

DIVISION DE EDUCACION CONTINUA
CURSOS ABIERTOS
INGLES TECNICO MODULO BASICO
Del 13 al 31 de marzo de 1995.

FECHA	HORARIO	TEMA	PROFESOR
Junes 13 al Viernes 31	19 a 21 hrs.	Uso de vocabularios Nombres Pronombres Artículos Preposiciones Verbos y tiempos Presente Pasado Futuro Gramática básica Introducción a la gramática de nivel intermedio Estructuras elementales de lectura y escritura de inglés técnico	Ing. J. Antonio Tena C.

EVALUACION DEL PERSONAL DOCENTE

CURSO: Inglés Técnico Módulo Básico
 FECHA: del 13 al 31 de marzo de 1995.

CONFERENCISTA	DOMINIO DEL TEMA	USO DE AYUDAS AUDIOVISUALES	COMUNICACION CON EL ASISTENTE	PUNTUALIDAD
Ing. José Antonio Tena Colunga				

EVALUACION DE LA ENSEÑANZA

ORGANIZACION Y DESARROLO DEL CURSO	
GRADO DE PROFUNDIDAD LOGRADO EN EL CURSO	
ACTUALIZACION DEL CURSO	
APLICACION PRACTICA DEL CURSO	

EVALUACION DEL CURSO

CONCEPTO	CALIF.
CUMPLIMIENTO DE LOS OBJETIVOS DEL CURSO	
CONTINUIDAD EN LOS TEMAS	
CALIDAD DEL MATERIAL DIDACTICO UTILIZADO	

ESCALA DE EVALUACION: 1 A 10

1.- ¿LE AGRADO SU ESTANCIA EN LA DIVISION DE EDUCACION CONTINUA?

SI	NO
----	----

SI INDICA QUE "NO" DIGA PORQUE.

2.- MEDIO A TRAVES DEL CUAL SE ENTERO DEL CURSO:

PERIODICO EXCELSIOR		FOLLETO ANUAL		GACETA UNAM		OTRO MEDIO	
PERIODICO EL UNIVERSAL		FOLLETO DEL CURSO		REVISTAS TECNICAS			

3.- ¿QUE CAMBIOS SUGERIRIA AL CURSO PARA MEJORARLO?

4.- ¿RECOMENDARIA EL CURSO A OTRA(S) PERSONA(S)?

SI		NO	
----	--	----	--

5.- ¿QUE CURSOS LE SERVIRIA QUE PROGRAMARA LA DIVISION DE EDUCACION CONTINUA?

6.- OTRAS SUGERENCIAS:



**FACULTAD DE INGENIERIA U.N.A.M.
DIVISION DE EDUCACION CONTINUA**

CURSOS ABIERTOS
INGLES TECNICO MODULO BASICO
marzo 13 a marzo 31 de 1995
DIRECTORIO DE PROFESORES.

ING. JOSE ANTONIO TENA COLUNGA
GERENTE DE INVESTIGACION Y DESARROLLO
GRUPO CONCREMET
NUEVA YORK No. 1-15-1er. PISO
Tel. 669 07 00



**FACULTAD DE INGENIERIA U.N.A.M.
DIVISION DE EDUCACION CONTINUA
CURSOS ABIERTOS**

INGLES TECNICO MODULO BASICO

Study Section 3.7



One, two, three,
four, five, six, seven,
eight, nine, ten,
twenty, thirty,
forty, fifty.

1 2 3 4 5 6 7 8 9 10
20 30 40 50

Practice 12

Read out these numbers:

5 9 6 3 7 20 8 40 50 5 2 1 10 30

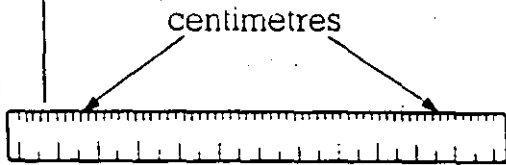


Practice 13

Write down these numbers:

Seven, six, nine,
three, thirty, eight,
fifty, five, four,
twenty.

