

Week 5 Writing Activity: *The Scientific Attitude, Ch. 4*

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1 Necessary and/or Sufficient Characteristics

In Ch. 4 of *The Scientific Attitude*, we begin to understand how the scientific attitude is not a “complete solution” to the demarcation problem in the sense that its two tenets are not necessary and sufficient conditions that demarcate science from non-science. For each field in Tab. 1, follow the prompt to decide whether or not it is a form of science.

Criterion	Type	Field	Yes/No
If <i>field</i> is scientific, then it is <i>falsifiable</i> .	Necessity	Physics	
If <i>field</i> is scientific, then it is <i>falsifiable</i> .	Necessity	Cosmology (e.g. Big Bang)	
If <i>field</i> is scientific, then it is <i>falsifiable</i> .	Necessity	Biology	
If <i>field</i> is scientific, then it is <i>falsifiable</i> .	Necessity	Evolutionary biology	
If <i>field</i> is scientific, then it is <i>falsifiable</i> .	Necessity	Astrology (horoscopes)	
If <i>field</i> is scientific, then it is <i>falsifiable</i> .	Necessity	Economics	
If <i>field</i> is <i>falsifiable</i> , then it is scientific.	Sufficient	Physics	
If <i>field</i> is <i>falsifiable</i> , then it is scientific.	Sufficient	Economics	
If <i>field</i> is <i>falsifiable</i> , then it is scientific.	Sufficient	Astrology	
If <i>field</i> is <i>falsifiable</i> , then it is scientific.	Sufficient	Gender Studies	
<i>Field</i> is scientific if and only if it is <i>falsifiable</i> .	Equivalent	Epidemiology (viral outbreaks)	
<i>Field</i> is scientific if and only if it is <i>falsifiable</i> .	Equivalent	Organic Chemistry	

Table 1: For each prompt, think very carefully about choosing yes or no, given the logical structure of the situation.

2 Leadership Characteristics

Essay development. Given what we have read about leadership qualities, outline a concise essay below that describes a moment in your life when you had to demonstrate these qualities. Your essay should be approximately 1000 words. In addition to describing a moment in your life, you should draw a connection to the character qualities that make for good science as shown in Ch. 3 of the book.