Unit 1

The Introduction to Computers

1   Learn how to orally introduce computer major
2   Understand the evolution of computers
3   Understand Internet Explorer

Section 1 Lead in

▶ **Task 1** Work in groups to discuss the components of a computer and write down as many words about computer as possible.

▶ **Task 2** Look at the following pictures and label them with the words given below.

| mainframe computer | desktop computer | mouse | scanner |
| notebook computer | laser printer | handheld PDA | bluetooth device |

Picture 1 _____

Picture 2 _____

Picture 3 _____

Picture 4 _____

Section 2 Conversations

▶ **Task 1** Listen to the dialogues and fill in the blanks with the missing information.（听对话并填空）

A　Hello! My name is David.

B　How are you? I am Susan.

A　I'm fine, thanks. And you?

B　Fine, too. Are you from the ___1___ ___2___ ?

A　No, My ___3___ ___4___ .

B　Oh, really? You speak English quite well.

A　Thank you. What's your major? English?

B　Yes. But I'm not good at computer. Can you help me when you're free?

A　___5___ , I can.

B　It's very nice to meet you today.

A　Me, too.

➤ **Task 2** Listen and repeat.（听对话并跟着朗读）

A   Hello! My name is David.

B   How are you? I am Susan.

A   I'm fine, thanks. And you?

B   Fine, too. Are you from the English Department?

A   No, My major is computer.

B   Oh, really? You speak English quite well.

A   Thank you. What's your major? English?

B   Yes. But I'm not good at computer. Can you help me when you're free?

A   Of course, I can.

B   It's very nice to meet you today.

A   Me, too.

➤ **Task 3** Play the dialogue in roles.（角色扮演这则对话）

A   Hello! My name is David.

B   How are you? I am Susan.

A   I'm fine, thanks. And you?

B   Fine, too. Are you from the English Department?

A   No, My major is computer.

B   Oh, really? You speak English quite well.

A   Thank you. What's your major? English?

B   Yes. But I'm not good at computer. Can you help me when you're free?

A   Of course, I can.

B   It's very nice to meet you today.

A   Me, too.

Section 3 Passages

Passage 1

The Evolution of Computers

The computer age did not really begin until the first computer was made available to the public in 1951. The modern age of computers spans almost 50 years, which is typically broken down into five generations. Each generation is marked by a significant advancement in technology.

First Generation (The Vacuum Tube Age 1951—1957)

During this generation, computers were built with vacuum tube - electronic tubes that were made of glass and were about the size of the light bulbs. These computers were expensive and

bulky. They used machine language for computing and could solve just one problem at a time. In the year 1951, the first commercially available electronic digital computer was introduced to the public, which marked the first generation computers came into being. IBM (International Business Machines Corporation), today a big name in the list of computer technology industries, announced the IBM 702 Electronic Data Processing Machine in 1953. It was developed for business use and could address scientific and engineering applications.

Second Generation (The Transistor Age 1958—1963)

This generation began with the first computers built with transistors - small device that transferred electronic signals across a resistor. Because transistors were much smaller, used less power, and created less heat than vacuum tubes, the new computers were faster, smaller, and more reliable than the first-generation machines. In the 1960s, transistor based computers replaced vacuum tubes. Transistors made computers smaller and cheaper. They made computers energy-efficient. The use of transistors marked the second generation of computers.

Third Generation (The Integrated Circuit Age 1964—1969)

In 1964, computer manufactures began replacing transistors with integrated circuits. An integrated circuit (IC) is a complete electronic circuit on a small chip made of silicon. These computers were more reliable and compact than computers made with transistors, and they cost less to manufacture. What's more, the use of the new types of computer increased the speed and efficiency of computers. In the year 1965, Digital Equipment Corporation (DEC) introduced the first minicomputers.

