ENGLISH For Today

Book Four: OUR CHANGING TECHNOLOGY
The National Council of Teachers of English
Second Edition

Second Edition

ENGLISH FOR TODAY

Book Four: OUR CHANGING TECHNOLOGY

THE NATIONAL COUNCIL OF TEACHERS OF ENGLISH

Project Director
WILLIAM R. SLAGER
Department of English, University of Utah

Chief Revisers William E. Norris Georgetown University

Christina Bratt Paulston University of Pittsburgh

William R. Slager University of Utah

McGraw-Hill Book Company

New York St. Louis San Francisco Auckland Beirut
Bogotá Dusseldorf Johannesburg Kuala Lumpur London
Madrid Mexico Montreal New Delhi Panama Paris
San Juan São Paulo Singapore Sydney Tokyo Toronto

and with lab of the action of the late of the late of the late.

NCTE Advisory Committee for English for Today

HAROLD B. ALLEN, University of Minnesota, Chairman ALBERT H. MARCKWARDT, Princeton University WILLIAM R. SLAGER, University of Utah ROBERT F. HOGAN. ex officio, Executive Secretary, NCTE

ENGLISH FOR TODAY

Book Four: Our Changing Technology

Second Edition

Copyright © 1975 by the National Council of Teachers of English. All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Library of Congress Catalog Card Number 72–5105

ISBN: 0-07-045813-8

First published in Australia
Printed and bound by FEP International Ltd.
Singapore

Acknowledgments

The project director wishes to thank the following for permission to reprint material in this text:

American Telephone and Telegraph Company, New York, for permission to adapt material from The Space Age, 1960; Communication Service "On the Move"; Overseas Telephone Service; DDD: An Industrywide Service; Machine Talk; "Picturephone," Bell Laboratories Record; Laser: The New Light; Signals in Space; Satellite Communications Physics (1963); Research and Development in the Bell System (1973). Copyright © American Telephone and Telegraph Company.

Basic Books, Inc., Publishers, New York, for permission to adapt and reprint material from *The Heart Explorers*. Adapted from Chapter 10 of *The Heart Explorers*, by Tony Simon. © 1966 by Tony Simon, Basic Books, Inc., Publishers, New York.

Encyclopaedia Britannica for permission to adapt and reprint material from "Medicine," Encyclopaedia Britannica, Book of the Year, 1973. Reprinted with permission from the 1973 Britannica Book of the Year, copyright © 1973 by Encyclopaedia Britannica, Inc.; Chicago, Illinois.

Field Enterprises Educational Corporation for material adapted from "Aerodynamics" and "Television." Adapted from *The World Book Encyclopedia*. © 1973 Field Enterprises Educational Corporation.

McGraw-Hill Book Company, New York, for adaptation of pp. 7-9, "Computers: Machines with Electronic Brains," from *Computers*! by Alan Vorwald and Frank Clark, revised edition. Copyright © 1964, by McGraw-Hill, Inc.

Jane Morse for permission to adapt and reprint material from *Parade*, January 25, 1970, © 1970 by Parade Publications.

Parade Publications for permission to adapt and reprint material from *Parade*, January 25, 1970, © 1970 by Parade Publications.

The Reader's Digest for "All Aboard BART, the Commuter's Dream." Adapted with permission from the July 1971 Reader's Digest. Copyright © 1971 by The Reader's Digest Association, Inc.

Senior Scholastic: For material adapted from "America on Wheels," Senior Scholastic, September 20, 1971. Adapted and reprinted by permission from Senior Scholastic, ©1971 by Scholastic Magazines, Inc. For material adapted from "The Land and Its Limits," Senior Scholastic, November 13, 1972; for material adapted from "Planned Cities," Senior Scholastic, December 4, 1972; for material adapted from "Urban Renewal or Suburban Sprawl?", Senior Scholastic, December 4, 1972.

Adapted and reprinted by permission from Senior Scholastic, © 1972 by Scholastic, Magazines, Inc.

