

SP 713 for Ses #5

Observing Materials

Write from your observations in the glass lab (see activity sheet): the properties of the hot glass, how the blowers worked with it, the changes in the glass and form as the glassblowers interacted with it. Describe what you learned and wondered about by watching.

Relate from your explorations and inferences with observing, lenses, frames and geometry.

Responses to Galileo in his time and later

Consider how Kepler's letter and Einstein's forward reflect each author's curiosity, scientific commitments, and personal struggles with authority. Heilbron's introduction provides a historical context for the science and its contention with authority, astutely and irreverently expressed.

Read

Under **Galileo Instruments:**

Excerpts Kepler's letter to Galileo

Kepler's Conversation with Galileo's Sidereal Messenger, 1610, trans 1965, E.

Rosen

Notice how it portrays the regard in which Galileo was then held by others; the relationship between Galileo and the astronomer Johannes Kepler (1571-1630); deep human emotion and relations in doing science; their shared journey in relation to external authority.

Consider Kepler's experience first in hearing of Galileo's discoveries, and then experiencing them for himself through reading Galileo's book.

Read

Under **Galileo Motion:**

Introductions to Galileo's Dialogue

John Heilbron, introduction (2001), Albert Einstein, forward, 1952

In Heilbron's introduction, follow the censor's impact on the *Dialogue*; the arguments about motion that Galileo crafted; the aftermath.

Reflect on Einstein's portrayal of Galileo's contributions through his own analysis of space and motion.

MIT OpenCourseWare
<http://ocw.mit.edu>

EC.050 Recreate Experiments from History: Inform the Future from the Past: Galileo
January IAP 2010

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.