

ผลการวิเคราะห์ข้อมูล

1. จากการทดสอบนักเรียนช่างอุตสาหกรรม 300 คน ซึ่งเป็นกลุ่มตัวอย่างประชากรของนักเรียนที่สังกัดโครงการเงินกู้เพื่อพัฒนาอาชีพศึกษาค้นคว้าแบบทดสอบความสามารถในการใช้โครงสร้างไวยากรณ์อังกฤษซึ่งสร้างขึ้นเป็นเครื่องมือในการวิจัย แล้ววิเคราะห์ค่าตอบของข้อสอบแต่ละข้อเพื่อตรวจสอบคุณภาพของแบบทดสอบนั้น โดยหาระยะค้ำความยาก (P) และอำนาจจำแนก (r) ด้วยเทคนิคเดียวกันกับการวิเคราะห์ค่าตอบของข้อสอบในการทดลองสอบปรากฏผลดังในแผนภาพที่ 2 (ในภาคผนวก)

และเมื่อหาค่าความเชื่อถือได้ของแบบทดสอบดังกล่าว โดยใช้สูตร คูเคอร์ ริชาร์ดสัน 21 (Kuder Richardson 21)¹ ปรากฏว่าแบบทดสอบที่ใช้ในการวิจัยมีค่าความเชื่อถือได้ถึง .93 ซึ่งนับว่าสูงมากพอที่จะเชื่อถือได้จริง

2. ค่าเฉลี่ย² และส่วนเบี่ยงเบนมาตรฐาน³ ของคะแนนความสามารถในการใช้โครงสร้างไวยากรณ์อังกฤษของนักเรียนกลุ่มสูง กลาง ต่ำ กลุ่มละ 100 คน กับของนักเรียนทั้งหมด 300 คน ปรากฏผลดังตารางที่ 2

$${}^1 R_{Kr21} = \frac{n}{n-1} \left[1 - \frac{M(n-M)}{n(S.D.)^2} \right]$$

$${}^2 \bar{X} = \frac{\sum X}{N}$$

$${}^3 S.D. = \sqrt{\frac{\sum X^2}{N} - \left(\frac{\sum X}{N} \right)^2}$$

ตารางที่ 2 ค่าเฉลี่ยและส่วนเบี่ยงเบนมาตรฐานของคะแนนความสามารถในการใช้โครงสร้างไวยากรณ์ของนักเรียนกลุ่มสูง กลาง ต่ำ และนักเรียนทั้งหมด

กลุ่มนักเรียน	จำนวน	\bar{X}	S.D.
กลุ่มสูง	100	72.95	8.08961
กลุ่มกลาง	100	50.94	5.19871
กลุ่มต่ำ	100	32.50	5.36257
นักเรียนทั้งหมด	300	52.13667	17.72564

3. เมื่อคำนวณหาร้อยละของนักเรียนทั้งหมดที่ทำข้อสอบแต่ละข้อผิด และเรียงลำดับจากข้อที่มีผู้ผิดมากไปหาน้อยแล้ว ทำให้สามารถทราบโครงสร้างไวยากรณ์อังกฤษที่เป็นปัญหามากน้อยต่อการใช้ของนักเรียนได้ ตามที่แสดงไว้ในตารางคือโครงสร้างไวยากรณ์ที่มีจำนวนนักเรียนตอบผิดตั้งแต่ร้อยละ 50 ขึ้นไป รวมทั้งสิ้น 40 รายการ ซึ่งสมควรนำไปสร้างแบบฝึกหัดเสริมแบบเรียนภาษาอังกฤษเทคนิคได้ดังนี้

จุฬาลงกรณ์มหาวิทยาลัย

ตารางที่ 3 โครงสร้างไวยากรณ์อังกฤษที่เป็นปัญหา และร้อยละของนักเรียน
ทั้งหมดที่ตอบข้อสอบแต่ละข้อผิด จากตัวอย่างประชากร 300 คน

ลำดับ ที่	ข้อ	โครงสร้างไวยากรณ์อังกฤษที่ทดสอบ	จำนวน ผู้ตอบผิด	คิดเป็น ร้อยละ
1	79	make + object + V. (infinitive)	259	86.67
2	90	Some verbs + gerund.	236	78.67
3	81	Modals: can, should, must, ought to	225	75.00
4	92	Verb + to infinitive V.S. Some verbs + infinitive without to	222	74.00
5	76	Relative clause beginning with "whom"	219	73.00
6	98	know } + wh - clause learn }	203	67.67
7	86	Accord of subjects and verbs. (every + N.)	202	67.33
8	97	get to + place	200	66.67
9	75	Passive Voice in Past Simple Tense	199	66.33
10	68	V + ing + N. (an interesting book)	197	65.67
11	77	Relative clause beginning with "which"	190	63.33
12	88	Nouns used as adjectives.	189	63.00
13	96	Accord of subjects and verbs (neither...nor)	189	63.00
14	61	Verbs (past participle) used as adjectives.	187	62.33
15	48	Gerund.	185	61.67
16	59	other, the other, another.	185	61.67
17	70	Two - word verbs.	182	60.67
18	50	too ..., to/very/so.	181	60.33

ตารางที่ 3 (ต่อ)

ลำดับ ที่	ข้อ	โครงสร้างไวยากรณ์อังกฤษที่ทดสอบ	จำนวน ผู้ตอบผิด	คิดเป็น ร้อยละ
19	93	some/any + count/noncount nouns.	180	60.00
20	94	enough + N. + to V.	180	60.00
21	73	Articles.	176	58.67
22	53	Modal (must not + infinitive)	173	57.67
23	56	Passive Voice.	171	57.00
24	83	as ... as/the same ... as/so ... as.	165	55.00
25	44	Passive Voice with modal.	165	55.00
26	46	one/ones as pronouns.	165	55.00
27	27	Preposition: in, on, at with place.	164	54.67
28	60	Passive Voice in Past Simple Tense.	163	54.33
29	74	still/any more.	162	54.00
30	99	Word order of adverbs of frequency.	158	52.67
31	40	too ... to/very.	156	52.00
32	54	prevent/protect in Past Simple Tense.	155	51.67
33	78	because of + N.	155	51.67
34	58	Preposition: to, in into, through.	154	51.33
35	67	this, that these, those as adjectives.	154	51.33
36	84	as ... as/the same ... as/so ... as.	153	51.00
37	47	Accord of subject and verb. (Everyone contracts with 'All,' Several and etc.)	152	50.67
38	15	Accord of subject and verb (There are)	151	50.33

ตารางที่ 3 (ต่อ)

ลำดับ ที่	ข้อ	โครงสร้างไวยากรณ์อังกฤษที่ทดสอบ	จำนวน ผู้ตอบผิด	คิดเป็น ร้อยละ
39	91	there is, there are + modals (there ... + modal + be)	151	50.33
40	62	a little, a few, many, a lot.	150	50.00

โครงสร้างไวยากรณ์อังกฤษจากหลักสูตร-แบบเรียนภาษาอังกฤษเทคนิค ชั้นมัธยมศึกษาปีที่ 4 สายอาชีพ สาขาช่างอุตสาหกรรม ที่เป็นปัญหาแก่ผู้เรียน ได้แก่

(1) Patterns of verb form (Verb + Verb)

นักเรียนใช้ผิดมากที่สุดและผิดเป็นอันดับแรก ๆ เช่น อันดับที่ 1 - 4 เป็นต้น ทั้งนี้เนื่องจากกริยาแต่ละคำในภาษาอังกฤษต่างมีระเบียบวิธีใช้เฉพาะตัว เช่น บ้างก็ตามด้วยกริยา *infinitive* ที่มี *to* นำหน้า บ้างก็ไม่มี บ้างก็ตามด้วยกริยาเติม *-ing* นักเรียนจึงสับสนมาก เพราะลักษณะดังกล่าวไม่มีในภาษาไทย แบบฝึกหัดประกอบบทเรียน จึงต้องมุ่งเสริมเรื่องเหล่านี้ให้มาก

(2) Use of Modals.

ปัญหาเดิมมี 4 ข้อ จากข้อสอบรวม 6 ข้อ คือ อันดับ 3, 22, 25 และ 39 เพราะผู้เรียนส่วนใหญ่ไม่ทราบชัดว่ากริยาที่ตาม *modals* ต้องเป็นรูป *infinitive* เนื่องจากตำราชวงว่าด้วยการแนะนำวิธีใช้และการทำงานของเครื่องจักร อุปกรณ์ต่าง ๆ พวก *modals* จึงมีปรากฏมาก เช่น คำ *should, ought to, must, will, etc.* เป็นต้น การใช้ *modals* ที่ถูกต้องจึงจำเป็นอย่างยิ่งในการเรียนภาษาทางเทคนิค

(3) Objective Relative Pronouns : "whom, which"

ผิดมากเป็นอันดับ 5 และ 11 คือ ร้อยละ 73 และ 63.33 ตามลำดับ
 นักเรียนส่วนใหญ่ยังไม่ทราบว่าใช้ that แทน whom หรือ which ได้ และอาจจะเผลอ
 ขอบกพร่องอีกอย่างคือ นักเรียนมักจะใช้ relative pronoun ขอนไปกับกรรมของ clause

(4) Embedded Question after "know" and "learn"

นักเรียนผิดเป็นอันดับ 6 ร้อยละ 67.67 ส่วนใหญ่เรียงประโยคแบบประโยค
 คำถามธรรมดา (Direct question)

(5) Accord of subjects and verbs

นักเรียนใช้ผิดมากในเรื่องต่อไปนี้

- every นักเรียนส่วนมากเข้าใจว่าคำ every นำหน้านามพหูพจน์ เช่น
 ในอันดับที่ 7 ผิดร้อยละ 67.33
- everyone เมื่อเปรียบเทียบกับ several/all ผิดทำนองเดียวกัน
 every เพราะไม่ทราบว่าสรรพนามนี้เป็นเอกพจน์
- neither ... nor นักเรียนสับสนกับการใช้รูปกริยาในกระส่วนนี้ มักไม่
 ทราบกันว่ารูปกริยาของประโยคจะขึ้นกับประธานตัวหลังสุด เช่นอันดับ 13 ผิดร้อยละ 63.00
- this, that, these, those as adjectives นักเรียนกลุ่มต่ำยัง
 สับสนการใช้คำเหล่านี้กับคำนามเอกพจน์และพหูพจน์ ผิดมากเป็นอันดับ 35 ร้อยละ 51.33
- There is/are บกพร่องร้อยละ 50.33

(6) Passive Voice

เป็นโครงสร้างสำคัญสำหรับผู้เรียนภาษาอังกฤษเทคนิค เพราะมีปรากฏมากกว่า
 โครงสร้างอื่น ๆ นักเรียนผิดเรื่องนี้เกินร้อยละ 50 ถึง 4 ข้อ จากข้อสอบ 5 ข้อ คืออันดับ 9,
 23, 25 และ 28 ร้อยละ 66.33, 57.00, 55.00 และ 54.00 ตามลำดับ ทั้ง Passive
 voice ในรูป Present Tense, Past Tense และที่มี modal ประกอบ

แบบฝึกหัดเสริมแบบเรียนภาษาอังกฤษเทคนิคจึงต้องมุ่งฝึกเรื่องนี้เป็นพิเศษ
 ทั้งฝึกปากเปล่าและฝึกเขียน Passive voice ในรูป Tense ต่าง ๆ รวมทั้ง Passive
 แบบซับซ้อนที่มี modal ขยายคั่งกล่าว

(7) Nouns and verbs used as adjectives.