Fourth Generation (The Microprocessor Age 1970—1990)

There were many key advancements that were made during this generation, the most significant of which was the use of the microprocessor - a specialized chip developed for computer memory and logic. This revolutionized the computer industry by making it possible to use a single chip to create smaller personal computers. Microprocessors came up during the 1970s. Intel produced large-scale integration circuits in 1971. Apple Computer, Inc., founded by Steve Wozniak and Steve Jobs, brought out the Macintosh personal computer in 1984. Microsoft, a company founded by a young Harvard drop-out named Bill Gates, who wrote the programming language BASIC for one of the earliest microcomputers, introduced their Windows graphical user interface in year 1985.

Fifth Generation (The Age of Connectivity 1990 and beyond)

Our current generation has been referred to as "Connected Generation" because of the industry's massive effort to increase the connectivity of computers. The rapidly expanding Internet, World Wide Web, and intranets have created an information highway that has enabled both computer professionals and home computer users to communicate with others across the globe. What's more, presently the computers would be capable of massive parallel processing, support voice recognition and understand natural language. The current advancements in computer tech-

nology are likely to transform computing machines into intelligent ones that process self organizing skills. The evolution of computers will continue, perhaps till the day their processing powers equal human intelligence.

New Words and Expressions

evolution	*n.*	进化、演变
generation	*n.*	一代人、时代
significant	*adj.*	重大的，有意义的
technology	*n.*	技术、工艺
vacuum	*n.*	真空、空间
commercially	*adv.*	商业上、通商上
transistor	*n.*	晶体管
efficiency	*n.*	效率、功效
silicon	*n.*	硅
compact	*adj.*	紧凑的、简洁的
revolutionize	*v.*	发动革命、彻底改革
interface	*n.*	界面、接口
massive	*adj.*	大量的、巨大的
connectivity	*n.*	连通性
intranet	*n.*	内部网络、专用网
parallel	*n.*	平行线、对比
intelligent	*adj.*	智能的、聪明的
intelligence	*n.*	智能、智力
vacuum tube		真空管
came into being		形成、产生
integrated circuit		集成电路
programming language		编程语言

Notes

1 The modern age of computers spans almost 50 years, which is typically broken down into five generations. 现代计算机的发展经历了 50 年的时间跨度，一般可以分为五个阶段。关系代词 which 引导定语从句修饰先行词 age，是一个非限制性定语从句。

2 During this generation, computers were built with vacuum tube - electronic tubes that were made of glass and were about the size of the light bulbs. 在这一阶段，计算机中内置有电子真空管，电子真空管是由玻璃制成的，大小和灯泡相似。关系代词 that 引导定语从句修饰 vacuum tube，是一个限制性定语从句。

3 It was developed for business use and could address scientific and engineering applications. 这是一款为商业用途使用开发的机型，它能够处理科学和工程的应用程序。句中 develop 意为开发，用了被动语态；address 此处是动词，意为解决问题。

4 Because transistors were much smaller, use less power, and created less heat than vacuum tubes, the new computers were faster, smaller, and more reliable than the first-generation machines were. 由于晶体管比真空管规模小得多，使用的电量更小，产生的热量更少，因此这种新型计算机会更快、更小，而且比第一代的机器更为可靠。Because 引导了一个原因状语从句，主句的主语是 the new computers。

5 There were many key advancements that were made during this generation, the most significant of which was the use of the microprocessor - a specialized chip developed for computer memory and logic. 在这一阶段，计算机技术有很多重要的进步，其中最具重要意义的就是微处理器的使用。微处理器是一个专门为计算机的存储数据和逻辑运算开发的芯片。the most significant of which...and logic.是一个非限制性定语从句，修饰先行词 advancements; specialized 是动词 specialize 的过去分词，在句中作 chip 的定语。

6 Our current generation has been referred to as "Connected Generation" because of the industry's massive effort to increase the connectivity of computers. 我们当前的时代被称为"连通性时代"，因为计算机行业在该阶段致力于大力提升计算机的连通性。refer 为不及物动词，与介词 to 连用构成短语，意为"指的是"；has been referred to 是该短语被动语态的一般现在时。

