ELECTRONIC ACCESS



The possibilities are endless in the digital age!

Sharon Parsons

Nelson Literacy Directions

For teachers' inspection ONLY

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Electronic Access

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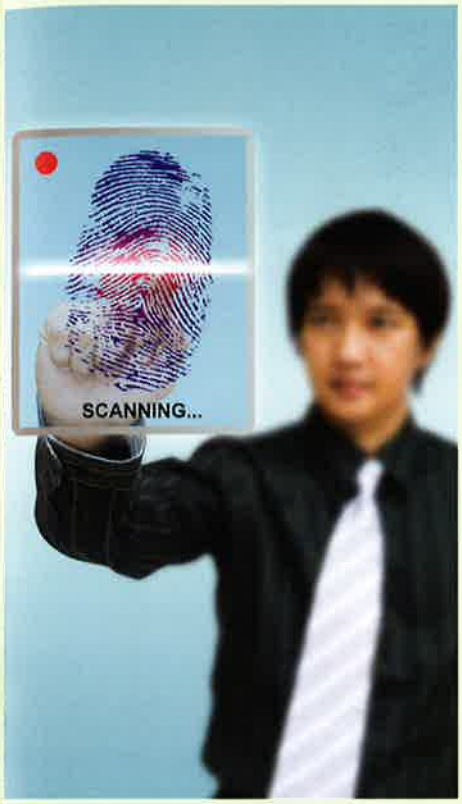
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Dear Reader

Just for a moment, think about times when you haven't been able to access the internet, or your mobile phone, or an app to play a game. On those occasions, we are reminded of just how much we rely on all forms of electronic access every day.

> "I THOUGHT OF THE CHOCOLATE VENDING MACHINE WHERE MONEY WAS PUT IN A SLOT AND A BAR DISPATCHED. SURELY MONEY COULD BE DISPENSED IN THE SAME WAY."
>
> JOHN SHEPHERD-BARRON
> INVENTOR OF ATM TECHNOLOGY

This book traces the history of access from metal keys and latches to many examples of electronic access. On pages 10–11, I am particularly delighted to feature the inventors of wi-fi technology – five Australian scientists.

Finally, in Chapter 11, meet Australian Jennifer Sandercock whose job it is to play games every day, so that she's inspired to design entertaining new computer games.

Enjoy!

Sharon Parsons

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1 Open the Door to Electronic Access

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For thousands of years, humans have invented ways of securing, limiting and monitoring access to their homes, workplaces, possessions, information, borders and roads. The evolution of devices that control access – from wooden door latches, to metal bolts and keys, to wireless electronic entry systems – shows how far humans will go to protect what's important to them.

Access in Earlier Times:
Latches



Manual Access:
Locks and keys



Typical Jobs:
Blacksmith
Carpenter
Locksmith



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A PADLOCK INVENTOR

In 1921, American Harry Soref founded Master Lock, and in 1924 he and his team invented the world's first laminated steel padlock. Prior to this, padlocks were not sturdy enough and were easily destroyed.







a 1924 advertisment for laminated Master Lock padlocks (left)

Access in Recent Times:
Locks and keys

Electronic Access:
Locks and key cards



Wireless Electronic Access:
Unlock wirelessly





Typical Jobs:
Computer technician
Locksmith
Electrician

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2 The Role of Computer Technology in Electronic Access

The pioneering period for computer inventions began in the 1940s, when computers were large, basic and operated very slowly compared to the technology we use today. Though these computers would not seem impressive today, at the time they were incredibly innovative, as the people who built them had only limited knowledge and resources to work with.

Almost 80 years later, this early work has set the foundation for the global technological community to improve computer design, write advanced software programs and design electronic devices that revolutionise how society works and communicates.

Computers Before the Internet: 1940s–1980s

1940s: First Commercial Computer

IBM, short for International Business Machines, is a United States company with a long history of technological invention stretching back as far as the 1890s.

1944: IBM invented the first computer to perform long calculations automatically.

1950s: Mainframe Computers

During this period, only governments and large organisations could afford the limited range of huge and very expensive computers.