- การใช้ V.-ing + N. นีครอยละ 65.67
- การใช้ nouns used as adjectives นีครอยละ 63.00
- การใช้ V.-ed + N. หรือ Past participle used as adjectives

นีครอยละ 62.33

การฝึกเรื่องเหล่านี้จะช่วยให้ผู้เรียนเข้าใจความหมายของโครงสร้างดังกล่าว

ดีขึ้น

(8) Use of some verbs.

- get to + place บกพร่องรอยละ 66.67 เพราะสับสนการใช้
- prevent/protect อันคัม 32 นีครอยละ 51.67 นอกจากจะสับสน

เกี่ยวกับความหมาย เพราะคำแปลในภาษาไทยของสองคำนี้พ้องกัน (แต่ความหมายต่างกัน) แล้วนักเรียนยังไม่รู้จักใช้กรรม prevent or protect someone from doing something.

- นอกจากนั้นได้แก่การใช้ two - word verb บางคำ

(9) Gerund as the beginning of a sentence.

อันคัม 15 เป็นนิตยารอยละ 61.67

(10) Use of "other, the other, another"

อันคัม 16 นีครอยละ 61.67 จากการวิเคราะห์คำตอบข้อสอบพบว่า นักเรียนส่วนใหญ่คือ กลุ่มกลางและกลุ่มต่ำสับสนในการใช้คำเหล่านี้มาก

(11) Use of some connections.

- too/very/so เป็นนิตยารอยละ 60.33 และ 52.00 จากการวิเคราะห์คำตอบข้อสอบพบว่า นักเรียนพากันเลือกใช้คำ very มากกว่าข้อที่ถูกคือ too ... to เป็นเพราะรู้จักและคุ้นเคยกับคำ very ก่อน too ... (to) แต่ก็ไม่รู้จักใช้ที่ถูกต้องแท้จริง

- as ... as, the same ... as, so ... as. นักเรียนผิดมากทั้งสองข้อที่ทดสอบเรื่องนี้ คืออันคัม 24 และ 36 รอยละ 55.00 และ 51.00 แสดงว่ายังต้องการฝึกฝนอีกมาก ทั้งโครงสร้าง as + (adjective) as และ the same + Noun + as.

(12) Quantity Words.

- some/any อันดั้ม 19 นิคร้อยละ 60.00

- a little/a few/many/a lot. อันดั้ม 40 นิคร้อยละ 50.00

วิเคราะห์คำตอบข้อสอบแล้วพบว่า นักเรียนยังสับสนเกี่ยวกับการใช้ countable noun กับ uncountable noun อยู่มาก

(13) Use of "enough" + N. + to V."

อันดั้ม 20 นิคร้อยละ 60.00 จากคำตอบ นักเรียนเลือกคำ many มากพอ ๆ กับคำตอบถูก นักเรียนส่วนหนึ่งยังไม่ทราบแน่ชัดว่า enough ต้องใช้คู่กับ to infinitive.

(14) Articles and no articles.

อันดั้ม 21 ข้อ 73 นิคร้อยละ 58.67 วิเคราะห์แล้วพบว่า นักเรียนไม่มีความเข้าใจในการใช้ a กับ an แต่นักเรียนสับสนมากระหว่างการใช้ The กับการไม่เติมคำนำหน้านาม ส่วนมากมักใช้ The กับคำนามที่เป็นพหูพจน์เสมอ ไม่ว่าจะชี้เฉพาะหรือไม่ก็ตาม เพราะยังเข้าใจผิดอยู่

(15) Pronouns : one/ones.

อันดั้ม 26 ข้อ 46 นิคร้อยละ 55.00 ส่วนมากนักเรียนกลุ่มต่ำ (นักเรียนอ่อน) เลือกใช้สรรพนาม them มากกว่า ones แบบผิดคิดนี้จะเป็นประโยชน์สำหรับซ่อมเสริมเด็กอ่อนโดยเฉพาะ

(16) Prepositions : of place and others.

การใช้ in, on, at เป็นปัญหาร้อยละ 54.67

การใช้ to, into, through เป็นปัญหาร้อยละ 51.33

การใช้ because of เป็นปัญหาร้อยละ 51.67 นักเรียนอ่อนทำข้อสอบข้อนี้ได้น้อยมาก เพราะไม่ทราบว่า because of เป็นบุรพบท ส่วนมากใช้กระสวนประโยคเช่นเดียวกับการใช้ because.

(17) Use of some adverbs.

- still/any more นักเรียนยังใช้สับสน เช่นอันดั้ม 29 นิคร้อยละ

- Positions of frequency adverbs เป็นปัญหาร้อยละ 52.67
(นักเรียนกลุ่มสูงทำถูกร้อยละ 69 กลุ่มกลางร้อยละ 42 และกลุ่มต่ำร้อยละ 31)

4. จากผลการวิเคราะห์ปัญหาทางโครงสร้างไวยากรณ์ดังกล่าว ผู้วิจัยได้นำปัญหาเหล่านี้มาเป็นบรรทัดฐานในการสร้างเสริมแบบเรียนภาษาอังกฤษเทคนิคชั้นมัธยมศึกษาปีที่สี่ของนักเรียนข้างอุตสาหกรรมที่สังกัดโครงการเงินกู้ฯ โดยสร้างเป็นบทฝึกปากเปล่าเสริมบทฝึกที่มีอยู่แล้วบ้าง และสร้างเป็นแบบฝึกหัดเขียนเพื่อการฝึกฝนจนเกิดทักษะ รวมทั้งแบบฝึกหัดสำหรับทบทวนหัวข้อไวยากรณ์เหล่านั้นบ้าง ดังต่อไปนี้



ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

Section 1

Gramatical Point: A/An/The/(no article)

Supplement to: Unit 1 pp. 119-121

1. Indefinite articles with singular/plural-count/non-count.

Exercise 1 (Oral drill) Replace the sentence with the given words.

A.

B.

- | | |
|------------------------------|-------------------------|
| 1. This is a hammer. | 1. That isn't a wrench. |
| 2. These: These are hammers. | 2. oil: That isn't oil. |
| 3. wrenches | 3. This |
| 4. Those | 4. screw |
| 5. axes | 5. It |
| 6. That | 6. cement |
| 7. divider | 7. That |
| 8. These | 8. axe |
| 9. screws | 9. This |
| 10. This | 10. copper. |

Exercise 2 Answer the question with the given word in each case.

Examples He's going to his toolbox. What does he want?
(tool).

HE WANTS A TOOL.

They don't have jobs. What do they need? (work).

THEY NEED WORK.

1. Tom has a cigarette but no match. What does he want? (light).
2. He's going to the toolroom. What does he want? (mallet).
3. The man will cut a tree. What does he want? (axe).
4. He can't read the print. What does he need? (light).
5. Preecha will hit a nail. What does he want? (hammer).
6. They are thirsty. What do they need? (water).
7. The boy will hold small articles. What does he want? (pliers).
8. Wichai went to the pump. What did he want? (oil).

2. Definite and Indefinite articles.

For Study.

I see a hammer on the table.

Hammers are always heavy.

The hammers in the box are new.

Oil is useful.

The oil in the car is clean.

The oil on the floor is dirty.

Oil is usually clean but the oil on the floor is dirty.

Exercise 3 (Oral drill) Substitute the sentence with the given words.

Examples: sharp tools - Tom likes sharp tools.
 tool I gave him - Tom likes the tool I gave him.
 English - Tom likes English.

1. green cars. _____
2. car he is driving. _____
3. engineering. _____
4. heavy hammers. _____
5. hammer he bought yesterday. _____
6. good cement. _____
7. cement from the factory. _____
8. wrench in the box. _____
9. technical English. _____
10. job he is doing. _____

Exercise 4 (Revision) Add "a" or "an" where necessary.

(In this exercise, the noncountable nouns need no articles).

1. _____ mallet is made of _____ wood or _____ plastic.
2. _____ wood comes from _____ tree.
3. _____ soft hammer is made of _____ copper or _____ solid lead.
4. _____ iron is metal.
5. _____ workman should have _____ toolbox of his own.
6. _____ hammer has _____ head and _____ handle.
7. _____ machine is made of _____ metal.
8. _____ pliers are _____ tools used for holding small articles.
9. _____ wrench is _____ tool used for twisting _____ nuts or _____ bolts.
10. _____ motor makes _____ electric power.

11. _____ heavy-duty screwdriver is made with _____ heavy blade.
12. _____ Michael Faraday discovered _____ electricity.
13. _____ generator can produce _____ electric power.
14. _____ conductor is _____ substance which conducts _____ electricity.
15. _____ electric lamp has _____ glass bulb.
16. _____ brick is made of _____ cement and _____ sand.

Exercise 5 (Revision) Add "a" or "an" or "the" where necessary.

1. They drive _____ tractors today.
2. _____ tractors you see in the catalogue are quite good.
3. Is _____ Penang near _____ Songkhla?
4. _____ hammers in the box are new.
5. _____ oil is usually clean but _____ oil on the floor is dirty.
6. _____ man who visited this factory saw _____ smoke and _____ dirt everywhere.
7. Thanom is studying _____ electricity. He is reading _____ book he bought yesterday.
8. The carpenter wants _____ piece of _____ wood to make _____ table.
9. _____ table he made is five feet wide.
10. He is driving _____ big car. Do you like riding in _____ open car?

Section 2

Grammatical Point: The same...as, as.. as, not so... as.

Supplement to: Unit 1 pp. 127-128.

Exercise 1 Drill as the examples.

Examples: 1. length (wood)

This wood is the same length as that one.

2. long (wood)

This wood is as long as that one.

3. thick (book)

This book is as thick as that one.

4. thickness (book)

This book is the same thickness as that one.

5. price (machine)

This machine is the same price as that one.

6. big (machine)

16. colour (car)

7. expensive (car)

17. price (car)

8. price (mallet)

18. size (car)

9. cheap (mallet)

19. long (hammer handle)

10. quiet (man)

20. length (hammer handle)

11. quietly (man speaks)

21. width (shop)

12. slowly (man speaks)

22. wide (shop)

13. slowly (car runs)

23. clean (room)

14. heavy (hammer)

24. old (man)

15. weight (hammer)

25. age (man)

Exercise 2 Combine the following sentences by using "the same... as" or "as...as"

Examples ↑

1. The colour of my car is white. The colour of your car is white too.
- My car is the same colour as yours.
2. Your books are interesting and mine are too.
- Your books are as interesting as mine.
3. John works carefully and Peter does too.
- John works as carefully as Peter.
4. John has two mallets. Peter has two mallets too.
- John has as many mallets as Peter.
5. Lop speaks clearly and Wichai does too.
6. Supa's height is six feet. Swat's height is six feet.
7. Supa's weight is 150 pounds. Swat's weight is 150 pounds.
8. John's age is seventeen. Peter's age is seventeen.
9. This car is old. That car is equally old.
10. I have three screws. You have three screws too.
11. The price of the hammer is ten baht. The price of the mallet is ten baht.
12. Lop works hard. Wichai works hard too.
13. This wood is one inch thick. That wood is one inch thick.
14. The thickness of this wood is one inch. The thickness of that book is one inch.
15. Somchit speaks quietly and Wichai does too.
16. Lop is tall and his father is too.

