

## **Voltmeter design**

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Resources and methods for learning about these subjects (list a few here, in preparation for your research):

## Questions

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### Question 1

What is a *galvanometer*? How might you build your own galvanometer from commonly available components?

[file 00719](#)

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### Question 2

Describe the design and function of a *PMMC* style meter movement.

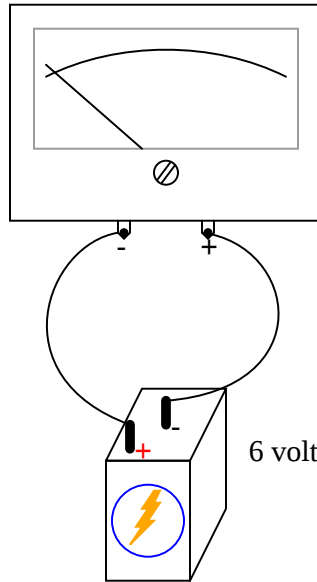
[file 00717](#)

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### Question 3

What would happen to this meter movement, if connected directly to a 6-volt battery?

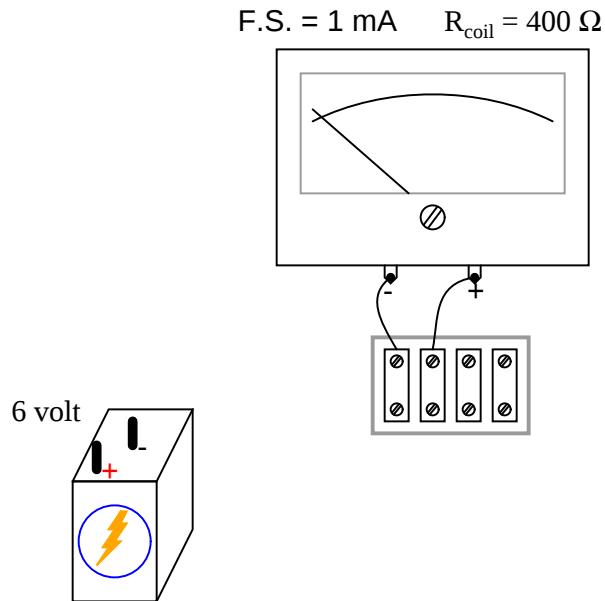
F.S. = 1 mA     $R_{\text{coil}} = 400 \, \Omega$



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#### Question 4

We know that connecting a sensitive meter movement directly across the terminals of a substantial voltage source (such as a battery) is a Bad Thing. So, I want you to determine what other component(s) must be connected to the meter movement to limit the current through its coil, so that connecting the circuit to a 6-volt battery results in the meter's needle moving exactly to the full-scale position:



[file 00720](#)

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#### Question 5

Calculate the necessary resistance value and power rating for  $R_{$





























