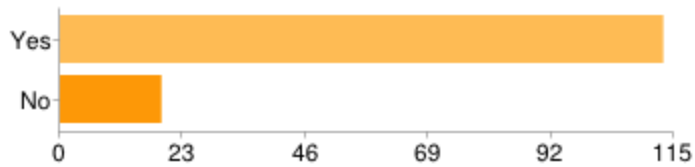
**Hypotheses are guesses based on available evidence.**



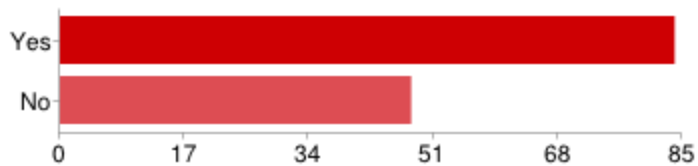
**Scientific theories are unreliable because they are inherently tentative.**



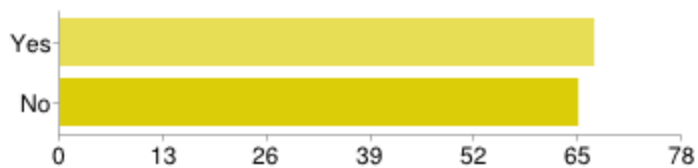
**Well-supported hypotheses can become scientific theories.**



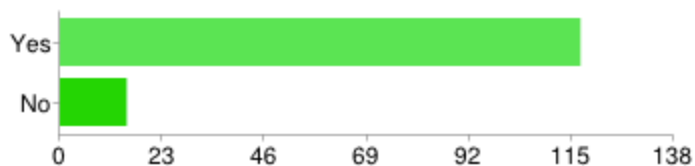
**A well-supported hypothesis can eventually become scientific law.**



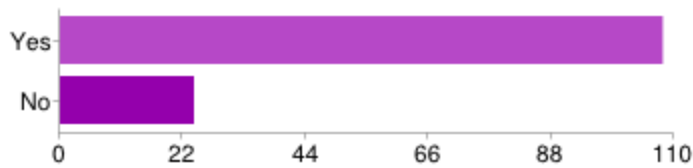
**Well-supported theories can eventually become scientific law.**



**Scientific theories are well supported by research evidence.**

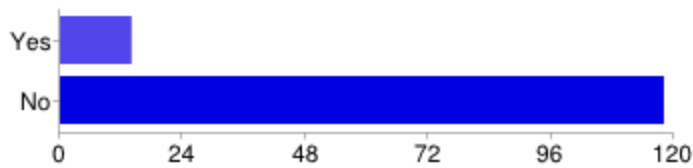


**Scientific theories explain a broad set of natural phenomena.**

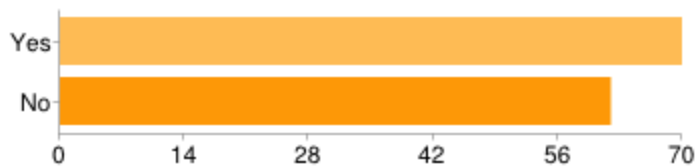


## Which of the following statements about the role of social and cultural factors in science is true?

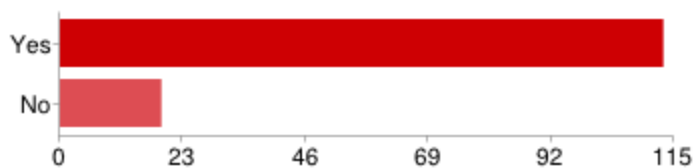
All cultures conduct scientific research the same way.



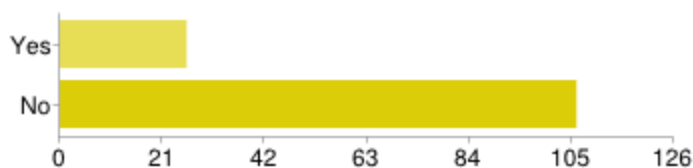
Science is universal and independent of society and culture.



Scientific research is influenced by society and culture.