17. The colour of my car is green. The colour of his car is green too.
18. Lop has two gallons of oil. Wichai has two gallons of oil.
19. John has three mallets. Peter has three mallets.
20. He drives the car slowly and his friend does too.

Exercise 3 Change into negative form

1. The ball peen hammer is as new as the cross peen hammer.
2. Iron is now as expensive as gold.
3. Pipop has as many tools as Somchai.
4. You use as much oil as I.
5. My transistor is as good as yours.
6. Smith works as hard as Johnson.
7. This hammer is as heavy as that one.
8. My tools are as clean as his.

Exercise 4 Change into affirmative form.

1. Tom doesn't drive so fast as Peter.
2. Bob doesn't work so hard as he did before.
3. I can not wait there so long as you want.
4. A welder doesn't work so hard as a builder.
5. This work doesn't take so much time as that one.
6. This man doesn't work so quickly as his friend.
7. Sumon didn't have so many gallons of oil as Somchai.
8. We don't have so much oil as they.

Section 3

Grammatical Point: Position of Adverbs of frequency: usually/
always/sometimes/etc.

Supplement to: Unit 2 pp. 132-133.

Sentences to remember:

I USUALLY study at night. I'm USUALLY busy.

Do you USUALLY study at night? Are you USUALLY busy?

ALWAYS work hard. And you will NEVER fail.

Exercise 1 (Oral drill). Substitute the word in the list
for one of the same function in the sentence.

A. You don't often work hard.

1. drive fast.
2. He
3. always
4. use the machine
5. You
6. watch television.

B. A student is sometimes late.

1. They
2. quite
3. usually
4. He
5. Is he
6. often

C. Substitute the sentences with the given alternative subjects in the bracket.

1. Does he always work hard? (You/they/we
2. Does he often use the machine? the man/the builder)

Exercise 2 (Revision) Add the sentences with the given words in the brackets.

1. Wires are made of copper. (usually)
2. Copper and aluminium are used instead of silver. (often)
3. An electric lamp is called an incandescent lamp. (sometimes)
4. The electric device in our houses are connected in a series circuit. (rarely)
5. A parallel clamp is called a machinist's clamp. (sometimes)
6. Wires are made in several varieties and sizes. (generally)
7. The workman wipes his tools clean. (always)
8. We measure voltage with a Voltmeter. (generally)
9. Solder comes in the forms of a hollow wire. (usually)
10. We finish our work with a file. (often)
11. Files differ in length, shape and the cut of the teeth. (usually)
12. He works on Sunday. (hardly)
13. They have finished twisting nuts. (just)
14. You may feel like making some furniture. (sometimes)
15. I have seen such a safety plug. (never)
16. You will work well with a worn file. (never)
17. You should take care of your files. (always)
18. Every tool should be oiled to prevent rusting. (often)

19. Oil should be used when reaming steel. (always)
20. We don't drive on the right. (usually)
21. Does he work on Sunday? (often)
22. Have you sawed particle board? (ever)
23. We don't study in the shop. (usually)
24. Stand on a wet place when changing fuse. (never)
25. Throw files together into a drawer with other hand tools. (never)
26. Work hard and you will fail. (always, never)



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Section 4

Grammatical Point: Past Participle used as Adjectives.

(V. ed + Noun Phrase)

Supplement to: Unit 3 p. 136

Unit 16 p. 204

Sentences to remember:

A tool is BROKEN. It's a BROKEN tool.

Exercise 1 (Oral drill) Describe the following objects as
in the given example.

Example: Describe their house. (painted)

IT'S PAINTED. IT'S A PAINTED HOUSE.

1. Describe those tools. (used)
2. Describe that blade. (worn)
3. Describe the screwdriver. (twisted)
4. Describe the rulers. (broken)
5. Describe his car. (repaired)
6. Describe the circuit. (broken)
7. Describe those files. (worn)
8. Describe the water. (boiled)
9. Describe the wrench. (adjusted)
10. Describe the end of the screwdriver. (fluted)

Exercise 2 Use the past participles in Column A and match them with the nouns in Column B. Use the words in a sentence.

Example: parked, car

DID YOU SEE THE PARKED CAR?

<u>Column A.</u>	<u>Column B.</u>
1. adjusted	blade
2. boiled	car
3. broken	chair
4. burnt	house
5. oiled	lamp
6. parked	machine
7. rented	screwdriver
8. stolen	tools
9. twisted	water
10. worn	wrench

Exercise 3 Complete the sentences as in the example.

Example: screwdriver/flattened.

THE SCREWDRIVER IS FLATTENED.

I don't want the flattened screwdriver.

1. work/finished.

I want to see the _____

2. tools/used.

I don't want the _____

3. car/repaired.

He wants to sell his _____

4. house/painted.

I'd like to live in a _____

5. wrench/adjusted

Please give me the _____

6. circuit/broken.

Please repair the _____

7. blade/worn.

A screwdriver with _____ should be ground.

8. end/fluted.

A Phillips screwdriver has a _____

9. screwdriver/twisted.

The _____ is useless.

10. ruler/broken.

I don't want the _____ throw it away.

Exercise 4 Make up your own sentences using the following
pairs of words.

1. glass/broken.

4. water/boiled.

2. battery/used.

5. car/stolen.

3. iron/coated.

Section 5Grammatical Point: Auxiliary Verbs + infinitiveSupplement to: Unit 3 pp. 137-139

Unit 9 pp. 173-174

Unit 19 pp. 216-217

Unit 25 pp. 245-246

For Study.

	can		
John	will	drive	a car
He	must	repair	a television set
We	should	work	hard
They	might	operate	the machine
I	may		
	ought to		
	used to		
	have to		

Exercise 1 (Oral drill) Replace the given words in the sentence as shown in the examples.

Examples: work hard : Lop can work hard
 will : Lop will work hard
 Lop and Dang : Lop and Dang will work hard.

- | | |
|----------------|-------------------------|
| 1. should | 11. must |
| 2. they | 12. have to |
| 3. ought | 13. ought |
| 4. may | 14. should |
| 5. we | 15. he |
| 6. drive a car | 16. may |
| 7. the man | 17. can |
| 8. can | 18. operate the machine |
| 9. they | 19. we |
| 10. used to | 20. will |

For Study

He	can	
Can he	can not	drive a car
	-	?
He	ought to	drive a car
Ought he	ought not to	
	to	?

Exercise 2 Read or write in negative and interrogative forms.

1. The toolroom will be clean.
2. An electrician should have diagonals.
3. He can grip small articles with pliers.
4. He must work at night.
5. They ought to study electricity.

6. We can tighten the screw.
7. They might repair the radio set.
8. A worn screwdriver should be ground.
9. The blade may be bent out of shape.
10. They will cut and strip electrical wire with a knife.

Exercise 3 (Oral drill) Ask and answer the following questions giving the long answer.

Examples: Q. Can you drive a car?
 A. YES, I CAN DRIVE A CAR.
 (or) NO, I CAN'T DRIVE A CAR.
 Q. OUGHT I to finish it?
 A. YES, YOU OUGHT TO FINISH IT.

1. Can I use these wrenches?
2. Can electricity produce heat?
3. Can a single-ended wrench be adjusted?
4. Could he drive the car if he tried?
5. Could they adjust the wrench if they wished?
6. Will you go to work tomorrow?
7. Will you strip the electric wire?
8. Will a nut be twisted?
9. Would you wait a few minutes?
10. Would you work well if you used the power tools?
11. Shall I help you?
12. Shall I start the engine for you?
13. Should a workman have a toolbox of his own?
14. Should every tool be wiped clean?

15. Should a worn screwdriver be ground?
16. May I leave the room?
17. May I borrow your mallet?
18. Might he finish it if he tried?
19. Did you think you might succeed?
20. Does he remove the nut?
21. Does he repair the radio well?
22. Must we turn the power on before starting the engine?
23. Must a lamp be used on the proper voltage?
24. Must the material be measured accurately?
25. Have I to work hard?
26. Have we to oil the machine?
27. Used he to work at a car factory?
28. Used you to repair a circuit?
29. Ought he to grind the worn blade?
30. Ought there to be enough tools for all the students?

Exercise 4 Read each sentence with the given words in brackets.

Examples: There is a lathe here. (may, should)

THERE MAY BE A LATHE HERE.

THERE SHOULD BE A LATHE HERE.

1. There is a place for every tool. (must, should, ought to)
2. There are several plugs in the building. (may, must, ought to)
3. There are safety rules in the workshop. (will, should, ought to)

4. There is enough oil for all the cars. (might, must)
5. There are enough tools for all the students. (will, should, ought to, must)



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Section 6

Grammatical Point: { Everything, Nothing, etc.
 Every, each + singular noun
 Several, all + plural noun.

Supplement to: Unit 4 pp. 141-142
 Unit 7 p. 161

For Study

Everything (body, one) Nothing (body, one)			here
A	handtool	is	here good useful clean heavy
Every	hammer		
Each	box		
It			
Several	handtools	are	
All	hammers		
Some	boxes		
They			

Every boy works hard.

Everything is ready

Everybody has come

Everyone likes him.

Exercise 1 Repeat these sentences first. Replace the word "Every" with the word "Each", "Several" and "All" consequently Make any other necessary changes.

1. Every hammer is heavy.
2. Every student has a toolbox.
3. Every teacher works hard.
4. Every welder wears goggles.
5. Every machine is operated by a teacher.
6. Every hammer has a handle on it.
7. Every student is using a steel tape rule.
8. Every rule has measuring marks on it.
9. Every workman uses his own toolbox.
10. Every mechanic oils his machine tool.

Exercise 2 (Oral drill) Contradict the following statements

Example: Everything was good

NOTHING WAS GOOD.

1. Everything is broken.
2. Nothing is oily.
3. Everything there was expensive.
4. Everything in the box is clean.
5. Nothing was changed.
6. Nothing here is automatic.
7. Nobody likes him.
8. No one comes to see him.

9. No one works hard.
10. Nobody wears goggles.
11. Everybody uses a handtool.
12. Everything was in good order.
13. Everyone has a toolbox.
14. Nothing here was good.
15. Everybody has a wrench.

Exercise 3 (Oral drill) Substitute the given word(s) in the right position of the sentence.

- A.
1. Every : Every man is here.
 2. All : All men are here.
 3. Several
 4. Students
 5. have come
 6. Every
 7. Each
 8. All
 9. Everybody
 10. Nobody
- B.
1. Every : Every student works hard.
 2. Several: Several STUDENTS WORK hard.
 3. All
 4. drive fast
 5. Each
 6. Man
 7. Every

8. All
9. Everybody
10. Nobody

Exercise 4 (Revision) Choose the correct verbs in the following sentences:

1. Everybody (know, knows) he works well.
2. Everyone (try, tries) to earn more and work less.
3. I heard a noise and went in the shop. I saw everything.
(was, were) in order.
4. Nobody (is, are) in the shop now.
5. No one (have, has) used it for many years.

Exercise 5 (Revision) Choose the correct nouns in the following sentences:

1. He goes to school every (days, day).
2. All (students, student) should work hard.
3. Tom has several (wrench, wrenches).
4. Every (driver, drivers) must drive carefully.
5. There should be a place for every (tools, tool).
6. Each (tools, tool) should be kept in its place.