Study Section 3.8



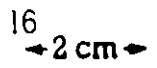
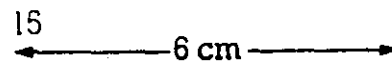
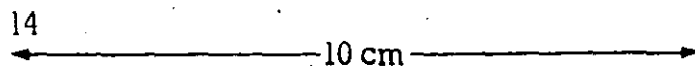
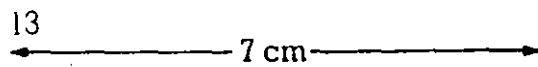
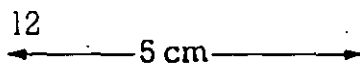
One centimetre.
Six centimetres.
Thirty centimetres.

1 cm 6 cm
30 cm

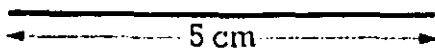
Practice 14

Read out these:

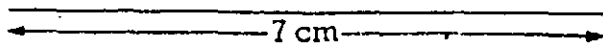
1 4 cm 2 8 cm 3 20 cm 4 1 cm 5 10 cm 6 2 cm 7 3 cm
8 50 cm 9 1 cm 10 7 cm 11 30 cm



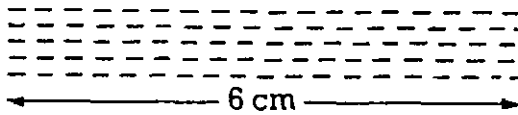
Study Section 3.9



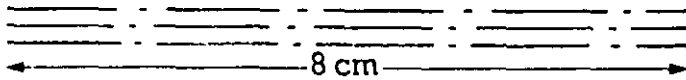
This is a thick line.
It is 5 cm long.



This is a thin line.
It is 7 cm long.



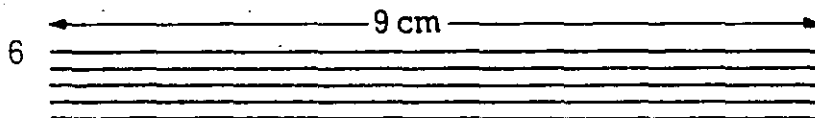
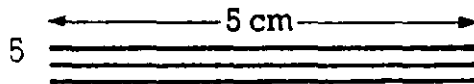
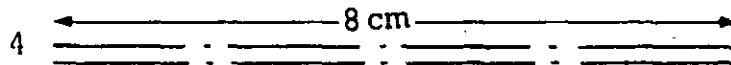
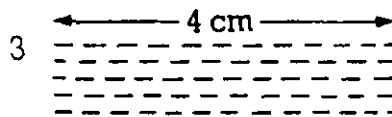
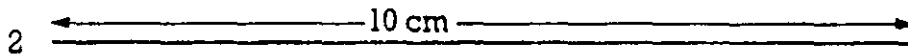
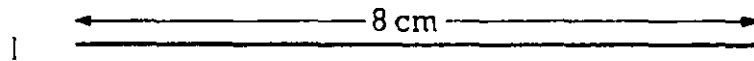
These are dotted lines.
They are 6 cm long.



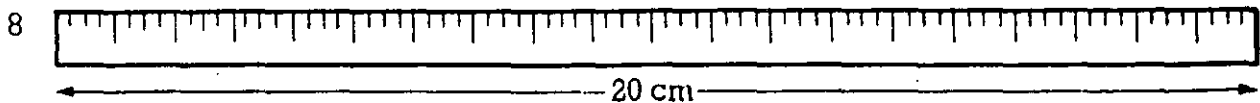
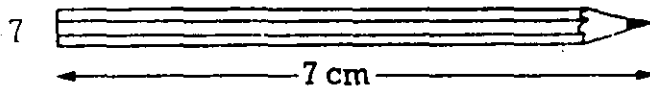
These are broken lines.
They are 8 cm long.

