

田方 主编

新机电英语



机械工业出版社
CHINA MACHINE PRESS



配MP3有声读物



“百名教师到企业挂职（岗）实践、开发百
门工学结合项目课程、编写百部工学结合校
本教材活动”系列教材

新机电英语

主 编 田 方
副主编 赵占香 张雪华
编 者 师海歌 张 平 高 岩 贺 娟
主 审 刘利平



机 械 工 业 出 版 社

本书遵循“工学结合,能力为本”的教学理念和“实用为主,够用为度”的教学原则编写,以期培养和提高学生实际运用英语语言的能力。全书共十个单元,每个单元分为词汇风暴、听说、阅读、补充阅读、语法、知识拓展、看图识词、综合练习等八个部分。其中听说部分选择的是职场中的涉外英语内容,设置真实的语境,培养学生的英语交流能力;阅读部分选用与机电技术、数控技术、自动化技术、汽车制造专业相关的文章。本书内容新颖、通俗、实用,既适用于提高学生的语言技能,又有利于培养学生的职业素质与技能。

本书为高职高专机电类专业教学用书,也可供相关技术人员参考。

为方便教学,本书配备 MP3 听力和电子课件等教学资源。凡选用本书作为教材的教师均可登录机械工业出版社教学服务网 www.cmpedu.com 免费下载。如有问题请致信 cmpgaozhi@sina.com,或致电 010-88379375 联系营销人员。

图书在版编目(CIP)数据

新机电英语/田方主编. —北京:机械工业出版社,2013.12
ISBN 978-7-111-45296-6

I. ①新… II. ①田… III. ①机电工程-英语-高等
职业教育-教材 IV. ①H31

中国版本图书馆 CIP 数据核字(2013)第 318909 号

机械工业出版社(北京市百万庄大街 22 号 邮政编码 100037)

策划编辑:王海峰 责任编辑:王海峰

版式设计:霍永明 责任校对:陈秀丽

封面设计:赵颖喆 责任印制:张楠

北京京丰印刷厂印刷

2014 年 2 月第 1 版·第 1 次印刷

184mm×260mm·15 印张·368 千字

0 001—3 000 册

标准书号:ISBN 978-7-111-45296-6

定价:29.50 元

凡购本书,如有缺页、倒页、脱页,由本社发行部调换

本书由北京市级专项“2011 年教育教学改革”专项项目

(PXM2011_014306_113573)资助完成

电话服务

网络服务

社服务中心:(010)88361066 教材网:<http://www.cmpedu.com>

销售一部:(010)68326294 机工官网:<http://www.cmpbook.com>

销售二部:(010)88379649 机工官博:<http://weibo.com/cmp1952>

读者购书热线:(010)88379203 封面无防伪标均为盗版

序 言

职业教育作为与经济社会联系最为紧密的教育类型，它的发展直接影响到生产力水平的提高和经济社会的可持续发展。职业教育的逻辑起点是从职业出发，是为受教育者获得某种职业技能和职业知识、形成良好的职业道德和职业素质，从而满足从事一定社会生产劳动的需要而开展的一种教育活动。高等职业教育以培养高端技能型专门人才为教育目标，由于职业教育与普通教育的逻辑起点不同，其人才培养方式也是不同的。教育部《关于推进高等职业教育改革创新引领职业教育科学发展的若干意见》（教职成〔2011〕12号）等文件要求“高等职业学校要与行业（企业）共同制订专业人才培养方案，实现专业与行业（企业）岗位对接、专业课程内容与职业标准对接；引入企业新技术和新工艺，校企合作共同开发专业课程和教学资源；将学校的教学过程和企业的生产过程紧密结合，突出人才培养的针对性、灵活性和开放性；将国际化生产的工艺流程、产品标准、服务规范等引入教学内容，增强学生参与国际竞争的能力”，其目的就是要深化校企合作、工学结合人才培养模式改革，创新高等职业教育课程模式，在中国制造向中国创造转变的过程中，培养适应经济发展方式转变与产业结构升级需要的“一流技工”，不断创造具有国家价值的“一流产品”。我校致力于研究与实践这个高等职业教育创新发展的中心课题，变使命为已任，从区域经济结构特征出发，确立了“立足开发区，面向首都经济，融入京津冀，走出环渤海，与区域经济联动互动、融合发展，培养适应国际化大型企业和现代高端产业集群需要的高技能人才”的办学定位，形成了“人才培养高端化，校企合作品牌化，教育标准国际化”的人才培养特色。