Exercise 6 (Revision) Select the correct word to use in each of the following sentences.

1. Every (workman, workmen) (is, are) working hard.
2. Each of the machines (is, are) here.
3. All (was, were) built in 1970.
4. Every (product, products) (is, are) made of iron.

5. Each (piece, pieces) of work (is, are) measured accurately.
6. All (wrench, wrenches) (is, are) adjustable.
7. Everybody (have, has) come.
8. Several (machine, machines) (is, are) made in Germany.
9. Everyone (like, likes) to use power tools.
10. Everything here (is, are) clean.
11. Nobody (have, has) a toolbox with (them, him).
12. Every (workshop, workshops) (contain, contains) electrical equipment.
13. Several labour-saving (device, devices)(is, are) used in every (workshop, workshops).
14. Every (tool, tools) should be wiped clean before (it, they) (is, are) placed in the toolbox.
15. Each (tool, tools) should be kept in (its, their) place.

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Section 7

Grammatical Point: Prepositions: in/on/at/in/to/into/through.

Supplement to: Unit 5 pp. 148-150

Unit 10 p. 179

Exercise 1 (Added to Drill 36 B)

Complete the sentences with prepositions IN, ON or AT.

1. Your screwdriver is _____ my desk.
2. This is the house I live _____.
3. He works _____ a car factory.
4. The factory is _____ 165 Kanchawanit Road.
5. Is the teacher _____ the workshop?
6. The incandescent lamp is _____ the wall.
7. A hook rule has a hook _____ one end.
8. Each tool should be kept _____ its place.
9. Several labour-saving devices are used _____ every workshop.
10. Stand _____ a dry place when turning a switch on or off.

Exercise 2 (Added to Drill 67)

Complete the sentences with preposition "IN, TO, INTO, THROUGH"

1. He went _____ the workshop.
2. He put the screwdriver _____ the toolbox.
3. All the tools are kept _____ the toolbox.

4. Water flows _____ a pipe.
5. Electric current flows _____ a conductor.
6. Changing fuse _____ the dark is dangerous.
7. The electric devices _____ our houses are connected in parallel.
8. In a parallel circuit the current flows _____ each lamp independently.
9. Never throw files together _____ a drawer with other tools.
10. The teacher was _____ the workshop, he walked _____ to examine all the machines.

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Section 8Grammatical Point: One, OnesSupplement to: Unit 6 pp. 155-156.Key to remember.

Do you need some screws?

Yes, I need a big ONE and several small ONES.

Exercise 1

Imagine you are going to buy some handtools at an ironmonger's. Make statements with I WANT + the following words. Use ONE or ONES when necessary. For example.

this	I want this one.
that	I want that one.
a new	I want a new one.
some new	I want some new ones.
these	I want these ones.

- | | |
|------------------------------|----------------------|
| 1. these new | 11. this portable |
| 2. those | 12. five fluted |
| 3. those double-ended offset | 13. a new |
| 4. several Phillips | 14. some good |
| 5. that red | 15. a few other |
| 6. this old | 16. some other |
| 7. ten single-ended | 17. a big |
| 8. ten sharp | 18. this big |
| 9. a very good | 19. these adjustable |
| 10. three good | 20. those portable |

Exercise 2 To avoid repetition, substitute the word 'one' or 'ones' for the suitable words in the following sentences.

Example: This hammer is heavier than that hammer.

This hammer is heavier than that ONE.

1. This man works harder than that man.
2. These pliers are better than those pliers.
3. This knife is very dull. Have you a sharper knife?
4. This divider is oily; please give me a clean divider.
5. This screwdriver is worn. May I have another screwdriver?
6. Which do you want, a single-ended wrench or a double-ended wrench?
7. He doesn't want a heavy-duty screwdriver. He wants a double-ended offset screwdriver.
8. There are wrenches of all sizes in the box, big wrenches and small wrenches.
9. These nuts are the nuts I want.
10. After looking over the new cars. I decided to keep my old car for another year.

Exercise 3 Add 'one' or 'ones' as required.

1. These bolts are too small; please give me some bigger _____
2. Oh! this is your car. It's a very pretty _____.
3. Are there any more screwdrivers? These _____ are all broken.
4. The _____ with plastic handle is good.
5. They say the big _____ are best. I'll buy some for him.

Exercise 4

Complete each sentence by adding 'one' or 'ones' in correct position.

1. Prasert's old car is a good, it's much better than our new.
2. There was an old battery and a new there.
3. I like a heavy hammer better than a light.
4. This toolbox is heavy, those are light.
5. He doesn't want these single-ended wrenches He wants those double-ended.
6. There is a big machine and there are four small in the workshop.
7. A house made of brick lasts longer than made of wood.
8. He will buy a brand new car. He doesn't want a used.
9. "Which screwdriver do you want?"
"The near the pliers."
10. He is using a good screwdriver not a broken.

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Section 9

- Grammatical Point: 1. Count/Noncount nouns with some/any.
2. Count/Noncount nouns with this/that/these/those.

Supplement to: Unit 7 pp. 159-161, 163-164.

1. Count/Noncount nouns with some/any.

For Study

A. Are there any	tools	here?	B. Is there any	oil	here?
	hammers			iron	
Yes, There are some	pliers		Yes, there is some	copper	
	wrenches			cement	
No, there aren't any	files		No, there isn't any	sand	

Exercise 1 Ask and answer as shown.

Example: hammer/mallet?

Student A. ARE THERE ANY HAMMERS HERE?

Student B. NO, BUT THERE ARE SOME MALLETS.

- | | |
|---------------------|-------------------------|
| 1. screwdriver/file | 5. lead/zinc |
| 2. cement/sand | 6. water/oil |
| 3. copper/iron | 7. drill/reamer. |
| 4. rule/divider | 8. rip saw/circular saw |

Exercise 2 Add 'some' or 'any' as required.

1. I want _____ nails; have you _____ ?
2. There isn't _____ water in the tank.
3. You have _____ new tools in the packages.
4. There aren't _____ nails left; we must buy _____ more.
5. He wants _____ cement and _____ sand to make bricks.
6. Don't make _____ noise. He wants to get _____ sleep.
7. Are there _____ saws on the table? No, but there are _____ files.
8. He hasn't _____ copper left but he has _____ lead.

Exercise 3 Choose the correct word in each bracket.

1. He bought some (wrench, oil) yesterday.
2. Please give him some (cement, screw).
3. Tom doesn't want any (wrenches, cements).
4. There are some (file, tools) on the table.
5. There isn't any (bolts, iron) here.

2. Count/Noncount nouns with this, that, these, those.For Study.

A.	these	tools	B.	this	tool
He bought		hammers	He bought		hammer
		dividers			oil
	those	wrenches		that	cement

Exercise 1 Substitute the sentence with the given words:

Example: Do you want this mallet?

1. wrenches: Do you want THESE WRENCHES?
2. copper: Do you want THIS COPPER?
3. that
4. machines
5. steel tape
6. oil
7. cement
8. pliers
9. these
10. dividers
11. hammer
12. iron
13. mallet

Exercise 2 Make sentences from the given groups of words.

Example: bought/rule/divider

HE BOUGHT THIS RULE BUT HE DIDN'T BUY THAT DIVIDER.

1. bought/copper/lead.
2. bought/machine tool/handtools.
3. saw/pliers/diagonals
4. saw/bolts/nut.
5. wanted/cement/sand

Exercise 3 (Added to Drill 52)

Choose the correct word in each bracket.

1. Shall I throw (this, these) dirty oil away? I want to use (this, these) tubs?

2. May I have some of (this, these) sheet metal?
3. Do you like (this, these) devices?
4. (This, These) hammers are very heavy.
5. Keep (this, these) cement away from (that, those) water.



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Section 10

Grammatical Point: Few, Little, Many, Much, A lot of and There is, There are.

Supplement to: Unit 7 pp. 162-163 : Few/little, many, etc.
 Unit 3 pp. 133-134 }
 Unit 22 p. 230 } There is/are

A table for study and drill.

Questions		Answers
Are there many	tools	Yes, there are a lot in the toolbox?
	hammers	
	pliers	
	screwdrivers	on the table?
	wrenches	here?
	rules	No, there aren't many
dividers	No, there are only a few.	
Is there much	oil	Yes, there is a lot in the workshop?
	iron	
	copper	
	zinc	here?
	cement	No, there isn't much.
	sand	No, there is only a little.
fuel		
rust		

Exercise 1 (Oral drill) Repeat and answer these questions.

Example: 1. Are there many hammers in the workshop?

Yes, there are a lot.

(or) No, there aren't many. There are only a few.

(or) No, there are only a few.

2. Is there much copper here?

Yes, there is a lot.

(or) No, there isn't much. There is only a little.

(or) No, there is only a little.

1. Are there many tools in your toolbox?
2. Are there many machines at home?
3. Are there many pliers on the table?
4. Are there many cars in the street?
5. Are there many workmen in the workshop?
6. Is there much oil in your car?
7. Is there much iron here?
8. Is there much zinc at home?
9. Is there much rust on the machine?
10. Is there much cement in the shop?
11. Are there many wrenches in the toolroom?
12. Are there many screwdrivers here?
13. Is there much sand here?
14. Is there much fuel here?
15. Are there many rules on the table?

Exercise 2 (Oral drill)

Make questions from the given words and answer them.

See the examples below.

Examples: handtool..... yes.

Are there many handtools here?

Yes, there are a lot.

oil..... no.

Is there much oil here?

No, there is only a little.

- | | |
|----------------------|----------------------|
| 1. copper.....yes. | 6. diagonals.....no. |
| 2. fuel.....no. | 7. cement.....no. |
| 3. dividers.....no. | 8. sand.....yes |
| 4. tungsten.....yes. | 9. rust.....no. |
| 5. wrenches.....yes. | 10. machines.....no. |

Exercise 3

Write three sentences in answer to each of these questions.

Example:

Are there many tools in your toolbox?

No, there are not many tools in my toolbox. There are only a few. There are a lot of tools in his toolbox.

1. Is there much iron in your workshop?
2. Is there much oil in your car?
3. Are there manypliers in your box?
4. Are there many wrenches in this package?
5. Is there much chip in this workshop?

Supplementary table for study

There are	a large number of	tools	here
	some	hammers	
	no	pliers	
There are	a lot of	screwdrivers	
	(only) a few	wrenches	
	twenty	rules	
	several	dividers	
There are not	any	diagonals	
Are there	many	files	
		reamers	
	some	oil	
	no	iron	
There is	a lot of	copper	
	a large amount of	zinc	
	(only) a little	cement	
		sand	
There is not	any	fuel	
Is there	much	rust	

Adopted from Hornby, A.S., Oxford Progressive English for Adult Learners, Book one (Bangkok: Suksapan Panit, 1962), p. 35.

Section 11

Grammatical Point: Others/The other/Another

Supplement to: Unit 8 pp. 166-167

Unit 12 pp. 187-189

An old car stopped here.

Another (car) stopped there.

One of his car is Volvo, another is Volkswagen.

Exercise 1

Examples: 1. We drove that car yesterday.

WE ARE DRIVING ANOTHER CAR NOW.

2. Narit went to Yala last month.

HE IS GOING TO ANOTHER TOWN NOW.

3. He used that battery last week.

HE IS USING ANOTHER BATTERY NOW.

4. Sumon and Somchai repaired an old radio yesterday.

THEY ARE REPAIRING ANOTHER RADIO NOW.

