

Interpreting Data in Tables

GLE 0607.12.1 Describe how simple circuits are associated with the transfer of electrical energy.

GLE 0607.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.

GLE 0607.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.

GLE 0607.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.

GLE 0607.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.

The table shows the results of an experiment when an ammeter was used in a circuit to measure electric current. Include evidence from the data in your answers to the following questions:

1. What is the relationship between the length of a nichrome wire and the amount of electric current in a circuit?
2. What is the relationship between the length of a copper wire and the amount of electric current in a circuit?

Wire Material	Wire length (m)	Electric Current (mA)
Nichrome	40	419
	20	591
	10	743
	5	853
Copper	40	979
	20	990
	10	995
	5	997

3. Does the amount of electric current depend on the type of material of the wire?

Answer the following questions about the experimental design:

1. How many experiments were done?
2. What is the independent variable in each experiment?
3. What is the dependent variable?
4. What question did the scientist want to answer?
5. Draw a schematic of the circuit used in the experiment.