为了改革创新高端技能型人才培养的课程模式，增强服务区域经济发展的能力，寻求人才培养与经济社会发展需求紧密衔接的有效教学载体，学校于2011年启动了“百名教师到企业挂职（岗）实践、开发百门工学结合项目课程、编写百部工学结合校本教材活动”（简称“三百活动”），资助100名优秀专职教师，作为项目课程开发负责人，脱产到世界500强企业挂职（岗）实践锻炼，去选择“好的企业标准”，转化为“好的教学项目”。教师通过深入生产一线，参与企业技术革新，掌握企业的技术标准、工作规范、生产设备、生产过程与工艺、生产环境、企业组织结构、规章制度、工作流程、操作技能等，遵循教育教学规律，收集整理企业生产案例，并开发转化为教学项目，进行“教、学、训、做、评”一体化课程教学设计，将企业的“新观念、新技术、新工艺、新标准”等引入课程与教学过程中。通过“三百活动”，有效促进了教师

的实践教学能力，职业教育的项目课程开发能力，“教、学、训、做、评”一体化课程教学设计能力与职业综合素质。

学校通过“教师自主申报”“学校论证立项”等形式，对项目的选题、实施条件等进行充分评估，严格审核项目立项。在项目实施过程中，做好项目跟踪检查、项目中期检查、项目结题验收等工作，确保项目的高质量完成。《新机电英语》是我校“三百活动”系列教材之一。课程建设团队将企业系列真实项目转化为教学载体，经过两轮的“教、学、训、做、评”一体化教学实践，逐步形成校本教学资源，并最终完成本教材的建设工作。“三百活动”系列教材建设，得到了各级领导、行业企业专家和教育专家的大力支持和热心指导与帮助，在此深表谢意。相信这套“三百活动”系列教材能为我国高等职业教育的课程模式改革与创新做出积极的贡献。

北京电子科技职业学院
副院长 安江英
于 2013 年 2 月

前 言

本书旨在搭建基础英语与专业英语的桥梁。基础英语课程以英语语言基本知识为重点,训练学生的基础语言技能;专业英语以学科知识为重点,培养学生运行进口设备时识读屏幕英文信息的能力。近年来,我国高等职业教育蓬勃发展,英语教学向满足岗位需要倾斜,只有将公共英语与行业有效地衔接,才能更好地培养学生的英语应用能力。本书编写依据《高职高专教育英语课程教学基本要求》,以“培养学生实际使用英语语言去处理业务工作中的涉外交际活动的的能力”作为最终目标,同时指导学生掌握有效的学习方法,提高综合文化素养,提升他们的就业和岗位竞争力。

为适应时代的发展,体现英语的职业性和行业性,本书结合机电行业毕业生从事涉外英语的实际,组织教材内容。教材内容包括汽车销售与售后服务、机械制造业简介、汽车制造和检测、汽车的电子产品、现代生产技术、机器人、非传统加工技术及企业管理等。

本书的主要教学对象为高职高专三年制汽车制造、模具设计与制造、机电一体化技术、机械制造技术、数控技术、数控设备应用与维护、自动化技术等专业的学生。本书共设十个单元,每个单元分为八个部分:词汇风暴、听说、阅读、补充阅读、语法、知识拓展、看图识词和综合练习。