5. He ground a worn screwdriver last week.

6. The worker tightened a screw two minutes ago.

7. The man drove the green tractor a week ago.

8. He bought a new plug yesterday.

9. The students studied electricity last week.

10. The workmen cleaned the workshop a week ago.

11. The engineer repaired the old car last month.
12. He used a steel-tape rule yesterday.
13. The boys went to the car factory two days ago.
14. Prasong adjusted the monkey wrench yesterday.

Three old cars stopped here.

- (a) Three other cars stopped there. or
 (b) Three others stopped there.

Some students study here in the morning

- (a) Other students study here at night. or
 (b) Others study here at night.

Exercise 2

Examples: 1. Some pupils come to school in the morning.

- (a) Other pupils come to school at night.
 (b) Others come to school at night.

2. Many cars arrive here in the morning.

- (a) Many other cars arrive here at night
 (b) Many others arrive here at night.

3. Three men work here in the morning.

- (a) Three other men work here at night.
 (b) Three others work here at night.

4. Some students study here in the morning.

5. Fifty cars leave the factory in the morning.

6. Three carpenters work here in the morning.



7. Five electricians work here in the morning.
8. Some watchmen watch here in the morning.
9. Ten buses stop here in the morning.
10. Many automobiles leave here in the morning.

Exercise 3

- Examples:
1. Two men work here in the morning.
Two others work here at night.
 2. One automobile stops here in the morning.
Another stops here at night.
 3. Many trains arrive here in the morning.
Many others arrive here at night.
 4. One engineer works here in the morning.
 5. 300 cars leave the factory in the morning.
 6. A few students study here in the morning.
 7. Three workmen sleep in this room in the morning.
 8. One car stops here in the morning.
 9. Fifty men come to work here in the morning.
 10. A boy helps him in the morning.
 11. Some students study here in the morning.
 12. An electrician stays here in the morning.
 13. Two cars stop here in the morning.

Exercise 4 (Revision)

Fill in the blanks with suitable words: other, others, the other, the others or another.

1. These machines are new. The _____ are out of order.
2. I don't like this mallet. Give me _____ please.
3. He has three screwdrivers. One is here, _____ are in the toolbox.
4. I have two rules. One is a short rule, _____ is a steel-tape rule.
5. Some people work in the morning, _____ work at night.
6. The engineer repaired an old car last week, he is repairing _____ car now.
7. Wichit bought a new plug yesterday, he is buying two _____ now.
8. Her brother has two cars, One is Mercedes Benz, _____ is Toyota Crown.
9. One of his wrenches is a single-ended wrench, _____ are double-ended wrenches.
10. Do you have _____ nut of the same size.
11. Here are four dynamos, but I can carry only two. Please bring _____
12. I had two files, but I can't find _____ one now.
13. There are two telephones. One is in use _____ is out of order.
14. There's _____ workshop near here.
15. Some cars get thirty miles to the gallon. _____ get forty.

Section 12

Grammatical Point : Interested VS. Interesting, etc.

Supplement to: Unit 8 pp. 167-168

Unit 24 pp. 242-244

Sentences to remember:

The book interests me.

I am interested in the book because the book is very interesting.

It is an interesting book. It is not boring at all.

Exercise 1 (Oral drill) Replace the model sentence with the given words.

A. The book's very interesting. B. I'm very interested.

amusing.

amused.

exciting.

excited.

boring.

bored.

surprising.

surprised.

pleasing

pleased.

Exercise 2 Look up the meaning of these verbs in your dictionary.

1. interest

7. surprise

2. excite

8. astonish

3. tire

9. frighten

4. bore

10. terrify

5. please

11. annoy

6. amuse

12. disappoint

Exercise 3 Repeat the following sentences and describe the persons or things in the brackets.

Example: The bicycle pleases him. (He is PLEASED.)
(The bicycle IS PLEASING).

1. The book interests me. (I.....)
(The book.....)
2. The news surprised us. (We.....)
(The news.....)
3. The work tires the man. (He.....)
(The work.....)
4. The TV program bored me (I.....)
(The program.....)
5. The movies excited them. (They.....)
(The movies.....)
6. Charlie Chaplin amused us. (We.....)
(Charlie.....)
7. The noise annoys the students. (They.....)
(The noise.....)
8. It doesn't surprise me. (I.....)
(It.....)

Excercise 4 Drill as the shown.

Examples: Teacher: Everything bores me.
Student: You're bored. You're a bored person.
Teacher: I interest everyone.
Student: You're interesting. You're an
interesting person.

1. Everything here interests me.
2. Charlie amuses everyone.
3. The news surprised everyone.
4. The man is big and ugly. He always frightens children.
5. She always complains. She bored everybody here.

Exercise 5 In each case write sentences as the example.

Example: The book interests me. (interested in).

I am interested in the book because the book is very interesting.

It is an interesting book.

1. The job bores Mary. (bored with).
2. The movies excited us. (excited about).
3. Charlie Chaplin amused them. (amused by).

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Exercise 2 Combine the sentences with NEITHER... NOR.

Example Tom does not have a car.

His sons do not have a car.

NEITHER TOM NOR HIS SONS HAVE A CAR.

1. The wrenches were not on the table.

The hammer was not on the table.

2. I am not working.

My friends are not working.

3. He does not work here.

His friends do not work here.

4. The welder can't go.

The builder can't go.

5. Files are not tools for turning nuts.

Screwdrivers are not tools for turning nuts.

6. The wrenches were not on the table.

The hammer was not on the table.

7. Tom does not use the portable drill.

Peter does not use the portable drill.

8. We do not operate the machine.

He does not operate the machine.

Section 14Grammatical Point: Passive VoiceSupplement to: Unit 9 pp. 175-176

Unit 20 pp. 222-224

Unit 30 pp. 273-275

I. The Impersonal Passive.

The majority of statements in technical writing are in the passive form, because the technical writer wants to be objective and impersonal.

Here are examples of the main tenses in the active and passive voice.

Tense	Active	Passive
Present Simple	The driver starts the engine. He welds the plates together.	The engine is started. The plates are welded together.
Present Continuous	He is turning a screw.	A screw is being turned.
Present Perfect	People have used hammers since the stone age.	Hammers have been used since the stone age.
Past Simple	The man sharpened the tool. He welded the plates together.	The tool was sharpened. The plates were welded together.

Tense	Active	Passive
Past Continuous	They were painting our house yesterday.	Our house was being painted yesterday.
Past Perfect	He had finished his work before noon	His work had been finished before noon.
Future Simple	They will repair the circuits tomorrow. They will start the work soon.	The circuits will be repaired tomorrow. The work will soon be started.
	You should keep every tool in a toolbox. We can saw particle board easily.	Every tool should be kept in a toolbox. Particle board can be sawed easily.

Exercise 1

Change the active statements into impersonal passive statements. Repeat each sentence first:-

A. Example:

Act. We USE hand drills for light work.

Pass. Hand drills ARE USED for light work.

1. Someone starts the engine.
2. The man adjusts the wrench.
3. They wipe the tools clean.
4. We operate hand drills by hand.
5. We use neon lamps for advertising.

6. We use a commutator for producing D.C.
7. We use pliers for holding small articles.
8. They keep the tools in the toolbox.
9. We call the revolving coils "the armature."
10. He clamps the two metal plates together.

B. Example:

Act. They ARE REPAIRING a radio set now.

Pass. A radio set IS BEING REPAIRED now.

1. Someone is hitting a nail.
2. He is twisting some nuts and bolts.
3. The boy is adjusting the jaws of the wrench.
4. He is using a heavy-duty screwdriver.
5. That man is mending my car.
6. The men are making some furniture.
7. Someone is grinding a screwdriver.
8. He is drawing a circle with a divider.
9. Is he doing the work well?
10. Whose house are they building?

C. Example:

Act. Someone HAS DROPPED the mallet.

Pass. The mallet HAS BEEN DROPPED.

1. They have started the engine.
2. He has ground his screwdriver.
3. They have repaired the television set.
4. Someone has turned out the light.

5. He has adjusted the jaws of the wrench.
6. We have bought two batteries this month.
7. He has asked us to visit his factory.
8. We have not yet finished our work.
9. Have you finished your work yet?
10. Has the man mended your radio set?

D. Example:

Act. The man SHARPENED one of his tools yesterday.

Pass. One of his tools WAS SHARPENED yesterday.

1. The student made some furniture yesterday.
2. The man operated the machine.
3. The workmen cleaned the workshop last week.
4. They built his new house in May.
5. He checked the oil level yesterday.
6. He turned the switch on.
7. The student adjusted the jaws of the wrenches.
8. They wiped the tools clean yesterday.
9. We clamped the two metal plates together.
10. Did they repair your car well?

E. Example:

Act. They WERE DRAWING a circle an hour ago.

Pass. A circle WAS BEING DRAWN an hour ago.

1. The man was hitting a nail an hour ago.
2. He was drawing a circle an hour ago.
3. Someone was operating the machine an hour ago.

4. The boys were cleaning their tools an hour ago.
5. They were turning some nuts and bolts an hour ago.
6. The men were building a new house a month ago.
7. Someone was sharpening the tool five minutes ago.
8. We were using the clamps an hour ago.
9. They were oiling every tool two days ago.
10. Was he twisting wires together an hour ago?

F. Example:

Act. He HAD FINISHED his work before noon.

Pass. His work HAD BEEN FINISHED before noon.

1. They had closed the factory before they left.
2. They had finished their game before noon.
3. He had repaired the car before the end of the week.
4. He had oiled the machine before he left.
5. They had wiped the tools clean before they left.
6. We had built the house before 1970.
7. We had completed our work before three o'clock.
8. I had ground the screwdriver before noon.
9. He had never used the instruments before.
10. They had never visited the factory before.

G. Examples:

Act. They WILL REPAIR the circuits tomorrow.

Pass. The circuits WILL BE REPAIRED tomorrow.

Act. We SHOULD WIPE every tool clean.

Pass. Every tool SHOULD BE WIPED clean.

1. He will turn a screw.
2. They will clean the workshop.
3. We will buy a new battery.
4. He will start the engine soon.
5. He will remove the nuts and bolts.
6. We will build a new house next month.
7. We must handle a reamer with care.
8. We should store each reamer in a separate wooden box.
9. They should grind the blade of a worn screwdriver.
10. We can adjust wrenches to various sizes of nuts.

H. Mixed Drills:

1. He is operating the machine.
2. We mark a rule in inches.
3. He left his car in the garage.
4. He lowered the spindle to drill a hole.
5. They soften the logs in a hot-water bath.
6. A giant lathe cuts the log into veneer.
7. They are trimming the sheets to standard specific dimension.
8. They were wrapping the sheets in packages.
9. They were painting our house yesterday.
10. We have oiled our machine.
11. They wiped the tools clean yesterday.
12. We can saw particle board easily.
13. They had finished his work before sunset.

14. Somebody will prepare the equipment.
15. We use dividers for measuring the distance between points.
16. He clamped the two metal plates together.
17. We can charge a storage battery when it runs down.
18. We can join pieces of metal by soldering or welding.
19. He built a new factory last year.
20. People have used hammers since the stone age.
21. Someone is repairing the circuits.
22. We must adjust the divider before drawing a circle.
23. We should grind the blade of a worn screwdriver.
24. They stack the board in a large warehouse.
25. They should oil every tool to prevent rusting.