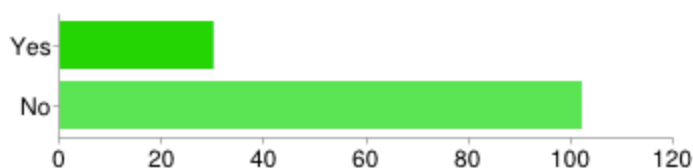


Scientists conduct pure and unbiased studies.

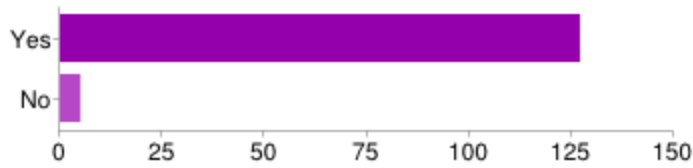


## Which of the following statements about the process of science are true?

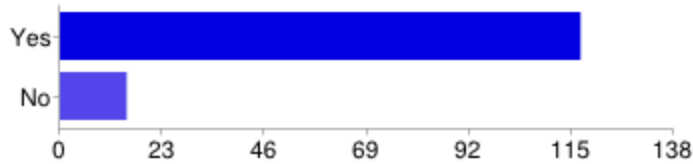
Science is a solitary endeavor.



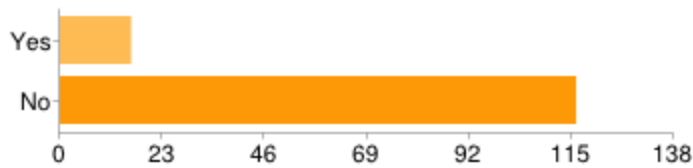
The peer review process ensures evidence is interpreted objectively.



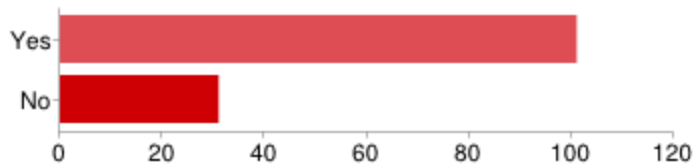
Scientific theories are accepted when there is general consensus among scientists.



Scientists do not consider the potential applications of their research.

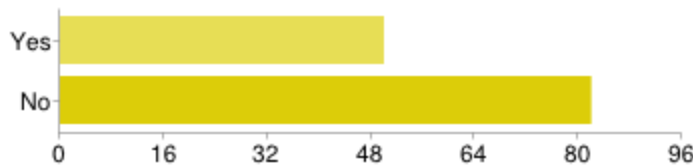


The standards of scientific research are maintained by a system of checks and balances.

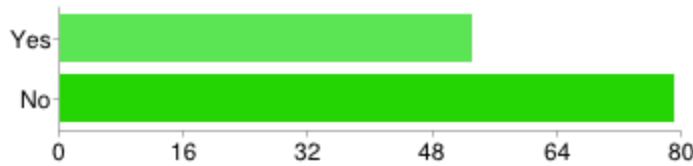


## Which of the following statements about scientific investigations are true?

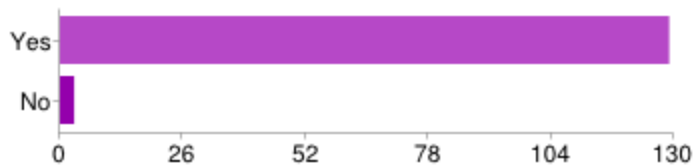
Imagination and creativity conflict with logical reasoning so they should be avoided.



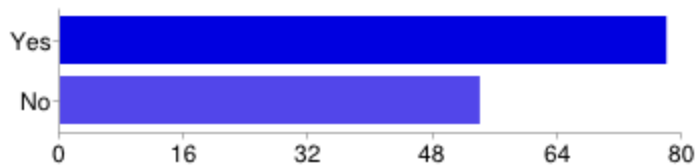
Imagination and creativity interfere with objectivity and rigor so they should be avoided.



Unexpected results can turn scientific investigations in new directions.