词汇风暴 (Vocabulary Storming):选择本单元对话及阅读材料中出现的词汇,通过图片或语言训练等联想方法唤起学生对这部分单词的记忆,抛砖引玉激发学生的学习兴趣,帮助学生进入学习状态。

听说部分 (Listening & Speaking):选用贴近实际的题材,涉及参观会展、询价、议价、参观企业、生产流程、技术交流、投诉、企业管理、员工招聘等主题,遵循任务型教学模式,设置对话主题、相关词语和主要句型,调动学生的想象力和创造力,完成简单对话。学生可以参考借鉴书中提供的对话样例,学习用英语进行交流。

阅读部分 (Reading):由两篇相关主题的文章组成。通过阅读开阔视野,同时学习核心词汇和语法结构,学习和掌握阅读技巧。

补充阅读部分 (Supplement Reading):培养学生快速阅读能力。

语法部分 (Grammar):在对话和阅读中,学习和运用语言知识点,并结合高等职业学校英语应用能力考试的要求,对学生难以掌握的语言点作出解析,并通过练习进行巩固。内容主要包括词汇结构、语态、从句、非谓语动词等语言点。

知识拓展部分 (Learning More): 帮助学生了解行业相关知识, 开阔视野, 增长学生经验。

看图识词部分 (Literacy Through Pictures): 介绍实用并与行业相关的词汇。

综合练习部分 (Comprehensive Exercises): 包括听说练习、课文理解、词汇和句型练习, 巩固学生在本单元所学知识, 培养学生运用英语语言的能力。

本书由北京电子科技学院田方担任主编, 北京电子科技学院刘利平担任主审。本书编写分工为: 第一单元——田方, 张雪华 (对话 2); 第二单元——师海歌; 第三单元——张雪华; 第四单元——高岩, 田方; 第五单元——田方, 贺娟; 第六单元——师海歌, 张雪华; 第七单元——赵占香; 第八单元——张平, 赵占香; 第九单元——高岩; 第十单元——张平, 师海歌 (PPT)。

受编者水平所限, 书中难免存在缺点和不足之处, 恳请专家、同行和读者批评指正。

编者

Contents

序言

前言

Unit One Introduction of Electromechanical Industry	1
Task 1 Vocabulary Storming	1
Task 2 Listening & Speaking	2
Dialogue 1: At an International Automotive Exhibition	3
Dialogue 2: At International Auto Show	5
Task 3 Reading: Machinery Industry	6
Task 4 Supplementary Reading: Automation	11
Task 5 Grammar: Prefix	12
Task 6 Learning More	14
世界 500 强企业	14
Task 7 Literacy Through Pictures	16
Task 8 Comprehensive Exercises	17
Unit Two Introduction of Automobile Market	21
Task 1 Vocabulary Storming	21
Task 2 Listening & Speaking	22
Dialogue 1: The Price and Brand of Automobiles	23
Dialogue 2: Thanks and Regrets	25
Task 3 Reading: The History of Automobile	26
Task 4 Supplementary Reading: My True Experience of Buying a Second-hand Car	33
Task 5 Grammar: Suffix	34
Task 6 Learning More	36
汽车文化	36
Task 7 Literacy Through Pictures	37
Task 8 Comprehensive Exercises	38
Unit Three The Automobile Manufacturing Process	43
Task 1 Vocabulary Storming	43
Task 2 Listening & Speaking	44
Dialogue 1: At the Automobile Manufacturing Plant (part 1)	45
Dialogue 2: At the Automobile Manufacturing Plant (part 2)	47
Task 3 Reading: The Automobile Manufacturing Process	48
Task 4 Supplementary Reading: Cars Production on the Assembly Line	56
Task 5 Grammar: Word Formation	57
Task 6 Learning More	59