II. Passive Verb + by + Noun (agent).

In technical writing, it is not usual to add the name of the agent to a sentence of this kind, IF THE AGENT IS A PERSON. But very often the agent is not a person, and it may be necessary to add it. For example:

LARGE QUANTITY OF STEAM ARE REQUIRED BY MODERN INDUSTRY

Or we can say that we mention the agent (by-) only if it is important and not obvious.

Exercise 1 Write these sentences in the Passive Voice.

1. Fire destroyed the factory.
2. Michael Faraday discovered an electric current.
3. Marconi invented a wireless.

4. Electricity operates many power tools.
5. Electric cells and generators produce electric currents.
6. A small electric motor powers the portable electric drill.
7. A pattern maker uses a shrink rule.
8. An electric current can produce heat.
9. A draftsman makes a working drawing in the drafting room.
10. A circular spring holds the legs of a divider together.

Exercise 2 Complete these sentences with correct form of verbs and tense.

1. The bridge (...build...) the Vichit Construction Company.
2. Heat (...generate...) friction.
3. The machine (...power...) a small electric motor.
4. The heat (...provide...) an oxy-acetylene torch.
5. Three machines can (...control...) a single operator.
6. The work (...grip firmly...) the jaws of the chuck.
7. Heat can (...produce...) an electric current.
8. The legs of a divider (...hold together...) a circular spring.
9. Electric bulbs (...invent...) Edison.
10. The damage to the machine last week (...cause...) carelessness.

Exercise 3 (Revision)

Write these sentences in the Passive Voice.

Write the agent only if you think it is necessary to show who performs the action. If the meaning is clear without it, leave it out.

1. He is tightening a screw.
2. Michael Faraday discovered an electric current.
3. We clamped the two metal plates together.
4. Someone has turned out the light.
5. A generator produces an electric current.
6. The chip will damage the file cut.
7. They should grind the blade of a worn screwdriver.
8. Fire destroyed the workshop.
9. We use a parallel clamp to hold small work.
10. Electric cells and generators produce electric currents.



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Section 15

Grammatical Point: Very, Too...to, So... that

Supplement to: Unit 10 pp. 177-178

Look at the following sentences:

1. It is VERY hot today.
2. It is TOO hot today TO play.
3. It is SO hot today THAT no one will play.

Exercise 1 (Oral drill)

A. Repeat the following:-

1. It is very cold today.
2. The machine is very big.
3. The generator is very bad.
4. The hammer is very heavy.
5. The refrigerator is very expensive.
6. I am very tired.
7. He works very hard.
8. She drives the car very quickly.
9. He always walks very softly.
10. He gripped the hammer very tightly.

B. Repeat the following:-

1. It is too cold today to swim.
2. The machine is too big to be operated with only one man.

3. The generator is too bad to use any more.
4. The hammer is too heavy for a little boy to hold.
5. The refrigerator is too expensive to buy.
6. I am too tired to work any more.
7. He worked too hard to stay well.
8. She drives the car too quickly to be safe.
9. He always walks too softly to be heard.
10. He gripped the hammer too tightly to blow accurately.



C. Repeat the following:-

1. It is so cold today that we shall not go swimming.
2. The machine is so big that only one man cannot operate it.
3. The generator is so bad that we cannot use it any more.
4. The hammer is so heavy that a little boy cannot hold it.
5. The refrigerator is so expensive that we cannot buy it.
6. I am so tired that I cannot work any more.
7. He worked so hard that he fell ill.
8. She drove the car so quickly that she had an accident.
9. He speaks so softly that you never hear him.
10. He gripped the hammer so tightly that he cannot blow accurately with it.

Exercise 2 (Mixed drills)

Repeat the following:-

1. It is very dark.
2. It is too dark to see.

3. It is so dark that I can see nothing.
4. He is very tired.
5. He is too tired to walk any farther.
6. He is so tired that he cannot walk any farther.
7. That knife is so sharp that no small child should play with it.
8. The question is so hard that they cannot answer it.
9. The question is too hard to answer.
10. You do your work very well.
11. It can be done very quickly.
12. It was done too quickly to be done well.
13. It has been done so quickly that it may not be any good.
14. They have mended it very badly.
15. They have mended it too badly to be of any use.
16. They have mended it so badly that I cannot use it.
17. The box fell very heavily.
18. The box fell too heavily to stay unbroken.
19. The box fell so heavily that it was broken.
20. The machine is very expensive.

Exercise 3 Ask and answer the following questions, using

VERY:-

Example: Q. Does it go fast?

A. Yes, it goes VERY fast.

1. Is he clever?
2. Does your friend work well?
3. Are you hungry?

4. Is the transformer good?
5. Can he do his job well?
6. Is the car expensive?
7. Did he grip the pliers tightly?
8. Did they repair it well?
9. Is the place near?
10. Has she been ill?

Exercise 4 Ask and answer the following questions, using

TOO:-

Example: Q. Is she ill?

A. Yes, she is TOO ill TO get up.

1. Is he lazy?
2. Does your friend work badly?
3. Are you tired?
4. Is the transformer bad?
5. Did he work hard?
6. Is the car expensive?
7. Is the file worn?
8. Did they repair it badly?
9. Is the place far?
10. Has she been ill?

Exercise 5 Ask and answer the following questions, using

SO...THAT.

Example: Q. Is she ill?

A. Yes, she is SO ill THAT she cannot get up.

1. Is he lazy?
2. Does your friend work badly?
3. Are you tired?
4. Is the blade worn?
5. Did he work hard?
6. Is the car expensive?
7. Is the file worn?
8. Did they repair it badly?
9. Is the place far?
10. Has he been ill?



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Section 16

Grammatical Point: Two-word Verbs (phrasal verbs)

Supplement to: Unit 10 p. 180
Unit 11 pp. 184-185

Exercise 1 Read the following sentences with pronouns instead of nouns.

Examples: The man got over his cold.

HE GOT OVER IT.

The mechanic will care for the engines.

HE WILL CARE FOR THEM.

1. The machine gets out of order.
2. The workman got over his cold.
3. The petrol pumps run out of oil.
4. The technician cares for the machines.
5. The students are listening to the radio.
6. The pliers belong to the teacher.
7. the man makes use of his transformer.
8. Electric wires are covered with plastic.
9. The carpenter made over a table.

Exercise 2 Read the following sentences with pronouns instead of nouns.

Examples: John turned on the engine.

HE TURNED IT ON.

Tom burned up the paper.

HE BURNED IT UP.

1. The toasters will blow out the fuse.
2. The man turned on the power.
3. Prakob will turn off the heater.
4. The students burned up the used paper.
5. The boy burned out the light bulb.
6. The mechanic makes over a new machine.
7. Tom opened the toolbox and took out his handshears.
8. The engineer switched on his engine.
9. Sompong put on his apron.
10. Prapas took off his rubber-soled shoes.

Exercise 3 Read the following sentences with pronouns instead of nouns.

Examples: The technicians care for the engines.

THEY CARE FOR THEM.

Tom put on his apron.

HE PUT IT ON.

1. The man turned on the radio.
2. You and I are listening to the radio.
3. The portable drill belongs to the boy.
4. The welder makes over the water pipe.
5. The man makes use of the clamp.
6. The students will burn up the wood chips.
7. The boy burned out the electric bulbs.

8. The device will blow out the fuse.
9. The workman took out the wrenches from the toolbox.
10. Prasert got over his fever.
11. The technician turns off the power.
12. The electrician took off his rubber-soled shoes.
13. The machines get out of order.
14. The man cared for the machine.
15. Those cars run out of oil.

Exercise 4 (Revision)

Put one of the expressions given in the list below in each blank space. Use each expression ONCE only.

- | | |
|------------|--------------------|
| turned on | cared for |
| turned off | burn out |
| took out | runs down |
| belong to | run out of |
| listen to | gets out of order. |

1. You should _____ the news every day.
2. The workman opened the toolbox and _____ a monkey wrench.
3. The motor must be oiled and _____.
4. He _____ the switch before starting the engine.
5. We _____ oil, therefore the engine doesn't work.
6. The mechanic _____ the motor because it was too hot.
7. A storage battery can be charged when it _____.
8. When the machine _____, it should be repaired.
9. If the voltage is too high, the lamp will _____.
10. These combination pliers _____ the teacher.

Section 17

Grammatical Point: whom/which (Objective Relative Pronouns)

Supplement to: Unit 16 pp. 203-204

Unit 22 pp. 233-236

Sentences to remember

This is the clamp (which, that) I use.

Here is the man (whom, that) you called.

(The objective relatives in the brackets can be omitted).

Exercise 1 (Oral) Imagine that you are visiting your friend's workshop. Ask him questions and he will answer.

Examples: Questions

Answers

Which is the vise you use? Here is the vise I use.

Where are the handtools you use? Here are the handtools I use.

Is that the blueprint (that) you made? Yes, that is the blueprint (that) I made.

Continue with different words and verbs:-

- | | |
|---------------------|-------------------------|
| 1. car/drive | 8. table/work at |
| 2. machine/operated | 9. house/live in |
| 3. chair/sit in | 10. rubber shoes/wore |
| 4. battery/charged | 11. rubber mat/stood on |
| 5. wrench/adjusted | 12. switch/turned on |
| 6. house/built | 13. handshears/used |
| 7. factory/work at | 14. radio set/repaired |

Notice these:

The man who is soldering is a welder.

The builder that stands near the pond is the workshop.

The man you saw at the workshop is a welder.

('that' omitted).

The building we built last year is his factory.

('that' omitted).

Exercise 2 Complete the sentences, using 'WHO' or 'THAT' or 'WHICH' if necessary. (The relative pronoun in the objective case can be omitted). Write the omitted relative in a bracket.

Examples: The vise which is on the bench is new.

This is the vise (that) I use.

1. The appliance _____ I want now is a washing machine.
2. The builder _____ works next door has mended our house.
3. The machine _____ is made in Germany is very expensive.
4. The electrician _____ worked here yesterday is not here today.
5. Where is the lathe _____ you bought last month?
6. Is there anything wrong with the generator _____ you brought here?
7. The hammer _____ you lent me is very heavy.
8. The overalls _____ you are wearing are too long.
9. The man _____ you want has just left.
10. The screwdriver _____ is worn should be ground.

Exercise 3 Add relative pronouns: WHO, WHOM, WHICH, THAT where needed.

1. The portable electric drill _____ I used yesterday is out of order now.
2. The man _____ you spoke to in the street is a machinist.
3. Have you found the pliers _____ you are looking for?
4. The factory at _____ we work is a car factory.
5. The man from _____ I bought this car has a big garage.
6. Buy it back from the man _____ you sold it to.
7. What is a shop _____ sells nails, hammers, etc?
8. What is a man _____ sells nails, hammers, etc?
9. The chair _____ was broken is now mended.
10. Is this the factory _____ they built last year?

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Section 18Grammatical Point: Prevent, Protect.Supplement to: Unit 13 p. 190

Exercise 1 Complete these sentences using correct form of PREVENT, PREVENTION, PROTECT, OR PROTECTION.

Example: We protect someone from danger. That is protection.

We prevent someone from doing wrong. That is prevention.