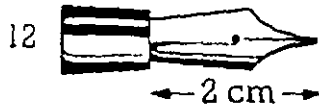
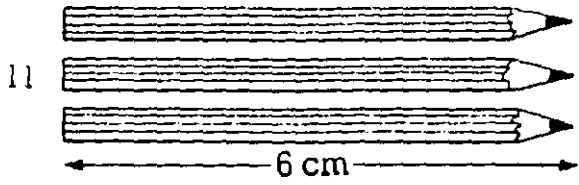
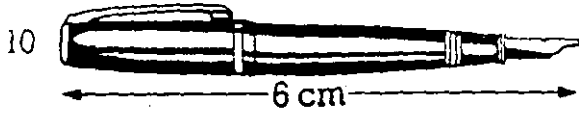
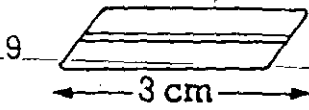
Practice 15

Describe these lines:

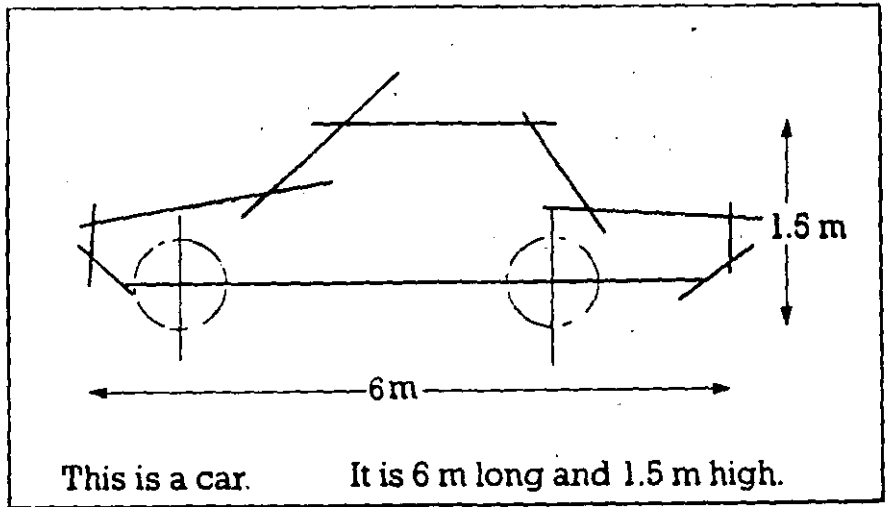


Now describe these objects:



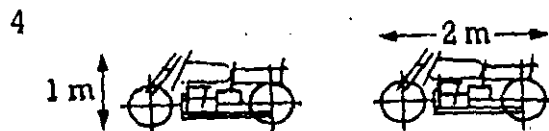
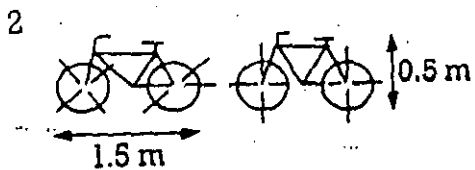
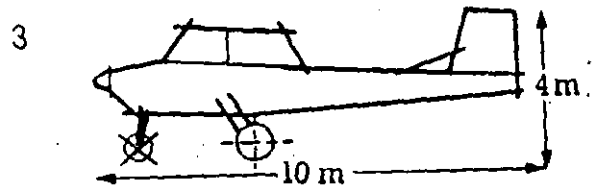
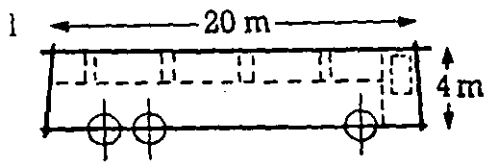