➤ Task 1　Answer the following questions according to the passage.（根据课文内容回答下列问题）

1　When did the computer age really begin?

2　What was the first generation of computer age?

3　What is the significant advancement in technology of computer generations?

4　Who is the founder of Microsoft Corporations?

5　Why has the current age been referred to as "Connected Generation"?

➤ Task 2　Choose the item from column B to match the one in column A.（从 A 栏选出解释 B 栏的项目）

A	B
1. 万维网	a. silicon
2. 硅	b. solve a problem
3. 编程语言	c. computer technology industries
4. 解决问题	d. transistor
5. 计算机技术行业	e. integrated circuit
6. 晶体管	f. microprocessor
7. 微处理器	g. programming language
8. 集成电路	h. World Wide Web

➤ Task 3　Judge the following statements true or false according to the passage.（根据课文判断下列句子对错）

1　During the first generation, computers were built with vacuum tubes - electronic tubes that were made of glass and were about the size of light bulbs. （　　）

2　IBM 702 Electronic Data Processing Machine was developed for military use and could address scientific and engineering applications.　　　　　　　　　　　　(　)

3　In the 1970s, transistor based computers replaced vacuum tubes.　　　　(　)

4　An integrated circuit (IC) is a complete electronic circuit on a small chip made of silicon.

(　)

5　The current generation has been referred to as "Connected Generation" because of the industry's massive effort to increase the connectivity of computers.　　　　(　)

Passage 2

Computers and Our Life

The Computer Era glows before us with the promise of new and improved ways of thinking, living and working. The amount of information in the world is said to be doubling every six to seven years. The only way to keep up with these increased amounts of data and information is to understand how computers work and have the ability to control them for a particular purpose.

The computer has literally revolutionized the way one person does his job or an organization operates their businesses. For this reason and many more, computers are considered more than just an essential piece of fancy equipment. Whether or not people know anything about it, they invoke computers in almost every aspect of their lives. Today, millions of people are purchasing fully functional personal computers for individual reasons, to keep track of bank accounts, communicate with friends and associates, access knowledge, purchase goods and many other countless tasks.

Computers are very productive, efficient and make our personal and professional lives more rewarding. These "magical" machines can do just about anything imaginable, moreover they really excel in certain areas. Below are some of the principal applications of the computer systems:

Business

Businessmen make bar graphs and pie charts from tedious figures to convey information with far more impact than numbers alone can convey. Furthermore, computers help businesses to predict their future sales, profits, costs, etc. , making companies more accurate in their accounts. Computers may also play a vital role in aiding thousands of organizations to make judgmental decisions concerning financial problems and prospective trends.

Education

Most good schools in the world have computers available for use in the classroom. It has been proved that learning with computers is more successful, for this enhances the knowledge of the student at a much faster pace than the old traditional methods. Likewise, colleges and various universities have extended the use of computers as many educators prefer the "learning by doing"

method—an approach uniquely suited to the computer.

Transportation

Computers are used in cars to monitor fluid levels, temperatures and electrical systems. Computers are also used to help run rapid transit systems, load containerships and track railroads cars across the country. An important part is the air control traffic systems, where computers are used to control the flow of traffic between airplanes which needs a lot of precision and accuracy to be dealt with.

Scientific Research

This is very important for mankind and with the development of computers, scientific research has propelled towards the better a great deal. Because of high-speed characteristics of computer systems, researchers can simulate environments, emulate physical characteristics and allow scientists proof of their theories in a cost-effective manner. Also many test lab animals are spared since computers have taken over their roles in extensive research.

Communication with the World

The computers are most popular for their users to connect with others on the World Wide Web. Therefore, communication between two or more parties is possible which is relatively cheap considering the old fashioned methods. Emailing, teleconferencing and the use of voice messages are very fast, effective and surprisingly cheaper as well. When connected to the Internet, people can gain various amounts of knowledge, and know about world events as they occur. Purchasing on the Internet is also becoming very popular, and has numerous advantages over the traditional shopping methods.