1. _____ him! He's in danger!
2. He _____ her from spending too much.
3. _____ is better than cure.
4. Laws are made to _____ us from doing wrong.
5. He _____ her by _____ the fast car from killing her.
6. Police give us _____ from the criminal.
7. He drives carefully in order to _____ accident.
8. Insulators are put on conductors to _____ short circuits.
9. Tools should be oiled to _____ rusting.
10. Safety rules are made to _____ us from danger.

Exercise 2 Fill in the blanks with the appropriate form of PROTECT or PREVENT.

1. Your umbrella will _____ you from the sun.
2. You should wear goggles to _____ your eyes while you are welding or soldering.
3. How can I _____ the mosquitoes from getting in through the holes in the net?
4. A toolbox will _____ your tools.
5. I do not know how to _____ my car from the heat of the sun.
6. The machinist uses lots of lubricating oil in the hope of _____ his machine from rusting.
7. You could have _____ the accident if you had driven slowly.
8. Some workmen wear rubber gloves to _____ their hands while they are working.
9. These shoes are not thick enough to _____ you from the wet and cold in Germany.
10. Rubber shoes or a rubber mat will _____ you from short circuit.
11. Why did you _____ me from telling him the truth?
12. Workers at the airport have to wear special pads to _____ their ears from the noise of the jet planes.
13. A sudden illness _____ him from going to the factory yesterday.
14. I _____ him from killing himself.
15. He did not try to _____ himself from the blow.

Section 19

Grammatical Point: Nouns used as Adjectives.

Supplement to: Unit 13 pp. 192-193

Unit 24 p. 244.

Sentences to remember.

It's a clean room. It's a tool room.

Exercise 1 (Oral drill) Ask and answer these questions.

Examples: What's a bus station? It's a station.

What's a station bus? It's a bus.

What's a machine tool? It's a tool.

1. What's a steel tape? 9. What's a bench work?
2. What's a hammer handle? 10. What's a file brush?
3. What's a rubber mat? 11. What's a hand saw?
4. What's a glass bulb? 12. What's a bench vise?
5. What's a knife switch? 13. What's a tool cabinet?
6. What's a tungsten wire? 14. What's a water pipe?
7. What's a desk lamp? 15. What's a steel tape rule?
8. What's a wood work?

Exercise 2 (Oral drill) Tell the things from the given descriptions.

Example: A room: It keeps all the tools. It's a tool room.

1. A factory: It produces cars.
2. A saw : It's used by hand.
3. A vise : It's fastened on a bench.
4. A brush : It's used for brushing files.
5. A bulb : It's made of glass.
6. A pipe : It's for water.
7. A tool : It's uses power
8. A work : It's made on a bench.
9. A lamp : It's on a post.
10. A post : It's for a lamp.

Exercise 3 What are these?

1. The handle of a hammer.
2. A lamp used on a floor.
3. A joint of several wires.
4. A tool used by machine.
5. A tape made of rubber.
6. The vise fastened at a power saw.
7. An engine uses steam.
8. A metal made as sheet.
9. A motor used for cars.
10. A cabinet used for keeping tools.

Section 20

Grammatical Point: Still, Any more.

Supplement to: Unit 14 pp. 195-196.

Exercise 1 Change these sentences to negative form, introducing ANY MORE instead of STILL: Follow the examples.

Example: They are STILL good friends.
They aren't good friends ANY MORE.

1. He is still studying electronics.
2. They still work together.
3. He still uses the transformer.
4. There is still current in the electrical wire.
5. Mr. Saroj is still our teacher.
6. They still live in Songkhla.
7. He still uses the old motor.
8. Pichit still likes mechanics.
9. They still have that old battery with him.
10. They are still in good order.

Exercise 2 Fill in the blanks with "still" or "any more" or "any longer".

1. Wichit is _____ working in the car factory.
2. Snit does not work here _____.

3. They don't live in Songkhla _____.
4. I am _____ studying electricity with Mr. Saroj.
5. We never see you at the welding shop _____.
6. He is _____ the best electrician in the factory.
7. I rarely see him _____.
8. He never uses that transformer _____.
9. I _____ think that a Volkswagen is the best car on the market.
10. Do they _____ have that old car with him?
11. No, I don't think they have a car _____.
12. He _____ thinks that he knows more about electricity than anyone else in the workshop.
13. We _____ haven't saved enough money for the refrigerator.
14. There isn't _____ current in the electrical wire.
15. I think there is _____ some oil left at the pump.
16. He _____ has the generator but he doesn't use it _____.
17. Swat doesn't like the transistor radio _____ but he _____ uses it.
18. Somchai _____ doesn't do his homework on time.
19. He _____ likes electricity but he has decided to study mechanics.
20. Lop and Wichai are _____ good friends although they don't see each other very often _____.

Section 21

Grammatical Point: Some verbs + infinitive without to: let, make, watch, see, feel + infinitive.

Supplement to: Unit 14 pp. 196-197.
Unit 15 p. 199

For Study.

The teacher	let	the student	work in the shop.
He	made watch	the electrician	move the motor.
We	observed saw heard	him	operate the machine.

Exercise 1 Substitute the model sentence with the given words.

Example: We let the worker operate the engine.

Observed: We OBSERVED the worker operate the engine.

- | | |
|--------------------|-------------------------|
| 1. saw | 5. students |
| 2. grind the blade | 6. made |
| 3. watched | 7. use the power tools. |
| 4. heard | 8. let. |

Exercise 2 (Oral Drill)

Ask and answer the following questions giving first the long answer.

Example: Q. Will he let you drive his car?

A. No he will not let me drive his car.

1. Who let the hammer fall?
2. Did he let you use his diagonals?
3. Will they let me operate the machine?
4. Have you let him tighten the screws?
5. Did the teacher make you work hard?
6. Does electricity make the engine work?
7. Does the current make the filament in the bulb glow?
8. Does the steam make the wheels of an engine go round?
9. Did you hear him start the engine?
10. Have you heard him grind the blade of a screwdriver?
11. May I hear you say it again?
12. Can you hear the current flow ?
13. Can you see electricity flow ?
14. Did you see the man tighten a screw?
15. Have you ever seen him oil the machine?
16. Are you watching him adjust the wrench?
17. Is he watching you operate the machine?
18. Have you watched him finish his work?
19. Have you observed the electrician move the motor?
20. Will you observe the teacher start the engine?

21. Did you observe the mechanic repair the machine?
22. Did you feel something shake?
23. Who feel the car move?
24. Do you feel the work-piece vibrate?
25. Can you feel the current flow?

Exercise 3 (Revision of auxiliary verbs, as well).

Finish the following sentences, using Infinitives:-

Example : The teacher lets us _____.

The teacher lets us charge the battery.

1. The man will _____ his work.
2. Oil makes the machine _____ .
3. An electrician ought _____ diagonals.
4. The man watched the workmen _____ .
5. Good welder should _____ .
6. The man could _____ the car.
7. The new boy dare not _____ the machine.
8. In the workshop you can hear the motor _____ .
9. In the street you can hear cars _____ .
10. In the factory you can see workmen _____ .
11. He let me _____ .
12. Electricity makes the light _____ .
13. The mechanic will _____ .
14. When welding you must _____ goggles.
15. Can you feel the electric current _____ ?

16. Anybody might _____ it.
17. A man who has a car need not _____.
18. The students observed the engine _____.
19. Motor cars will sometimes _____.
20. Teachers watch their pupils _____.



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Section 22.

Grammatical Point: Verb + to infinitive (want to, need to, etc.).

Supplement to: Unit 19 pp. 217-218.

Key to remember:

He wants to drive a car.

Exercise 1 (For study and drill)

Repeat the following sentences in A and
replace the sentence in B with the same verbs.

A. Did you want to do it? B. Do they want to go?

need

like

hope

decide

expect

plan

try

care

ask

learn

know how

tell him

allow him

Exercise 2 Substitute the model sentence with the given words in correct position.

A. Model : He likes to start the engine.

1. can : He can start the engine.
2. must
3. wants
4. knows how
5. will
6. plans
7. expects
8. asked us
9. may
10. decided

B. Model : He asked us to work hard.

1. made: He made us work hard.
2. let
3. expects
4. told
5. move the motor
6. saw
7. wants
8. heard



Exercise 3 A. Ask and answer the questions, giving the long answer first.

1. Do you hope to pass the examination? (Yes).
2. Did he decide to buy a machine tool? (No).
3. Would you like to park the car here? (Yes).
4. Did he ask you to remove the nut? (Yes).
5. Does an insulator allow electricity to pass through it easily? (No).
6. What did he ask you to do? (strip the wire)
7. What do you plan to do next? (study electricity)
8. What does he want you to buy? (a refrigerator)

B. Make questions and answers with the given word groups.

Example: want/build a new house - A builder.

Who wants to build a new house?

A builder wants to build a new house.

1. plan/make a belt - A machinist.
2. like/repair a radio - A radio repair man.
3. try/operate the machine - The mechanic.
4. decide/cut the sheet metal - A welder.
5. need/wear goggles. - A welder.

Exercise 4 Finish each of the following sentences, using an Infinitive.

Example: The man wants _____.

The man wants to make belts.

1. A machinist plans _____.
2. The welder likes _____.
3. The builder wants _____.
4. They try _____.
5. An electrician needs _____.
6. The teacher asked me _____.
7. The engineer decided _____.
8. The man would like _____.
9. He told his workmen _____.
10. Tom hopes _____.
11. Who knows how _____.
12. Who allowed you _____.
13. The teacher expects us _____.
14. The students can learn how _____.
15. An insulator does not allow _____.

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Section 23

Grammatical Point: Gerund { 1. Gerund as a subject.
2. Gerund after some verbs.
3. Gerund after prepositions.

Supplement to: Unit 16 pp. 205-206

Unit 19 pp. 218-219

1. Gerund as a subject.

Exercise 1 (Oral drill) Repeat the sentences by using Gerund for the words in brackets.

Example: (Work) all day makes him tired.

Working all day makes him tired.

1. (Twist) nuts or bolts is not difficult.
2. (Grip) small articles with our hands is not easy.
3. (Change) fuse in the dark is dangerous.
4. (Chip) is (cut) metal with a cold chisel and a hammer.
5. (Chip) is usually followed by filing.
6. (File) is a difficult operation in the mechanical field.
7. (Keep) the file clean will save much hard work.
8. (Know) how to do sheet metal work is useful.
9. (Weld) is different from soldering.
10. (Solder) joins pieces of metal together by using a solder.
11. (Weld) is the fusion of the pieces of metal being joined.
12. (Ream) is done with a reamer.
13. (Bring) wood from the forest takes several steps.
14. (Play) practical jokes in the workshop is dangerous.
15. (Change) fuse should be done in daylight.

2. Gerund as objects of some verbs.

Exercise 2 Ask and answer these questions.

What does he enjoy doing? (work)

He enjoys working.

1. What does he enjoy doing? (drive, file, make furniture).
2. What have they finished doing? (work, change fuse, repair the television).
3. What does he keep doing? (brush his file, wipe his tools, make a desk lamp).
4. What did you consider doing? (buy a car, make a blueprint, build a new house).
5. What do you remember doing last week?
(grind a screwdriver, change fuse, make a blueprint).
6. What do you avoid doing? (get hurt, waste time, play in the shop).
7. What do you want to stop doing? (smoke, delay, play in the shop).
8. What do you want to give up doing? (smoke, delay, play in the shop).
9. What are you fond of doing? (drive, weld, make a radio).

