

Teacher's notes

The Road Ahead

by Bill Gates

with Nathan Myhrvold and Peter Rinearson



SUMMARY

The *Road Ahead*, published in 1995 and brought out in a new edition in 1996, touches on aspects of life close to everyone. Bill Gates, famous across the world for his successful business, Microsoft, gives readers a fascinating insight into how personal computers are in the future going to change our lives still further and how the Internet will continue to evolve. Optimistic and enthusiastic, Bill Gates takes the reader into a world of the near future. This is a world where less paper is used, where teachers share their work and reach more students, where businesses hold meetings across the world without anyone leaving their offices, and where someone's house can recognize them and choose their favorite music as they enter.

The Road Ahead is Bill Gates' view of how the Information Highway - the Internet - will affect everybody. Gates is not blind to possible problems, but he stresses the fact that the computer is always just a tool, and must be treated as such.

ABOUT THE AUTHOR

Bill Gates, billionaire chairman and chief executive officer of the Microsoft Corporation - was born in Seattle in the north-west US on October 28, 1955. A "typical competitive Scorpio", he says. Gates' father was an attorney in Seattle, and his mother a teacher. He has two sisters, one older and one younger than him.

Gates went to a private school in Seattle, and later to college at Harvard. He dropped out of Harvard at 19 when he and his friend Paul Allen created the company Microsoft - now the leading provider of software for personal computers in the world.

Gates' feeling that personal computers would be big business, and his continual clear vision, are central to Microsoft and to the entire software industry today. Starting out as two people, Gates and Allen, Microsoft grew quickly to 12 people by 1979, and Allen and Gates decided to move from Albuquerque to Seattle. Within a year the company had grown to 35 and they hired their first professional manager, Steve Bullmer. To encourage Bullmer to join them they offered him a stake of Microsoft - he now owns 5%, worth 2.7 billion dollars. Today

Microsoft employs more than 20,000 people in 48 countries of the world.

When Gates and Allen first set up in business, they learned as they went along. Paul Allen admits that "our management style was a little loose in the beginning. We both took part in every decision. If there was a difference between our roles, I was probably the one always pushing a little bit in terms of new technology and new products, and Bill was more interested in doing negotiations and contracts and business deals."

Paul Allen left the company in 1983 when he became ill with Hodgkins Disease. He was badly missed by Bill Gates for a long time.

In Hawaii on January 1, 1994 Gates married Melinda, a product manager at Microsoft. They have a daughter, born in 1996. One of the richest men in the world, Gates annually gives away more than most people earn in a lifetime. He says he plans to give most of his money away in about ten years, "I plan to go from the world's richest man to the world's largest philanthropist."

Gates is interested in biotechnology and is on the board of Darwin Molecular and the Icos Corporation. He is an enthusiastic reader and also enjoys golf and bridge. He is a very hard worker and his idea of relaxation is to race Melinda at identical jigsaw puzzles.

BACKGROUND AND THEMES

The Road Ahead held the number one position on the New York Times bestseller list for seven weeks, and has been published in more than twenty languages. Just two weeks after its publication, Bill Gates announced that he was going to re-focus his entire company, Microsoft, on the Internet. Less than a year later, Gates not only achieved that, but he also presented a virtually re-written Internet version of *The Road Ahead*. The new edition has a companion CD ROM featuring the complete text of the book, and hundreds of multimedia links to reference material, an interview with Gates, video demonstrations of future technologies and access to the World Wide Web. This is how Gates sees the future for all books.

People can no longer ignore the fact that we are living in the computer age. In *The Road Ahead*, Bill Gates

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recognizes that many people are frightened of computers, and are worried about being overloaded with too much information. He tries to lessen those fears by sharing his vision of the future and showing that computers are not to be feared but to be used.

The Road Ahead is written in clear and easy language which makes it extremely readable and interesting, even to those with little knowledge of computers. Bill Gates wrote *The Road Ahead* to encourage "people from all walks of life to think about the opportunities and challenges ahead. Everybody in society, not just the technologists, must debate the nature and pace of change. I'm optimistic that informed dialogue will help individuals, companies, industries and societies prepare."

All royalties from *The Road Ahead* go to the National Foundation for the Improvement of Education. This is a charity which funds The Road Ahead Program, providing grants to encourage the use of technology in education. Proceeds from foreign language editions support similar programs and organizations throughout the world.

Communicative activities

The following teacher-led activities cover the same sections of text as the exercises at the back of the reader, and supplement those exercises. Supplementary exercises covering shorter sections of the book can be found on the photocopiable Student's Activities pages of this Factsheet. These are primarily for use with class readers but, with the exception of discussion and pair/group work questions, can also be used by students working in a self-access center.

ACTIVITIES BEFORE READING THE BOOK

Write the 'Special words you will meet in this book' (see pages vi-vii of the book) on sets of single cards. On other sets of cards write the meanings of the words.