There are so many applications of computers that it is impractical to mention all of them. Computers are all around us and we interact with them in our daily lives. This is the Computer Age and these machines are sure to affect our lives in more and more ways.

New Words and Expressions		
era	*n.*	时代、年代
information	*n.*	信息
keep up with		赶上、跟上
particular	*adj.*	特别的、独有的
essential	*adj.*	基本的、必要的
invoke	*v.*	祈求
purchase	*v.*	购买
keep track of		跟踪、记录
professional	*adj.*	职业的、专业的
imaginable	*adj.*	可想象的
excel	*v.*	优于、胜过
tedious	*adj.*	沉闷的、乏味的
furthermore		此外、而且

accurate	*adj.*	精确的
prospective	*adj.*	有希望的、预期的
enhance	*v.*	提高
precision	*n.*	精确度
propel	*v.*	推进、推动
emulate	*v.*	仿真、竞争
teleconference	*n.*	远程电信会议

➤ **Task 1** Judge the following statements true or false according to the passage.

1. The amount of information in the world is said to be doubling every ten years.

(   )

2. Computers are just an essential piece of fancy equipment.   (   )

3. Computers may help businesses to make predictions of future sales, profits, costs, etc. , making companies more accurate in their accounts.   (   )

4. People use computers in cars to monitor fluid levels, temperatures and electrical systems.

(   )

5. Few researchers can simulate environments, emulate physical characteristics and allow scientists proof of their theories in a cost-effective manner with a computer.   (   )

➤ **Task 2** Fill in the blanks without referring to the passage.

The computers are most ___1___ for their uses to connect with others on the World Wide Web. Therefore, ___2___ between two or more parties is possible which is relatively cheap considering the old fashioned methods. Emailing, teleconferencing and the use of ___3___ are very fast, effective and surprisingly cheaper as well. When connected to the ___4___ , people can gain various amounts of knowledge, and know about world events as they occur. Purchasing on the Internet is also becoming very popular, and has numerous ___5___ over the traditional shopping methods.

Section 4 **Software Introduction, Instructions of IT Products**（软件介绍或 IT 产品说明）

Internet Explorer

Internet Explorer is one of the most widely used web browsers, attaining a peak of about 95% usage share during 2002 and 2003.Its usage share has since declined with the launch of Firefox (2004) and Google Chrome (2008), and with the growing popularity of operating systems such as OS X, Linux, iOS and Android that do not run Internet Explorer. Estimates for Internet Explorer's overall market share range from 27.4% to 54.13%, as of October 2012. Microsoft spent over $100 million per year on Internet Explorer in the late 1990s, with over 1000 people

working on it by 1999.

Since its first release, Microsoft has added features and technologies such as basic table display ; XMLHttpRequest, which aids creation of dynamic web pages; and Internationalized Domain Names , which allows Web sites to have native-language addresses with non-Latin characters. The browser has also received scrutiny throughout its development for use of third-party technology and security and privacy vulnerabilities, and both the United States and the European Union have alleged that integration of Internet Explorer with Windows has been to the detriment of other browsers.

The Internet Explorer project was started in the summer of 1994 by Thomas Reardon,who used source code from Spyglass, Inc. Mosaic, which was an early commercial web browser with formal ties to the pioneering National Center for Supercomputing Applications (NCSA) Mosaic browser. In late 1994, Microsoft licensed Spyglass Mosaic for a quarterly fee plus a percentage of Microsoft's non-Windows revenues for the software.Although bearing a name similar to NCSA Mosaic, Spyglass Mosaic had used the NCSA Mosaic source code sparingly.

▶ **Task**　Without referring to the text, fill in the blanks with the missing information.