Mark Walker for material adapted from "All Aboard BART, the Commuter's Dream." Adapted with permission from the July 1971 Reader's Digest. Copyright © 1971 by The Reader's Digest Association, Inc.

command from the Space Age, 1800, Caminetin cannot September and thate's Oberseld

· dane Morre for neumlacion to where and reprint material from Perode der vare 25

Contents

Lesson Eight:

Lesson One:	Machines in the City 1 Clauses with when and while 8
	Clauses with before and after 10
	Clauses with until and since 10
	Clauses with for and since 11
	THE A TO DOES AND ASSESSED ASS
Lesson Two:	Machines on the Farm 12
	Clauses with if and unless 19
	Clauses with even if and whether or not 20
	Sentences with anyway 20 1 AND KOMET MANER AND ASSESSED TO SENTENCES WITH A SENTENCE WITH A
Lesson Three:	The Ultimate Machine: The Electronic
	Computer 21
	Conjunction and deletion with both, too, and so 27
mgery 106	Conjunction and deletion with either, neither, and neithernor 27
	Conjunction with or, either, and neither nor
Unit Two: TRANS	SPORTATION 29
Lesson Four:	America on Wheels 29
	Sentences with but, although, and however 36
Lesson Five:	BART: An Automated Answer to the Problems of
	Urban Transportation 39
	Sentences with so, because, and therefore 46
Lesson Six:	Airplanes: Yesterday, Today, and Tomorrow 48
	Sentence connectors consequently and furthermore Sentence connectors for example and in fact 55
	milital: One 12.7 To althought based and
Lesson Seven:	Travel in Space: To the Moon and Beyond 57 Sentence connectors nevertheless and moreover 63
PAT	Sentences with not only also 64
Unit Three: COM	MUNICATION 65 Mars on mineral work in

Television: The Modern Wonder of Electronics

73

Adjective + that clauses 75 It's + adjective + that clauses

65

	That clauses as objects of verbs 74 Deletion in object clauses 75		
Lesson Nine:	The Telephone of Today—and Tomorrow Reported statements introduced by that 83 Reported yes-no questions introduced by if 85 Deletion in object clauses 85 Reported Wh questions 86		
Lesson Ten:	Communications Satellites 88 Object clauses after whether and if 93 From object clauses to infinitive phrases 95		
Unit Four: BKEA	KTHROUGHS IN MEDICINE 96		
Lesson Eleven:	The Search for New Drugs 96 -ing phrases in object position 104 -ing phrases: deletion of identical subjects 104		
Lesson Twelve:	The Heart Laid Open: Open-Heart Surgery 106 Adjective + infinitive 114 Adjective + enough + infinitive 115 Too + adjective + infinitive 116		
Lesson Thirteen:	The Shape of Things to Come: The New Doctor Infinitives in sentence's with it 124 From adjective+infinitive to noun+infinitive 125 Sentences with so that and in order to 127 Reported negative imperatives 127		
Unit Five: OUR (CHANGING LANDSCAPE 128		
Lesson Fourteen:	The Land and Its Limits 128 Relative Clauses Relative word as subject 138 Relative word as direct object 139 Relative word as object of preposition 141		
Lesson Fifteen:	Urban Renewal or Suburban Sprawl? 143 Relative Clauses Whose + noun as subject 150 Whose + noun as direct object 151		

Whose + noun as object of preposition

152

Lesson Sixteen: Planned Cities 154

Relative Clauses
Where 161
When 162

Restrictive determiners: every, each, some, most, many,

and the supplied the state of the supplied t

both, and all 163

Lesson Seventeen: Tokyo Goes Underground 164.

