

Rubric for determining student ability to apply scientific method by conducting experiments

Criteria	Performance levels		
	Exemplary Score 3	Acceptable Score 2	Unacceptable Score 1
Able to apply basic experimental techniques	Can put together experiment apparatus, calibrate, and make measurements with little or no assistance.	Can put together experiment apparatus, calibrate, and make measurements with some assistance.	Cannot put together experiment apparatus, calibrate, and make measurements without major assistance.
Demonstrate the proper interpretation of experimental data	Can fit data to a mathematical model and explain the results of an experiment in terms of the theoretical model.	Can fit data to a mathematical model and partially explain the results of an experiment in terms of the theoretical model.	Cannot fit data to a mathematical model or partially explain experiment results in terms of the theoretical model.
Explain threats to validity and reliability of observations/experiments	Good understanding of experiment design including limitations and possible systematic and random errors. Understands how to test for reliability.	Some understanding of experiment design including limitations and possible systematic errors. Some understanding of how to test for reliability.	Little or no understanding of experiment design including limitations and possible systematic errors. Little or no understanding of how to test for reliability.