Exercise 3 A. Read or rewrite the sentences with DO (or WOULD) YOU MIND.

Example: Will you please turn the power off?
DO YOU MIND TURNING THE POWER OFF?
WOULD YOU MIND TURNING THE POWER OFF?

1. Please wipe the tool clean.
2. Please tighten the screws.
3. Please strip the electric wire.
4. Will you please start the engine for me?
5. Please do not rotate the drill.

B. Read or rewrite each sentence with the polite form WOULD YOU MIND.

Example: A. Twist the nut.
B. Would you mind twisting the nut?
C. Don't twist the nut.
D. Would you mind not twisting the nut?

1. Adjust the monkey wrench.
2. Measure the distance between points.
3. Draw a circle.
4. Grind the blade.
5. Remove the electric lamp.

Exercise 4 A. Make complete sentences by using infinitive or gerund.

Examples: He enjoys..... weld - HE ENJOYS WELDING.

We decided..... weld - WE DECIDED TO WELD.

1. Do you mind bring me a hammer?
2. The engineer expected have a new machine.
3. The mechanic decided buy a car.
4. They have finished solder.
5. He avoided grind the blade.
6. The workman tried use a chisel.
7. We plan make a desk lamp.
8. He considered make some furniture.
9. The man keeps do his work.
10. The welder wanted weld.
11. I asked him change the fuse.
12. He told me finish my work.
13. I would like operate the machine.
14. He is fond of study machine.
15. We learn operate the machine.
16. The lamp keep on burn.
17. They give up play in the workshop.

B. Drill as the example using infinitive or gerund.

- Exampels:
1. enjoy I enjoy driving.
 2. want I want to drive.
 3. avoid
 4. work

5. have finished
6. decide
7. asked him
8. consider
9. told him
10. enjoy
11. plan
12. would like
13. am fond of
14. expect
15. try
16. enjoy
17. avoid

3. Gerund after prepositions.

Exercise 5 Change the following verbs after prepositions into gerund and underline them with their prepositions.

Example: A commutator is used for (produce) D.C.

A commutator is used for producing D.C.

1. He is fond of (study) electronics.
2. Wrenches are tools used for (turn) or (twist) nuts or bolts.
3. He tried to prevent the wrench from (slip) off the nuts.
4. Too much heat at the time of (grind) will soften the blade.

5. He does his job well without (waste) his time.
6. You should turn off the switch before (change) fuse.
7. The chemical effect is used in (electroplate).
8. Before (buy) a lamp, be sure to ascertain the voltage of your circuit.
9. There are several ways of (connect) lamps together in a circuit.
10. The lamps keep on (burn).
11. We can measure voltage by (use) a voltmeter.
12. Pieces of metal can be joined by (solder) or (weld).
13. Welding is different from (solder).
14. Dividers and rubers are needed in (do) layout work.
15. The C-clamp can be operated by (turn) a small screw.
16. Saws are tools used for (saw) metal or wood.
17. Before (operate) a power saw, place the work secruely in the saw vise.
18. A file is used for (smooth) wood or metal.
19. Keep the file free from chips by (brush) it with a file card.
20. You should give up (play) pratical jokes in the workshop.

Section 24Grammatical Point: Because/Because of.Supplement to: Unit 20 p. 221

Unit 29 pp. 269-270.

Key to remember:

I am studying	because	I have an examination this afternoon.
	because of	my examination.

Exercise 1 Make sentences with BECAUSE OF followed with a noun or a noun phrase. For example.

Examples: I came here because I wanted to study mechanical courses.

I CAME HERE BECAUSE OF THE MECHANICAL COURSES.

I stayed home because it was raining.

I STAYED HOME BECAUSE OF THE RAIN.

I am resting because my head aches.

I AM RESTING BECAUSE OF MY HEADACHE.

1. Pichai didn't go to work because he was ill.
2. They are looking for a new job because the salary is very low.
3. He went to Bangkok because he wanted to buy a new car.
4. Lop went to Penang because his father wanted him to go.
5. He didn't repair his radio because he had a lot of homework to do.

6. He bought a washing machine because his wife wanted it.
7. Prasert studied radio and telecommunication because his father asked him to.
8. He went to the workshop because he wanted a portable electric drill.
9. He can't work because his stomach aches.
10. You can't file well because the small chips stick in front of the file teeth.
11. He didn't pass the examination because he was lazy.
12. Tom didn't buy a new car because it is very expensive.
13. She doesn't live near the factory because it is very noisy.
14. I am worried because I shall have my examination soon.
15. They can't go out because it is raining.
16. The man can do his job well without wasting time and effort because he is an efficient man.
17. The machine is out of order because it is rusty.

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Section 25

Grammatical Point: know }
 learn } + embedded questions.
 etc. } wh- + S. + V.

Supplement to: Unit 22 pp. 231-233.

Sentence to remember:

He knows what a clamp is.

Exercise 1 (Added to Drill 120 B)

Combine these sentences introduced by WHO, WHICH,
 HOW MANY, ETC.

Example: One file is yours. I don't know which.
 I DON'T KNOW WHICH FILE IS YOURS.

1. A tool was on my desk. I don't know whose.
2. He didn't use the machine. I asked him why.
3. He visited a carpenter yesterday. I asked him who.
4. He wanted a radio set. I don't know which.
5. He repaired many cars last year. I can't remember how many.
6. I want a wrench. I don't remember which.

Exercise 2 Answer the questions with I DON'T KNOW +
 an included sentence with WHERE, WHO, WHOSE,
 ETC.

Examples: Is he from Yala or Pattani?

I DON'T KNOW WHERE HE IS FROM.

Is he fifteen or sixteen years old?

I DON'T KNOW HOW OLD HE IS.

Did Tom come or did Peter come?

I DON'T KNOW WHO CAME.

Did Tom's wrench fall or did Peter's wrench fall?

I DON'T KNOW WHOSE WRENCH FELL.

1. Did she meet Tom's pliers or Peter's pliers?
2. Is this blade worn or is that blade worn?
3. Is he a welder or is he a builder?
4. Did ten people come or did fifteen people come?
5. Was the engineer here or was the electrician here?
6. Was he here yesterday or was he here last week?
7. Was it 3 o'clock or was it 4 o'clock?
8. Is that Winai or is that Somsak?
9. Does he want to study mechanics or electricity?
10. Is your friend in Songkhla or Haadyai?
11. Did he come by plane or by train?
12. Were there ten people or fifteen people at the workshop?
13. Is it 20 kilometres or 30 kilometres from Songkhla to Haadyai?
14. Can I buy a mallet here or there?
15. Was Prakob or was Swat here?

Exercise 3 (Oral Chain Drill). Answer the questions as shown.

Example:

Teacher: Do you know who he is?

Student A: No, I don't know who he is. Do you know who he is?

Student B: Yes, I know who he is?

Teacher: Do you know where he comes from?

Student C: No, I don't know where he comes from.

Do you know where he comes from?

Student D: Yes, I know where he comes from.

1. Do you know how old he is?
2. Do you know why he works hard?
3. Do you know where the clamp is?
4. Do you know what time it is now?
5. Do you know how the engine moves?
6. Do you know what this is made of?

Exercise 4 Complete the answer as in the examples:

Examples: Who is that man? I don't know _____.

I DON'T KNOW WHO THAT MAN IS.

Where did he go? He didn't say _____.

HE DIDN'T SAY WHERE HE WENT.

Whose wrench did he find? Do you remember _____.

DO YOU REMEMBER WHOSE WRENCH HE FOUND?

1. What is a clamp? Do you know _____.
2. When does the work begin? I don't know _____.
3. Where is the garage? He forgets _____.
4. Why wasn't the shop open? Who knows _____.
5. How far is Penang from here? I don't know _____.
6. Where can I buy some pliers? Please tell me _____.
7. Whose hammer is that? Do you know _____.
8. What is his name? Please tell me _____.
9. When did they leave? Do you know _____.
10. Why weren't they in the workshop? They didn't say _____.
11. What time is it? Do you know _____.
12. Which did he want? Do you remember _____.
13. How many power saws are there here? Who knows _____.
14. What are these tools? The workers should learn _____.
15. What are clamps and vises? The students should learn _____.

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Section 26Grammatical Point: Enough + N. + to VSupplement to: Unit 26 p. 251-252. (Pattern 2).

Exercise 1 Use the groups of words to make up sentences as shown in the example.

Example: you/money/buy a car.

1. You have enough money to buy a car.
2. Do you have enough money to buy a car?
3. You don't have enough money to buy a car.

1. We/books/read.
2. Tom/time/finish the work.
3. We/men/buid the house.
4. He/oil/go to Haadyai.
5. She/money/travel.
6. You/tools/repair the radio.
7. The carpenter/wood/make four tables.

Exercise 2 Complete the following sentences:

1. Pichai didn't have enough time _____.
2. Prakob didn't make enough money _____.
3. Do you have enough instrument _____.
4. We don't have enough oil _____.
5. _____ food for all of us?
6. _____ chalk to write on the board.

Exercise 3 Combine the following pairs of sentences into one.

Use the word "enough" to express the main idea.

Example: There is plenty of chalk. You can write on the board.

There is ENOUGH CHALK (for you) to write on the board.

1. I have some money. I can buy a new television set.
2. Somsak doesn't have much time. He can't finish his work.
3. There are a lot of instrument. All the students can use them.
4. There is plenty of wood. We can build up a new house.
5. There is a lot of metal plate. We can make ten pails out of it.
6. We don't have many machine tools. All the students can't practice at a time.
7. There are several vises in the workshop. All of us can use them.
8. The teacher doesn't have much chalk. He can't write on the board.
9. We have a lot of oil. We can go there.
10. He doesn't have many boxes. He can't keep the tools.

Section 27Grammatical Point: get to + placeSupplement to: Unit 28 p. 260.

Exercise 1 Substitute the following words in the correct functions of the model sentence.

Example: Bangkok: The train got to Bangkok at ten.
 Songkhla: The train got to Songkhla at ten.
 the bus
 the bus station
 they
 at four
 the airport
 a few minutes early.
 in time
 Swat
 the station
 We.

Exercise 2 Read the following sentences by using the correct forms of 'GET TO' instead of 'ARRIVE IN or ARRIVE AT'

Examples: Thomas arrived in Bangkok yesterday.
 Thomas GOT TO Bangkok yesterday.
 He usually arrives at the office at eight.
 He usually GETS TO the office at eight.

1. He arrived in Penang last month.
2. We arrive at school at eight.
3. The plane arrives in Songkhla at ten o'clock.
4. The express usually arrives in Haadyai at seven.
5. Tom arrived at the workshop at noon.
6. They arrives at the station about nine.
7. The cars arrived at the factory in the afternoon.
8. We arrive at the calssroom on time.
9. She arrived at the airport in time.
10. The mechanic arrives at the garage early.

Exercise 3. Use the given groups of words to make questions and answers as shown in the example.

Example: you/airport. (three)

What time (or When) did you get to the airport?

I got to the airport at three.

(or) I got there at three.

1. You/classroom. (about eight.)
2. You/workshop. (in the morning).
3. He/Songkhla. (two days ago).
4. They/factory. (at eight).
5. Prakob/Penang. (last week).
6. The train from Bangkok/station. (half past eight).
7. The plane/airport. (ten past nine).
8. The car/garage. (at noon).
9. The boys/workshop. (in the afternoon).