Summary

Read the following summary and fill-in the gaps with the words from the box

current	proportional	electrical	electricity	circuits	experimental
current	resistance	fixed	electrochemical	steady current	introversion
current	resistance	mathematical	voltage	metal wire	inversely
electromotive	length	voltage			a trans

Georg Simon Ohm was a German physicist born in 1789. He was a high school teacher and he carried
out some research starting from the recently invented 1 cell, invented by Alessandro Volta.
Using equipment of his own creation, Ohm determined that the 2 that flows through a wire is
3 to its cross sectional area and 4 proportional to its 5 He became
professor at the college at Cologne in 1817.
Ohm's main interest was current electricity but his experimental equipment was primitive. Despite this,
he made his own 6, producing a range of thickness and lengths of remarkable consistent
quality and he also focused on the nature of electric 7 In 1827, he was able to show from his
experiments that there was a simple relationship between 8, 9 and
10
This result represents the true beginning of 11 circuit analysis. Unfortunately, when Ohm
published his finding in 1827, his colleagues did not accept his ideas, so he had to resign from his high-
school teaching position and he lived in poverty and shame until he accepted a position at Nuremberg in
1833. In 1852 Ohm became professor of 12 physics in the University of Munich, where he
later died.
Ohm's law stated that the amount of 13 through a material is directly proportional to the
14 across the material, for some 15 temperature: $I = V/R$. Ohm had discovered
the distribution of 16 force in an electrical circuit, and had established a definite relationship
connecting 17, electromotive force and 18 strength.
He would receive no credit for his findings until he was made director of the Polytechnic School of
Nuremberg in 1833. In 1841, the Royal Society in London recognized the significance of his discovery and
awarded him the Copley medal. In 1849, just 5 years before his death, Ohm's lifelong dream was realized
when he was given a professorship of Experimental Physics at the University of Munich.
However, why was his work not recognized during his life? There is not a definite answer but maybe
many factors contributed to it. One factor may have been his 19; another was certainly his
²⁰ approach to topics which at that time were studied in his country a non-mathematical way.
²¹ was not the only topic on which Ohm undertook research, and not the only topic in which
he ended up in controversy.