汽车历史人物介绍	59
Task 7 Literacy Through Pictures	60
Task 8 Comprehensive Exercises	61
Unit Four Machine Tools	67
Task 1 Vocabulary Storming	67
Task 2 Listening & Speaking	68
Dialogue 1: Visiting Metal Processing Workshop	68
Dialogue 2: Health care for staff	70
Task 3 Reading: Machine Tools	71
Task 4 Supplementary Reading: Introduction of CNC Machining Centers	79
Task 5 Grammar: Passive Voice	82
Task 6 Learning More	83
西门子与法兰克简介	83
Task 7 Literacy Through Pictures	84
Task 8 Comprehensive Exercises	85
Unit Five Computer Information Techniques & Manufacturing Industry	90
Task 1 Vocabulary Storming	90
Task 2 Listening & Speaking	91
Dialogue 1: Staff Training	91
Dialogue 2: The Situation of Domestic CNC Machine Tools	93
Task 3 Reading: Machinery Industry	94
Task 4 Supplementary Reading: Flexible Manufacturing System	100
Task 5 Grammar: Noun Clauses	102
Task 6 Learning More	104
第一次工业革命	104
Task 7 Literacy Through Pictures	105
Task 8 Comprehensive Exercises	106
Unit Six The Assembly of Automobile	110
Task 1 Vocabulary Storming	110
Task 2 Listening & Speaking	111
Dialogue 1: Failure Detection on an Assembly Line	112
Dialogue 2: A Newly-Introduced Assembly Line	114
Task 3 Reading: The Assembly of Automobile	116
Task 4 Supplementary Reading: Toyota Production System	121
Task 5 Grammar: Adverbial Clauses	123
Task 6 Learning More	125
产品保修卡	125
Task 7 Literacy Through Pictures	127
Task 8 Comprehensive Exercises	128

Unit Seven Electrical and Electronic Technology	134
Task 1 Vocabulary Storming	134
Task 2 Listening & Speaking	135
Dialogue 1: Safety Rules in the Workshop (I)	136
Dialogue 2: Safety Rules in the Workshop (II)	137
Task 3 Reading: Electrical and Electronic Technology	139
Task 4 Supplementary Reading: Energy Conservation	145
Task 5 Grammar: Attributive Clauses (I)	147
Task 6 Learning More	149
第二次工业革命	149
Task 7 Literacy Through Pictures	150
Task 8 Comprehensive Exercises	151
Unit Eight After-Sale Services and Testing Technology	155
Task 1 Vocabulary Storming	155
Task 2 Listening & Speaking	156
Dialogue 1: Talking About Car Fixing Procedures	157
Dialogue 2: DTC Chart	158
Task 3 Reading: After-Sale Services	159
Task 4 Supplementary Reading: Cars Testing Work	164
Task 5 Grammar: Attributive Clauses (II)	165
Task 6 Learning More	167
第三次工业革命	167
Task 7 Literacy Through Pictures	168
Task 8 Comprehensive Exercises	169
Unit Nine Intelligent Robots	175
Task 1 Vocabulary Storming	175
Task 2 Listening & Speaking	176
Dialogue 1: Dealing with Customer Complaints	177
Dialogue 2: Management Disputes	179
Task 3 Reading: Robotics	180
Task 4 Supplementary Reading: Robots in the Future	185
Task 5 Grammar: Infinitives	186
Task 6 Learning More	190
企业文化	190
Task 7 Literacy Through Pictures	191
Task 8 Comprehensive Exercises	192
Unit Ten Non-traditional Machining Methods	196
Task 1 Vocabulary Storming	196
Task 2 Listening & Speaking	197

Dialogue 1: Preparation for a Job Interview	198
Dialogue 2: Expressions of an Interview	199
Task 3 Reading: Non-traditional Machining Methods	200
Task 4 Supplementary Reading: Environmental Protection	205
Task 5 Grammar: Participles	207
Task 6 Learning More	210
现代企业对员工的要求	210
Task 7 Literacy Through Pictures	211
Task 8 Comprehensive Exercises	212
Appendix	216
Reference	227

Unit One Introduction of Electromechanical Industry

Learning Objectives

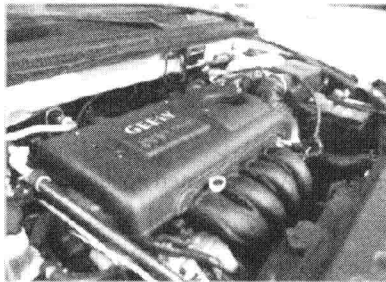
1. To visit exhibitions and introduce products.
2. To introduce machinery industry.
3. To introduce automation.
4. To learn and master prefix.
5. To learn fortune global 500.