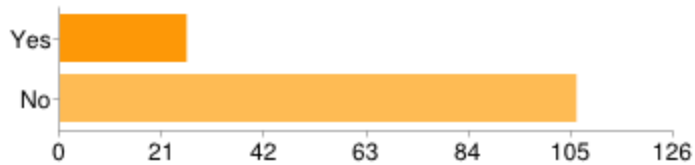


Scientists follow the scientific method step-by-step when they do research.

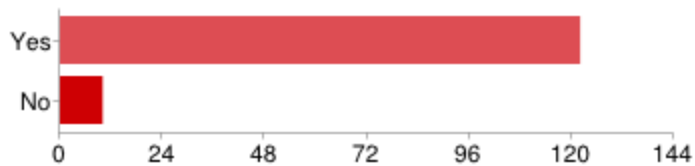


## Which of the following statements are true?

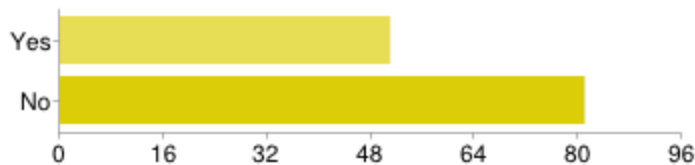
Scientific investigations have conclusive endings.



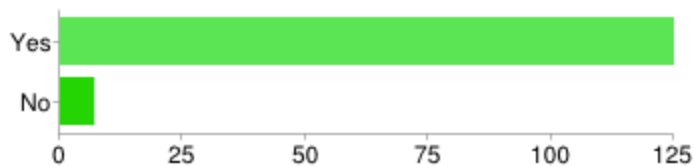
Scientific theories are always tested in multiple different ways.



Scientific knowledge is developed mainly through laboratory experimentation.

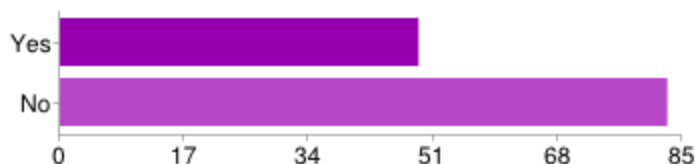


Scientific testing involves using a hypothesis to predict expected results.

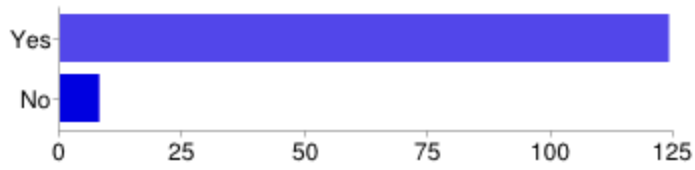


## Which of the following statements about the applications of science are true?

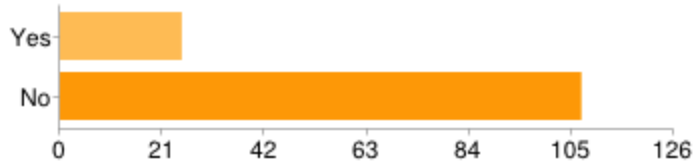
Science can make decisions related to morality.



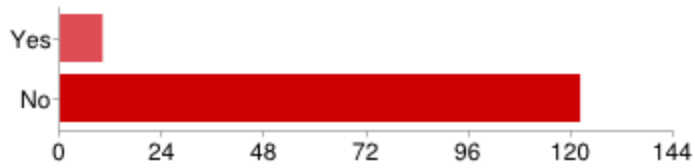
Scientific advancements have raised the standard of living.



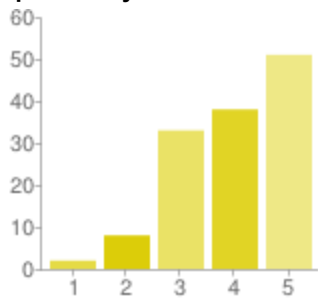
**Science can eventually solve all of humanity's problems.**



**Science can eventually disprove the existence God.**



**I personally think that science is boring.**



**I personally think that science is valuable for society.**