Nonrestrictive Clauses

Who as subject 169

Whom as direct object 170

Whom as object of preposition 171

Which as subject 172

Which as direct object 173

Which as object of preposition 173

Lesson One

Machines in the City

the heart of the big city the center of the city tied linked

machine age period when most work is done by machines

- 1. Dick Mallory is a book publisher. His office on the fortieth floor of a skyscraper in the center of New York City is the world he works in. The world he lives in is a white house on a quiet street in a suburb 30 miles from the big city. Whether he is at work in the heart of the big city or at home in the quiet suburb, Dick's life is tied to machines. In many ways he represents modern man in the big city—modern man in the machine age.
- 2. In a typical working day, Dick and his wife are awakened by the buzzing of an electric alarm clock. As he pushes a button to silence the alarm, he turns on the radio beside his bed to hear the morning news. Then he goes to the bathroom for a quick shave with his electric shaver.
- 3. After dressing, Dick goes to the kitchen, where his wife has begun to prepare breakfast. Eggs are cooking on the electric stove, bread is being toasted in an electric toaster, and coffee is being made in an electric coffee maker. From the electric refrigerator Dick takes a carton of cream, another of fresh milk, and a can of frozen orange juice. He opens the can with an electric can opener and mixes the contents with several cans of cold water. Then the orange juice is ready, and Dick and his wife can begin breakfast. During breakfast, they sometimes watch the morning news program on television.
- 4. After breakfast Dick gets the car out of the garage, and his wife drives him to the railroad station. The station is crowded with other commuters like himself, people who must travel 30 or even 50 miles to the city and back every day. Some are reading the morning paper:

on schedule at the set time

whipped open opened quickly

bank of elevators several elevators side by side up upward bound

more urgent points matters requiring attention at once a matter of routine a usual thing to do

Once when

an electric case opener and

others are talking with one another, waiting nervously for the train. If the train is late, their routine, timed to the minute, could easily be upset. But exactly on schedule, the train arrives at the station. Forty-five minutes later it arrives in the city, still on schedule.

- 5. With the other commuters, Dick hurries from the train into the station. As he nears the door, it is whipped open by an electric eye, and he passes through into the waiting room. A moment later he steps onto a moving stairway that takes him rapidly up to the street level. Buses and taxis are everywhere, but because Dick's office is only four blocks away, he always walks.
- 6. Soon he is inside the sixty-story skyscraper where his company has offices. At a long bank of elevators he waits until a green light flashes for an up car, then steps inside. He pushes the button for the fortieth floor, the door closes, and the car rises smoothly and noiselessly.
- 7. When the elevator reaches the fortieth floor, the door again slides open, and Dick steps into the familiar hall with its early-morning quiet, and hurries to his office. He turns on the lights and is soon at work. There is much to be done before the clerks and secretaries begin to arrive.
- 8. An hour later the day's routine begins with the arrival of the mail. As he reads it, he usually takes notes, and on the more urgent points picks up the telephone and calls other departments in the building and other businesses in New York. It is a matter of routine for Dick to call the company's offices in Chicago and San Francisco, and sometimes even to call its representatives in London and Paris. Once he has the information he needs, he dictates letters into a recording machine for his secretary to type and return to him later for his signature.
- 9. At times Dick is aware of the workers in the outer office answering telephones, typing letters, and filing papers. From a room next door he hears the even clicking of a machine that is duplicating copies of schedules and instruction sheets. Other machines are taking pictures of important letters and documents and producing many copies in a few minutes. From a special office nearby comes the hum of an electronic computer, which is recording orders, billing customers, and making out the company payroll.
- 10. Often Dick is also aware of other sounds, the more or less muffled traffic noises that come from the street down below—the honking of horns, the blowing of

muffled not very clear



dictating machine in use

whistles, the screeching of brakes. These are curiously mixed with the clang of hammers and riveting machines and with the shouts of the workmen putting up a new skyscraper next door. But Dick is used to noise-for the big city, a city of machines, must be a city of noise. 11. Although he is used to the noise, Dick usually looks forward to the end of the day, when he can return to his house in the quiet suburb. For relaxation he may mow the lawn with his power mower; or sometimes he repairs a piece of furniture with his electric tools. He may help his young children build a pen for their pet rabbit. Or he may just sit in a comfortable chair watching television or listening to his favorite music on the record player. 12. In the office or at home, machines are a part of the Mallorys' life. Like many other city people, they would find it hard to live without machines.