1959: IBM invented its first mainframe computer, which could perform 229 000 calculations per second!



early computers at a Russian space museum

1960s: Space Computers

The use of computers for space exploration by the USSR and the USA led to significant results that culminated in the moon landing in 1969.

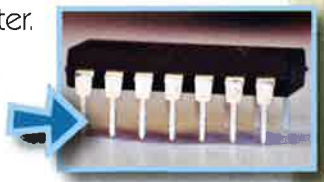
1969: Two *Apollo 11* astronauts became the first humans to land on the moon on 20 July 1969.

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1970s: Personal Computers

This decade marked the rise in popularity of the personal computer.

1971: Intel Corporation engineers invented the first microprocessing chip. In 1974, a small firm called MITS made the first personal computer, the Altair, using Intel Corporation's 8080 microprocessor.



an early microprocessing chip (above)

1977: Apple II, a personal computer that was affordable for homes, small businesses and schools, was released.

the first Apple Macintosh (128k) from 1984

APPLE FOUNDERS

Steve Jobs (1955–2011) and Stephen Wozniak (1959–) founded the Apple Company in 1976, California, USA.



Steve Jobs (left)

1980s: Personal Computers and Games

In the 1980s, video games became very popular.

1982: Compact discs became available.

1983: The first Nintendo gaming consoles were launched in Japan.

1989: Apple released its first portable Macintosh personal computer.



THEN

NOW

a Nintendo entertainment system with controllers



playing with a Nintendo WiiU controller at a world video games expo in 2012, Los Angeles, USA

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Computers Since the Internet: 1990s–Present





inventor and founder of the World Wide Web Sir Tim Berners-Lee making a presentation in 2012

1990s: Internet-Fuelled Electronic Access

In 1989, British computer scientist Sir Tim Berners-Lee developed software that allowed people to share information on the internet. By the following year, the World Wide Web was available and this technology inspired companies to create products that made use of the new global information networks, such as laptops and downloadable entertainment.

1990: Internet access became available.

1995: Microsoft launched Internet Explorer.

1995: DVDs were introduced to the market.



a DVD player

1996: 3D graphics enabled more advanced computer games.



1996: Hotmail email accounts became popular.

an Apple iPhone 3GS, the third generation smartphone, released in 2009 (the original iPhone 3 was produced in 2007)



2000s: Millions More Access an Online World

By the year 2000, almost 400 million people had become connected to the internet and billions of emails were being sent, outstripping the volume of postal mail.

2001: Portable media players became popular.

2007: Smartphones appeared on the market.















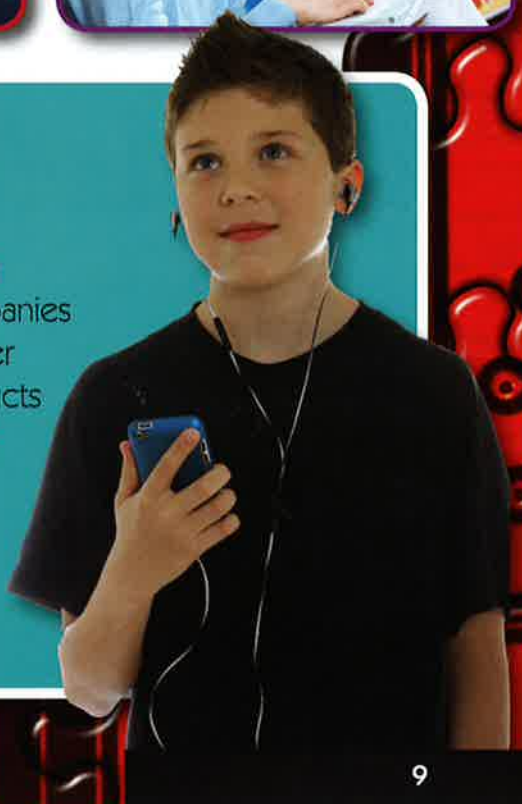




2010s: Online Everywhere!

New generations of personal computing devices continue to fill the market. Many competing hardware and software companies design similar devices to offer consumers choice of products for all kinds of uses, such as apps and games.

2010: Touch-screen tablet computers became available.



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