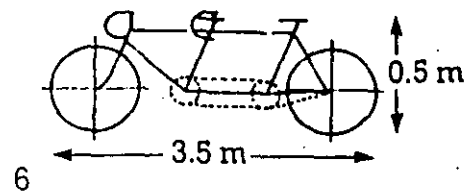
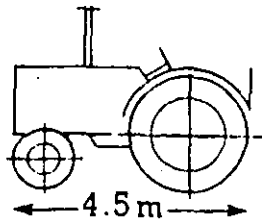
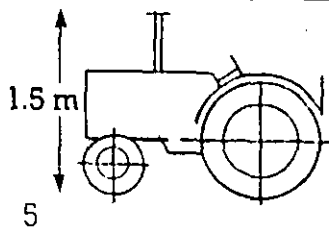
Study Section 3.10



Practice 16

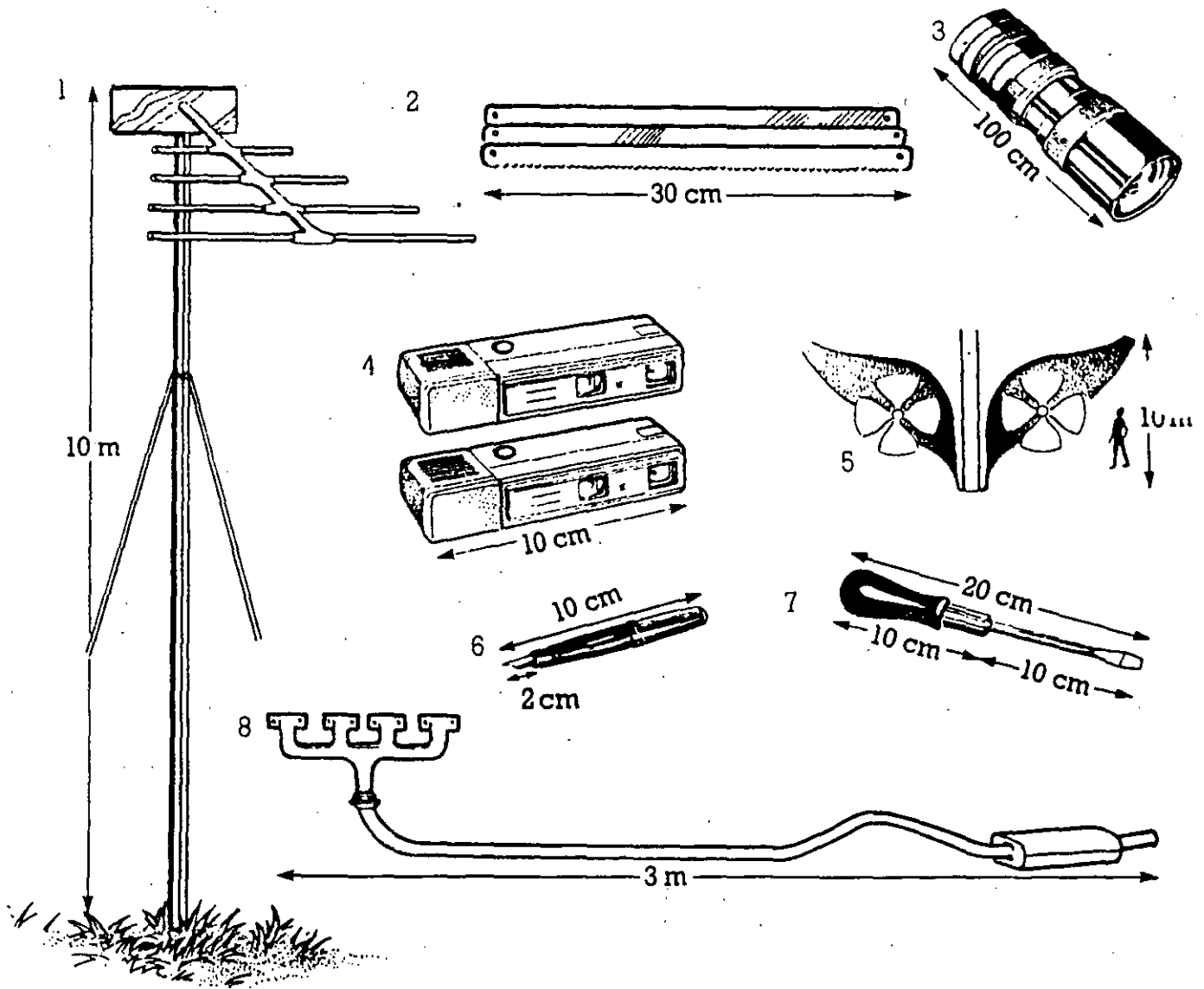
Describe these objects:





Revision Exercise

Describe these objects:



Unit 4

Technical Measurement

Study Section 4.1

11 = eleven	18 = eighteen	43 = forty-three	200 = two hundred
12 = twelve	19 = nineteen	50 = fifty	300 = three hundred
13 = thirteen	20 = twenty	60 = sixty	1.5 = one point five
14 = fourteen	21 = twenty-one	70 = seventy	1.6 = one point six
15 = fifteen	30 = thirty	80 = eighty	1.7 = one point seven
16 = sixteen	32 = thirty-two	90 = ninety	6.1 = six point one
17 = seventeen	40 = forty	100 = one hundred	7.2 = seven point two

Language Point

Seven / 7 is a number.
Seven is a word.
7 is a figure.
1.7 is a decimal.

Practice 1

Write these figures in words:

- | | | | |
|---|------|----|-----|
| 1 | 15 | 6 | 92 |
| 2 | 16 | 7 | 500 |
| 3 | 16.5 | 8 | 9.3 |
| 4 | 44 | 9 | 1.8 |
| 5 | 87 | 10 | 8.4 |

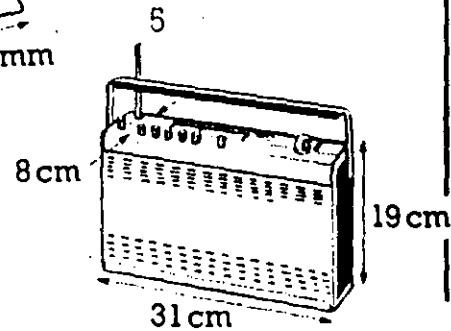
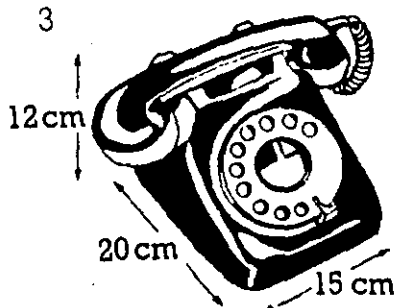
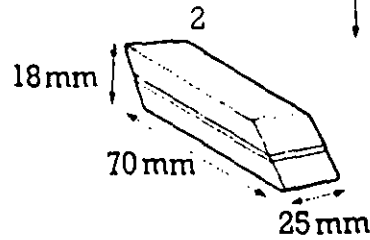
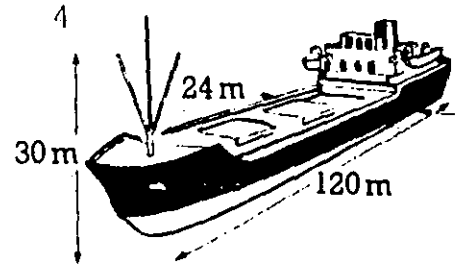
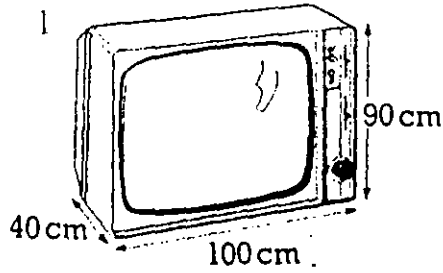
Practice 2

Now write these words in figures:

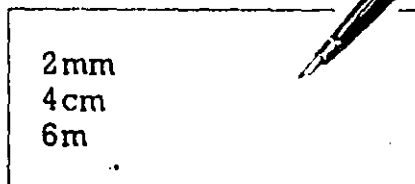
- seventeen
- sixty-three
- seventy-nine
- eight point seven
- one point one
- twelve point three
- forty-five point six
- ninety-nine point nine
- seven hundred
- one hundred and one