Suggestions for Students

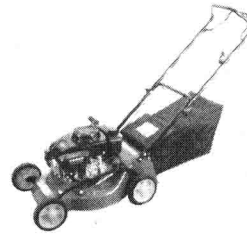
1. To memorize more new words via prefix rules.
2. To read more information about the importance of electromechanical industry.

Task 1 Vocabulary Storming

industry, manufacture, shape, exhibition, tractor,
aerospace, electricity, plastic (cup), engine, mower



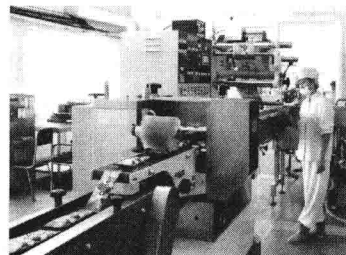
a. _____



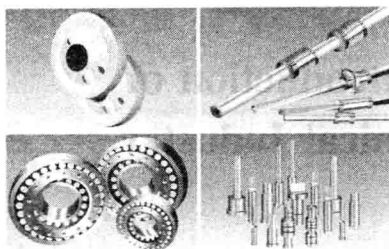
b. _____



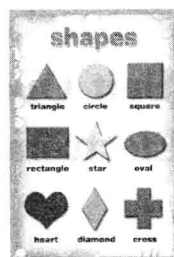
c. _____



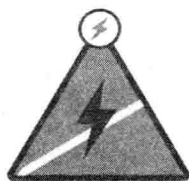
d. _____



e. _____



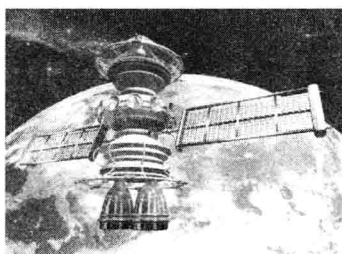
f. _____



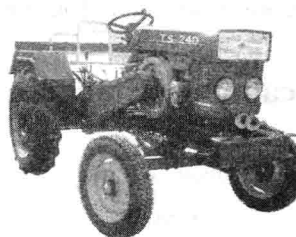
g. _____



h. _____



i. _____



j. _____

Task 2 Listening & Speaking

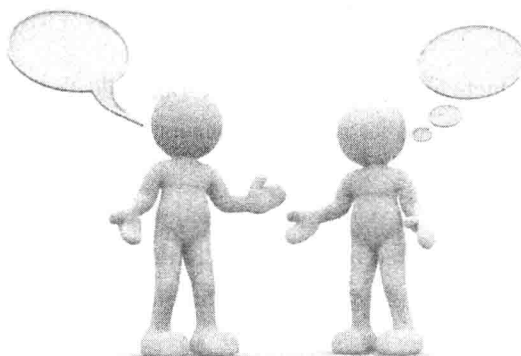
1. Learning situation: Mike, from ABC Company, is requested to help his company to buy three new cars. His friend Peter, a sale representative for a car distributor, serves as the guide. Peter and Mike are visiting an international automotive exhibition. They talk about the most important component of engine and manufacturing industry. Peter explains what final products of manufacturing industry include. Mike wants to get some information about domestic auto.



Speaking material: domestic, imported, fashionable, economic, advanced, Chery A3, engine, develop, manufacture, technology, equipment, intermediate, arrangement

Key sentences:

- (1) Have you ever been to...
- (2) How do you feel...?
- (3) It is said that...
- (4) Engine manufacturing largely depends on...
- (5)...either serve as...or...
- (6)...play a significant role in...
- (7) Could you give me an introduction to...?