COMPREHENSION

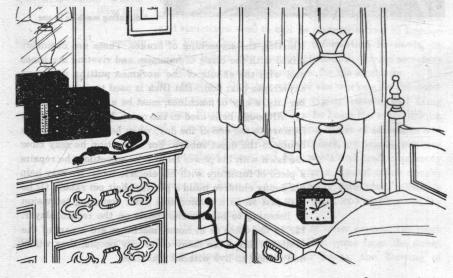
Yes-No Questions

- 1. Is Dick a book publisher? Yes, he is.
- 2. Is his office in a skyscraper?
- 3. Is the skyscraper in Chicago?
- 4. Does Dick live in a suburb?
- 5. Is the suburb 10 miles from the city?
- 6. Is Dick's life tied to machines?
- 7. Is Dick awakened by the paperboy?
- 8. Does he listen to the morning news?
- 9. Is the radio beside his bed?
- 10. Does he use an electric shaver?

Or Questions

- 1. Is Dick a salesman or a book publisher? He's a
- 2. Is his office on the thirtieth floor or the fortieth floor?
- 3. Does Dick live in a white house or a red house?
- 4. Is the suburb quiet or noisy?
- 5. Does Dick go to the railroad station by bus or by car?
- 6. Is the station deserted or crowded with commuters? _
- 7. Does the train arrive late or on schedule? _
- 8. Does Dick take a taxi to his office or does he walk?__
- 9. Is his office building forty or sixty stories high?
- 10. Does Dick hurry to his office or does he take his time?

Alarm clock, razor, and radio—all run by electricity



Wh Questions

How is Dick awakened? He's awakened by How does he silence the alarm? What does he turn on after he wakes up? 3. 4. Why does he turn on the radio? What device opens the station door for Dick? What machine carries him up to street level? 7. What must Dick do to get to the fortieth floor?_ What does he use the telephone for? ___ 9. What machine helps him to write letters? 10. What machine records orders, bills customers, and makes out the company

Contradiction and Comment

payroll? ___

First contradict the statement. Then supply a comment that explains why the statement is incorrect. Refer to the reading whenever you need to.

MODEL Dick walks to the station.

No, he doesn't. His wife drives him there.

- 1. Dick Mallory is an engineer. No, he isn't. He's a
 - His office is in Chicago.
 - 3. Dick lives in New York City. _
- 4. Dick works in the suburbs.

 - 5. Dick prepares breakfast.
- 6. Dick drinks fresh orange juice.
- 7. Commuters walk to work.
 - 8. The train arrived late.
- 9. Dick could walk to work if he wanted to.
 - 10. Dick should walk upstairs to his office.

MODEL Dick's wife doesn't drive a car.

Yes, she does. She drives him to the railroad station.

- 11. Dick doesn't walk from the station to his office. Yes, he does. His office
- Dick doesn't depend on elevators. 12.
- 13. Dick doesn't make long distance calls.
- 14. Dick doesn't dictate letters.
- 15. The copying machines aren't fast. ___
- The big city isn't noisy. 16.
- 17. Dick can't mow the lawn.
- Dick can't repair furniture. 18.
- Dick's children don't have any pets. 19.
- Machines aren't a necessary part of the Mallorys' life. 20.

Toward Interpretation

- 1. What are some of the machines that Dick Mallory uses at home? What machines does he use to get to work? What machines does he use at work?
- 2. What source of power do most of the machines use? Are they quiet or noisy?
- 3. Name some machines useful for relaxation and pleasure.

You and Your Machines

- 1. What machines do you depend on during a typical day? Does anyone in your family use machines that you do not ordinarily use yourself?
- 2. If the electrical power were suddenly cut off in Dick's city, how would his day be different? How would your day be different if the power you use failed?
- 3. If you could buy more machines, which ones do you think would be most useful to you? How would they be useful?

COMPOSITION

- 1. Notice that the entire reading is organized according to a time sequence: It takes Dick Mallory through a typical working day. Special time expressions are used to make this time sequence clear. In paragraph 2, the time expressions are "in a typical working day," "as," and "then." Find the time expressions used in paragraphs 4 and 8.
- 2. There are basically three types of time expressions: subordinating conjunctions, prepositional phrases, and adverbs of time. The latter two can be used as sentence connectors. (See the composition exercises for Lesson Five). Here are some of the subordinating conjunctions commonly used to indicate time relationships:

after	now that
as	once
as long as	since
as soon as	until, till
before	when
by the time (that)	whenever
every time (that)	while

The grammatical exercises at the end of this lesson provide practice with when and while, before and after, and until and since.