Practice 4

Describe these objects in the same way:



Language Point

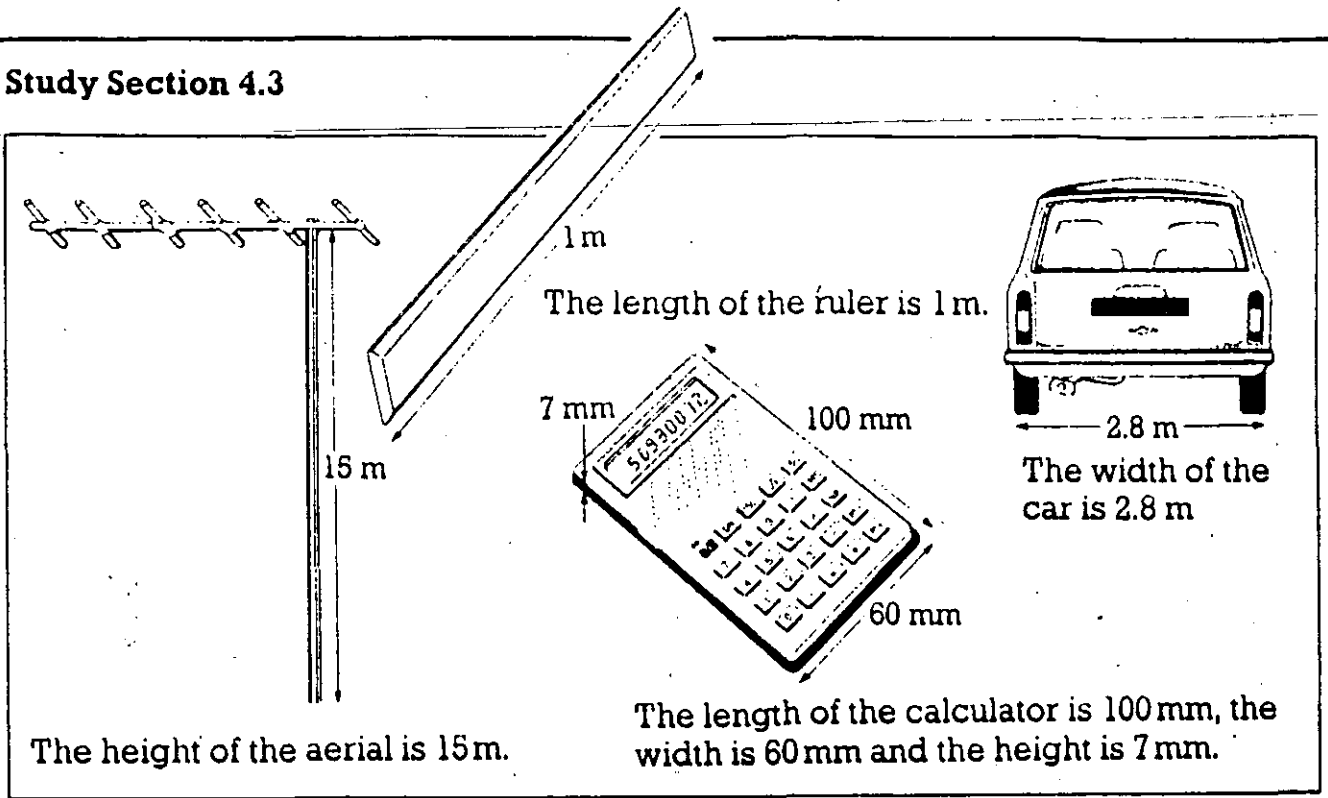


Two millimetres.
Four centimetres.
Six metres.