Ask students to read pages vi-vii of their books. Then put them into pairs, give each pair a set of 'word' cards and a set of 'meaning' cards, and ask them to match the meanings to the words.

ACTIVITIES AFTER READING A SECTION

Chapters 1 - 3

Write on pieces of paper some facts from these chapters. Write one on each separate piece of paper. Ask students to write some too, and collect them. Give each student a piece of paper. Students have ten minutes to collect as many facts as possible by asking each other for their facts. They then sit down with their books closed and write down all the facts they collect. The winner is the person who has listed the greatest number of facts.

Chapters 4-6

Ask students to think of as many different ways of advertising as possible. Ask students to call them out. Write them all on the board.

Put students into small groups. Give each group a list of different articles to be sold. Give the same list to each

group. Ask them to discuss and then decide the following things about each article:

Who will buy it?

What is the best way of advertising it?

When all the groups have finished, have a whole-class discussion. Then get the class to vote for the best advertising ideas.

Chapters 7-10

Ask the class to think of all the changes computers could make to our lives in the future. Ask students to call out their ideas. Write them on the board.

In small groups, students list everything you have written on the board under the headings 'good' and 'bad'. A class discussion could follow.

ACTIVITIES AFTER READING THE BOOK

Write the chapter titles from the book on single pieces of card. Put students into small groups and give a set of cards to each group. In turns, students look at a title and describe what that chapter was about.

Glossary

It will be useful for your students to know the following new words. They are practised in the Before You Read sections of exercises at the back of the book.

Chapters 1-3

become (v) to begin to be something

copy (n) something that is made to be exactly the same as another thing

future (n) the time after the present (after now)

memory (n) the ability to remember things

message (n) something that you say to a machine or write down when someone is not at home and you need to speak to them

powerful (adj) strong, fast

reason (n) why something happens

ring (v) if the telephone rings, it makes a noise

share (v) to use something that another person is also using, or to tell somebody an idea

show (v) to let someone see something

system (n) a way of working

toy (n) something for children to play with

Chapters 4-6

advertise (v) to tell people about something to get them to buy it

advertising (n) the business of getting people to buy something

communication (n) the ways that people give and get information

document (n) something which holds important information, usually a piece of paper

electronic (adj) using electricity and computer equipment

encyclopedia (n) a book of facts about many different things

Chapters 7-10

pin (n) a small metal thing that you put on your clothes and wear, to look nice or for another reason



Student's activities

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Students can do these exercises alone or with one or more other students.

Activities before reading the book

Read the Introduction at the front of the book and answer the following questions:

- What is this book about?
- In what year did Bill Gates start Microsoft? How old was he?
- Where does Bill Gates live?
- Why does the Introduction tell you about Nathan Myhrvold and Paul Rinearson?
- Who worked at Cambridge University? Where is this?
- How and when did Paul Rinearson meet Bill Gates?

Activities while reading the book

CHAPTERS 1-3

Chapter 1

Put the two halves of these sentences together.

- The first computer program Gates wrote
- When we talk about the future of the Internet, we call it
- Paul Allen is
- A microprocessor chip is...
- In December 1974 Gates and Allen saw...
- The Altair 8800 is important because it was the first...
- Gates and Allen took five weeks to...
- Bill Gates and Paul Allen started the first company that...
- Bill Gates left college at 19 because...
- ...write a program for the Altair.
- ...told the computer to play a game.
- ...a picture of the Altair 8800.
- ...three years older than Bill Gates.
- ...small computer that Gates saw.
- ...wrote programs for microcomputers.
- ...the Information Highway.
- ...the part of the computer that thinks.
- ...he couldn't run a business and study.

Chapter 2

1 The numbers and words in *italics* are in the wrong sentences. Put them into the sentence where they belong.

- The first computer was built *more than 150 years ago*.
- During the last 20 years* a British man called Charles Babbage wanted to make a machine that could work with numbers.

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- Bill Gates plans to make a new Windows system in the 1940s.
 - Computer companies have made some mistakes every two or three years.
- 2 Answer these questions.
- How does a computer keep all its information?
 - Write down two mistakes made by computer companies in the past.
 - How do computer users steal software?
 - Why does Microsoft do so well?
 - In 1979 what was the most important computer programming language?
 - When did Microsoft stop working with IBM?
 - What does Bill Gates think is the secret to winning in the computer business?

Chapter 3

Choose the right answer.

- How does the telephone answering machine help you?
 - It makes telephone calls for you.
 - It tells you who has called you.
 - It lets you see the face of the person calling you.
- Why are pocket computers useful?
 - Because they are small enough to carry.
 - Because they cannot be broken.
 - Because they show up in the dark.
- How does the Internet work?
 - It holds information.
 - It gets into other people's computer systems.
 - It uses telephone systems.

