

The Content Dictionary for Theormostatics

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November 11, 2008

Observable (temparature):

Opdef: Measure with a thermometer

Refinement Give a rule to iteratively improve the thermometer (exp. setup)
Type (dimensions): temperature

Observable (density):

Opdef: opdef

Refinement give an iterative rule to improve stepwise the exp. setup Type
(dimensions): mass/volume

System (mercury-thermometer):

Realization A thin glass tube with mercury in it. ref: temperature

System (gas-cylinder):

Realization A gastight wooden box ref: pressure.obs ref: density.obs ref:
color.obs

Preparation We make the box red! **State:**color→red

Experiment: Measuring the pressure vs. temperature of a compressed gas
cylinder. ref: gas-cylinder ref: mercury-thermometer **Measurement:** **State:**
pressure→ $332.49586 \cdot \frac{N}{cm^2}$ density→ $332.49586 \cdot \frac{g}{l}$
State: temperature→ $17.52 \cdot K$

natural-law 0.1: $k = m * b$