Internet Explorer is one of the most widely used ___1___ , attaining a peak of about 95% usage share during 2002 and 2003.Its usage share has since declined with the ___2___ of Firefox (2004) and Google Chrome (2008), and with the growing popularity of ___3___ such as OS X, Linux, iOS and Android that do not run ___4___. Estimates for Internet Explorer's overall market share ___5___ from 27.4% to 54.13%, as of October 2012. Microsoft spent over $100 million per year on Internet Explorer in the late 1990s, with over 1000 people working on it by 1999.

Section 5　Extended Reading（拓展阅读）

Getting More Comfortable with Computers

When I stepped into campus my freshman year of college with my one semester of C programming beneath my belt, I had no clue that I would be appointed my floor's computer genius.

Maybe it was my willingness to help my floor mates hook up their computers, but suddenly everyone on my floor was turning to me for their computer problems. Rarely a day passed by without someone asking me to install some new piece of software, to get their printer up and running again, or teach them how to use some new programs.

At first, I didn't have a clue why they would turn to me. It wasn't like I was a true computer guru who programmed for fun and could read binary. I was just your average computer user who sometimes knew the right combination of buttons to help retrieve a "lost" paper. Then, one day after helping a friend squeeze far more programs than we probably should have onto her computer, the answer hit me: I understand the three fundamental rules for dealing with computers. Understand these rules and you too can have dozens of people convinced that you are the source of

computer knowledge.

Rule 1. Save It! When computers, or computer programs decide to shut down or otherwise fail you, it is almost always when you're on page 29 of your 30-page research paper. If you've been saving all along, you've lost half a page, maybe a page, both of which are a lot easier to recreate from memory than the 29 pages you would have lost if you hadn't been saving at all.

Yes, some programs have an auto-save feature, and some programs can even recover material you never saved. But often, these features fail. Saving often will save you a lot of headache. The general rule is to hit save every half-page or so.

Rule 2. Help! Almost every computer program has a help button designed to provide information about how to use the program. Many also come with a tutorial step-by-step guide that walks you through the basic use of the programs. Hardly anyone uses them. Using the help feature is not like asking for your directions. There's no stigma attached to using it, and no one but you and the computer even have to know that you used it. So use it and embrace it, you'll be better off for it. Granted, sometimes the help feature won't be able to answer your question, but that's when you turn to other sources of help, e.g. online tutorials, tech support lines, or that tech kid down the hall who hasn't left his room in a week.

Rule 3. Practice. If the only time you approach a computer is to type up a paper or check your e-mail, you won't ever get comfortable with them. To get comfortable use them a lot. Play with programs you've never tried before, learn a programming language, build your own web page. You'll find out that computers almost follow a pattern.

As colleges and businesses in general become more and more computer based, it's becoming mandatory to have a great working knowledge of computers. And while there are software packages(like Microsoft Office) that everyone should know how to use, being comfortable using computers isn't about memorizing how to use every computer program out there.

Anyone can teach you to use a program, but unless you get the gist of what you're doing when the technology changes, you'll be left computer illiterate. Learn the fundamental rules, and use them, and you won't be left in the technological dust.

New Words and Expressions		
guru	*n.*	专家、权威
binary	*n.*	二进制
retrieve	*v.*	使恢复、使再生
squeeze	*v.*	硬塞
recreate	*v.*	恢复
feature	*n.*	特点、特色
tutorial	*adj.*	辅导的、指导的
stigma	*n.*	污名、耻辱、烙印、特征
embrace	*v.*	接受、采取
mandatory	*adj.*	强制的、必须履行的
illiterate	*n.*	文盲

beneath one's belt		被自己获得
hook up		安装
shut down		关闭、停工
in the dust		受辱的

➤ **Task 1**　Judge the following statements true or false according to the passage.

1. When the author first came to the campus he knew he would become a computer genius.

(　　)

2. The author understands the three fundamental rules for dealing with computers.　(　　)

3. It was very often for the author to help others install some new piece of software, to get their printer up and running again, or teach them how to use some new programs.　(　　)

4. Most computer programs have a help button designed to provide information about how to use the program.　(　　)

5. Anyone can teach you to use a program, so you are not likely to be a computer illiterate.

(　　)