CHAPTERS 4-6

Chapter 4

1 What is a document? Is it only paper?

Discuss with a friend or write down your ideas. How is the idea of a 'document' changing?

2 Make a list of how people can use computers for fun.

Chapter 5

1 Are these sentences correct? If they are not, correct them.

- A computer is a tool.
- When Bill Gates was a child there were no computers.
- Microsoft began to use e-mail in the 1970s.
- E-mail is easy to use and goes from computer to computer immediately.
- E-mail takes longer than a telephone conversation.

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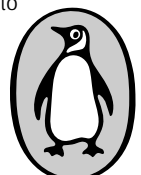
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Student's activities

- (f) In the future people in business will meet people in different countries without leaving their offices.
- (g) In the future more people will work in offices.
- (h) Bill Gates thinks that there is nothing to do in the city.
- (i) Bill Gates thinks that, in the future, there will be more people living in cities.

Chapter 6

- 1 Write down or discuss with a friend. Why is life going to get harder for middlemen (middlemen sell things for other people)?
- 2 Finish these sentences. Try not to look at the book.
 - (a) In 1776 Adam Smith wrote a book called
 - (b) Advertising will because people will buy things straight from the companies that make them.
 - (c) Before you buy something you will be able to read what other people say about it on
 - (d) Microsoft paid for their Windows program to appear in the movie
 - (e) The company is trying a new system for its jeans.
 - (f) Pay-messages will give you money if

CHAPTERS 7-10

Chapter 7

- 1 Answer the following questions.
 - (a) Why should each child be taught in a different way?
 - (b) How will electronic documents help teachers?
 - (c) Why haven't computers made much difference in the classroom yet?
 - (d) Will computers take the place of the teacher?
 - (e) How will computers help students with tests?
 - (f) How will every school have a wonderful library?
- 2 Write, draw or discuss with a friend: What do you think a classroom will look like in the future?

Chapter 8

The words in *italics* below are incorrect. Correct the sentences. Try not to look at the book.

Some people worry that computers will change our lives because we will not have time to spend with *the house*. However, people said that *telephones* would kill movie theaters. On the Internet it is easier to see friends who have moved away, because we can write *less* often, and it won't cost *more*.

One problem with the Internet is that children will be able to *speak* about anything they want, good or bad.

Bill Gates' *yard* is made out of wood, glass, stone and *gas*. When it is dark, the light *far away from* you turns on. You can tell the house *because* you want something. This works because you wear a metal pin and hold *an electric switch*.

Chapter 9

Which thing happened first? Which thing happened second? Put these sentences in the right order.

- (a) Companies dropped plans for the Information Highway and began to look more carefully at the 'World Wide Web'.
- (b) Levi Strauss opened a store in San Francisco.
- (c) Companies were excited by the Information Highway. They didn't see much of a place for the personal computer in their picture of the future.
- (d) A man from Nevada offered Strauss an idea for a new sort of pants, made of blue denim.
- (e) People began to communicate from one personal computer to another on the Internet.
- (f) Companies began to make computer hardware and software specially for the Internet.

Chapter 10

- 1 Which words best describe how Bill Gates feels about computers:
sad, excited, angry, frightened, worried, grateful
- 2 Finish these sentences.
 - (a) We have to be ready for
 - (b) Bill Gates hopes for great things from
 - (c) Before we had machines, most people lived or worked
 - (d) When people spend more time with computers, they
 - (e) We have to get both boys and
 - (f) There will have to be new rules for the
 - (g) You can keep your information safe by using a

Activities after reading the book

- 1 What is Bill Gates' character? What do you feel about him?
- 2 Would you like to be Bill Gates? Why/Why not?



The Road Ahead is a book written by Bill Gates, co-founder and then-CEO of the Microsoft software company, together with Microsoft executive Nathan Myhrvold and journalist Peter Rinearson. Published in November 1995, then substantially revised about a year later, The Road Ahead summarized the implications of the personal computing revolution and described a future profoundly changed by the arrival of a global information superhighway. The Road Ahead

Infobox Book name = The Road Ahead title orig = translator = image caption = author = Bill Gates with Nathan Myhrvold and Peter Rinearson illustrator = cover artist = country = language = English series = subject = genre = publisher = VIKING pub

Wikipedia. The Road Ahead; America's Creeping Revolution is John T. Flynn s treatise on the infiltration of Socialism into the politics of the United States. First published in 1949, it had at least three printings totaling over 500,000 copies. The road ahead Gaining momentum from energy transformation. Megatrends and disruptions are having profound implications for the strategies and future role of companies all along the power utility value chain. We map the impact on the power sector and look ahead at what it might mean for future market and business models. Making the right moves now will be vital if companies are to be a successful part of energy transformation. www.pwc.com/utilities www.strategyand.pwc.com.