

USING AMMETERS AND VOLTMETERS

QUESTION

How do you measure current and voltage in a circuit using an ammeter and a voltmeter?

APPARATUS

- Ammeter
- Voltmeter
- Power Supply
- Switch
- 2 identical light bulbs with bases
- 7 wire leads with alligator clips

METHOD

Follow the instructions in Science Links 9 on Page 286.

OBSERVATIONS

Circuit	Ammeter Reading (A)	Voltmeter Reading (V) (Switch Open)	Voltmeter Reading (V) (Switch Open)
A			
B			
C			
D			
E			

DISCUSSION QUESTIONS

1. Look at your results for Circuits A and B. How do the values of the current compare for the two different positions of the ammeter?
2. Look at your results for Circuits C, D, and E. How does the potential difference you measured for each of the circuits compare when the switch was open? Suggest an explanation for your observations.
3. Look at your results for Circuits, C, D, and E. How does the potential difference you measured for each of the circuits compare when the switch was closed? Make a general statement about the potential difference across an individual load compared with the potential difference across the source.