When the subordinate clause begins the sentence, it is usually followed by a comma. When the subordinate clause comes at the end of the sentence, there is no comma. Look at the use of the comma in the following sentences:

When you write, you should be careful of the punctuation. You should be careful of the punctuation when you write.

Now turn to paragraph 7 and observe the punctuation in the first and last sentences. The *when* clause begins the first sentence, and so there is a comma after "flóor," the last word of that clause. In the last sentence the *before* clause comes at the end, and

so it is not set off by a comma. Rewrite these two sentences so that the when clause comes at the end and the before clause comes at the beginning. Remember to change the punctuation. Now write some sentences of your own using any of the subordinating conjunctions in the list above.

Time	Clause	First

	1. After 1 c	come nome from school, I c	change my clothes.			
	2	nels in Xi L	solutioning versio grawin			
	3		1 1012 2012			
	4.	a della d	1719/10 10017 9399000			
	5.	ra kama li da	erorites / /			
	Time Clause Lo	Time Clause Last that two day medi to vitem work on biru gaither and Aquerds of				
	6. I have s		ead reports of the medical research.			
			TR. MULDERS of THE SUSTED AND A PROPERTY OF			
	8.	NAME OF THE PARTY	agrifo asterolial oils to see differences may			
	9.					
	10		VALUE STATE OF THE STATE OF THE			
3.	Here are son	ne of the prepositions com	nmonly used in phrases that refer to time			
	after (breakfa	ast) at (ten o'clock)	during (lunch time)			
	before (break		from to (Monday Friday)			
		on (January 1st)	하는 사람들은 사람이 있는 것들이 하면 경우를 하는 것이 되었다. 그런 사람들은 사람들은 사람들이 되었다.			
			since (yesterday)			
	ember that w	sing when or while like				
a gon	gerund. Look as e of them is a g Now write si eer dressing. Lo e phrase. For s e others you ca	g to bed. When the ing for at paragraph 3: There are gerund. Which one is it? x sentences which begin vook carefully at the model				
		re eating breakfast, Dick s				
	recordin	ng machine.	ees in Chicago, Dick dictates letters into a			
	2. After _	, I do my ho	omework.			
	3. After _		her bears of			
		other department				
	5. Before	, I read th	e newspaper.			

4. Here are some of the common adverbs (or adverbial phrases) used to express time:

(a week) ago soon at times last (week) later every (day, month) again

next

then

Among the most common frequency adverbs are the following:

always never sometimes still ever often usually frequently rarely seldom

Go through the reading and see how many of them you can find.

Now write a story of your own typical day, making liberal use of the time expressions that occur in the reading and in the preceding lists. You might begin your story with one of the following phrases:

In a typical working day . . . In a typical school day . . .

GRAMMAR

Clauses with when and while

1.1 Combine the paired sentences by using when or while. Remember that when means something like "at that moment," and while means something like "during that time." Follow the appropriate model below.

SITUATION One day Dick drove his car to work.

MODELS He got in the car.

He put the key in the ignition.

When he got in the car, he put the key in the ignition.

The motor was warming up.

He checked the gas gauge.

While the motor was warming up, he checked the gas gauge.

1. He turned the corner.

He saw a traffic light ahead.

When he turned the corner, he saw

He got to the traffic light.

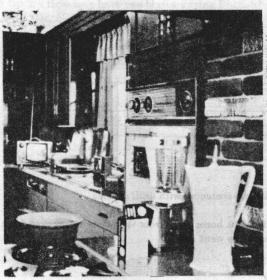
It turned red.

He saw the red light.

He stopped the car.

- 4. He was waiting for the light to change.
 He turned on the car radio.
- 5. He was driving to work.
 He listened to the news.
- He was two blocks away from his office.
 He got caught in a traffic jam.
- 7. He finally arrived at his office.

 He was two hours late.
- He was eating his lunch.
 He began to wonder what the traffic would be like after work.
- He went to get his car.
 He saw that it had a flat tire.
- The tire was being fixed.
 He read the evening paper.
- He got home.
 He was tired.
- His wife was getting dinner.
 He watched television.



National Wildlife Magaz

A kitchen with many electric appliances