Dialogue 1: At an International Automotive Exhibition

Peter: Have you ever been to last International Automotive Exhibition?

Mike: No. This is my first time. How do you feel it?

Peter: I saw a variety of domestic and international automobiles. They were fashionable and vintage, luxurious and economic, advanced and traditional.

Mike: Look at Chery A3, how about it? It is said it is homemade but its engine is developed with foreign countries together.

Peter: I am not sure. However, ACTECO series engines are newly independently developed by Chery Automobile Co. Ltd.

Mike: Good news. Engine manufacturing is the most important. And it largely depends on the manufacturing industry.

Peter: Yeah, such as machinery equipment, machining technology, etc. The final products can either serve as a finished good for sale to customers or as intermediate goods used in the production process.

Mike: So machinery manufacturing industry plays a significant role in our life and national economy. By the way, I am interested in visiting automobile manufacturing factory.

Peter: Really, I agree with you.

Mike: Thanks. Now, could you give me an introduction to others?

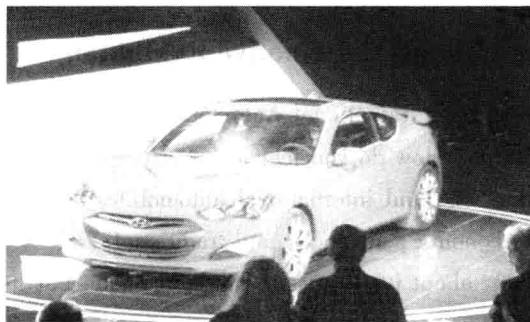
Peter: Sure, this way please.

Implementation:

Choose the best answer according to the Dialogue 1.

- () 1. What exhibition are they talking about?
A. Garment exhibition. B. Automotive exhibition. C. Industry exhibition.
- () 2. Can you see economic car there?
A. Yes. B. No. C. Traditional.
- () 3. Is Cherry A3 domestic or foreign automotive?
A. Domestic B. Imports. C. Not mentioned.
- () 4. Can an automotive be whole produced in an automotive plant?
A. Yes. B. No. C. It's uncertain.
- () 5. What products are made in Manufacturing industry?
A. A finished good for sale to customers. B. Intermediate goods.
C. Both A and B.

2. Learning situation: Mike is visiting an international auto show with Peter. They are talking about the coupe which Mike is attracted by the feature of the modern, fashionable in shaping design. And driving performance, safety, fuel consumption, interior and even brand are the most important factors in buying cars.



Speaking material: performance, standard equipment, fuel consumption, brand image, leather seats, passenger airbags, ABS, high performance, flowing lines, all-new design, driving pleasure, economic car

Key sentences:

- (1) I'm very happy to introduce sth. to sb.
- (2) I'm looking for a car with...
- (3) ... would be ideal for ...
- (4) It's fully equipped with...
- (5) What about...
- (6) This company has a good name for quality...
- (7) You can't go wrong with ...

Dialogue 2: At International Auto Show

Mike: Look, the red coupe. It has two doors or four doors model with the sloping back. The sleek (= smooth) and flowing line design is striking.

Peter: I see you are interested in this model. I have known the car's driving performance well. I'm very happy to introduce it to you.

Mike: Thank you. I'm looking for a car with good safety features that is also economical.

Peter: Well, you're right, this car would be ideal for you. It's fully equipped with driver and passenger airbags. And ABS is standard equipment.

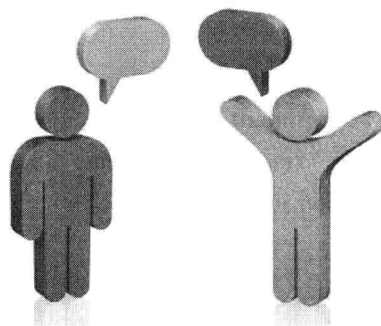
Mike: What about fuel consumption?

