

Cultures of Experimentation in the 17th Century

Galileo Galilei vs. Robert Boyle - Activity

For class today, you read two primary documents reporting 17th century experiments:

1. “Galileo’s Ship Experiment” excerpt from *Dialogue Concerning the Two Chief World Systems* (1632)
2. Robert Boyle, “New Experiments Concerning the Relation between Light and Air,” *Philosophical Transactions of the Royal Society*, no. 31 (1667): 581-600.

Reflect on the form and audience of these two forms of “lab reports”:

What kind of document is Galileo’s *Dialogue*: _____

What audience does Galileo seem to have in mind for this excerpt? How difficult was it to read and understand on a scale of 1 to 10, with 10 being the most difficult?

What kind of document is Boyle’s “New Experiments” _____

What audience does Boyle seem to have in mind for this excerpt? How difficult was it to read and understand on a scale of 1 to 10, with 10 being the most difficult?

How do these two documents define the criteria for a valid experiment and appropriate reporting of the experiment?

	Galileo’s Ship Experiment	Boyle’s “New Experiments Concerning the Relation between Light and Air.”
Rules of evidence: thought experiment or first-hand sensory experience?		
Rules of evidence: Does the conclusion seem open ended based on the data gathered or is the scientist looking to confirm a telos or logical point?		

	Galileo's Ship Experiment	Boyle's "New Experiments Concerning the Relation between Light and Air."
Does the scientist present himself as the ultimate authority on the subject, or are his claims more modest?		
Does the scientist suggest that witnesses were required for the experiment to be valid?		
Does scientist suggest that the experiment needs to be repeatable? In what way?		
How long is the "lab report" for these experiments?		
What kinds of detail are included in the report of the experiment?		
Does the scientist care about or ignore data that is surprising and does not conform to expectations?		
Does the scientist report errors, equipment failures, etc.?		

If you had to write-up a lab report on the same experiment twice—once in the style of Galileo and once in the style of Boyle—what general rules would you follow for each?

Galileo-Style

Boyle-Style