Peter: It has a fuel consumption of 6 liters per one hundred kilometers and a top speed of 220 kph.

Mike: This company has a good name for quality, doesn't it? I like their cars.

Peter: That's right. You can't go wrong with this one. And a good brand image is important for the consumers. Now, would you like to sit in the car and have a closer look at the interior (= inside)?

Mike: That's great...

**Implementation:****I. Choose the best answer according to the Dialogue 2.**

- () 1. Where are they?
A. At an international auto show. B. At an international fashion show.
- () 2. Which type of the car is Mike interested in?
A. A crossover. B. A coupe.
- () 3. What is the design of this model like?
A. The car has a sloping back. B. The design is very fashionable.
- () 4. What are the safety features?
A. It is equipped the airbags and ABS. B. ABS is optional.
- () 5. Why is the brand image important for consumers?
A. Because the brand can show the status of the driver.
B. Because the brand company can offer good services to the consumers.

II. Role-play exercise with the given sentence patterns.

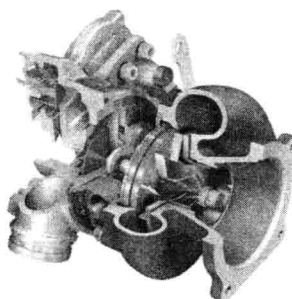
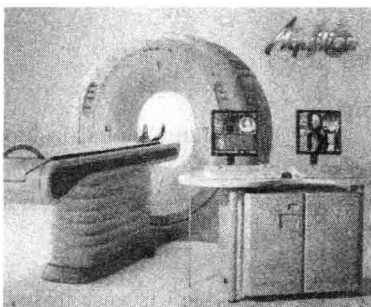
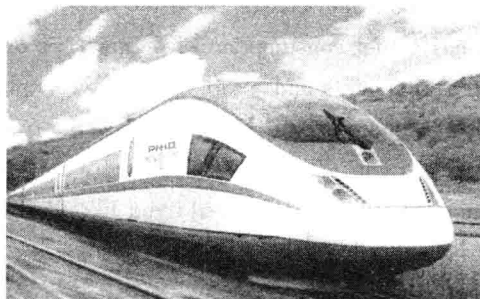
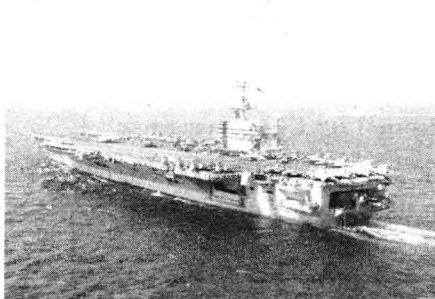
1. I recommend...
2. You need a car which...
3. Have you thought about...?
4. If I were you, I would buy a...
5. Would you like to...?

6. A... would be ideal/perfect for you.
7. Why don't you buy a...?
8. You should /shouldn't buy a...
9. I'm interested in...

Task 3 Reading: Machinery Industry

1. Pre-reading

Assignment: Introduce the machinery industry. Learn the development and role of machinery industry. You can take China, USA, Japan and German as instance. Search the related words and information in groups.



2. In-reading

Assignment: Correct the missing contents and finish the pre-reading task in groups. Make PPT for presentation.

Key words learning:

advance [əd'vɑ:ns] *n.* a movement forward 前进, 进步 *vt. & vi.* to move forward, to make progress (使) 前进; 向前推

feature ['fi:tʃə] *n.* a prominent or distinctive aspect, quality, or characteristic of something 特征, 特点

accomplish [ə'kɒmplɪʃ] *vt.* to succeed in doing something, complete 完成

critical ['kritikəl] *adj.* urgent, absolutely necessary 危急的, 决定性的

agriculture [ˈæɡrɪkʌltʃə] *n.* farming and the methods that are used to raise and look after