Practice 5

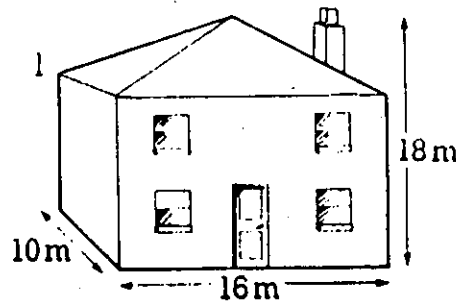
- 1 Draw a cube 5 cm long, 5 cm high and 5 cm wide.
- 2 Draw a television 50 cm long, 20 cm wide and 45 cm high.
- 3 Draw a car 4 m long, 2 m wide and 1.5 m high.
- 4 Draw a lorry 10 m long, 3.5 m wide and 4 m high.
- 5 Draw a dotted line 6.5 cm long and a broken line 7.8 cm long.

Study Section 4.3

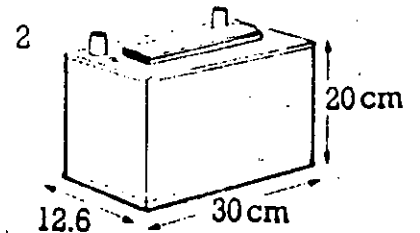


Practice 6

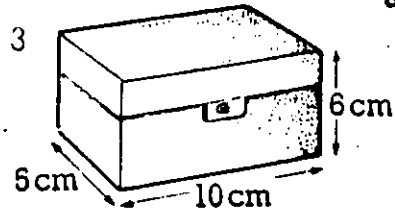
Describe these objects. Use the words length, width and height:



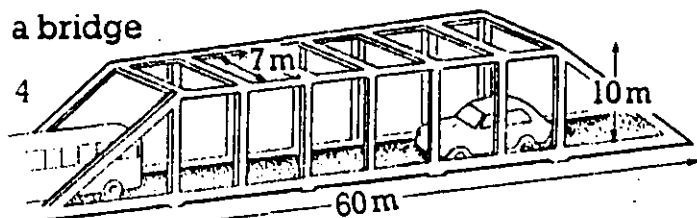
a house



a battery



a box



a bridge

Unit 6

How Things Work

Study Section 6.1

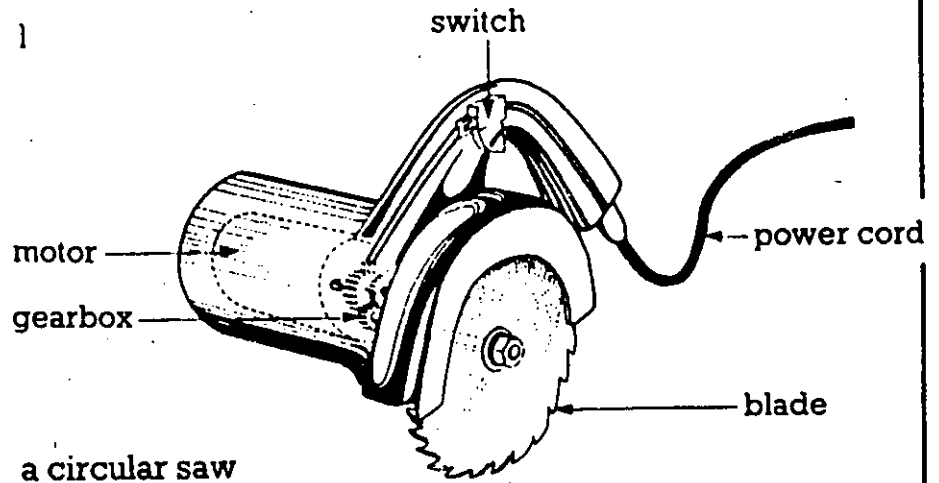
an electric drill

gearbox motor
bit
chuck
switch
power cord

This is an electric drill. It has a power cord, a switch, a motor, a gearbox and a chuck. The power cord supplies electricity to the switch. The switch connects the electricity to the motor. The motor drives the gearbox. The gearbox drives the chuck. The chuck holds the bit.

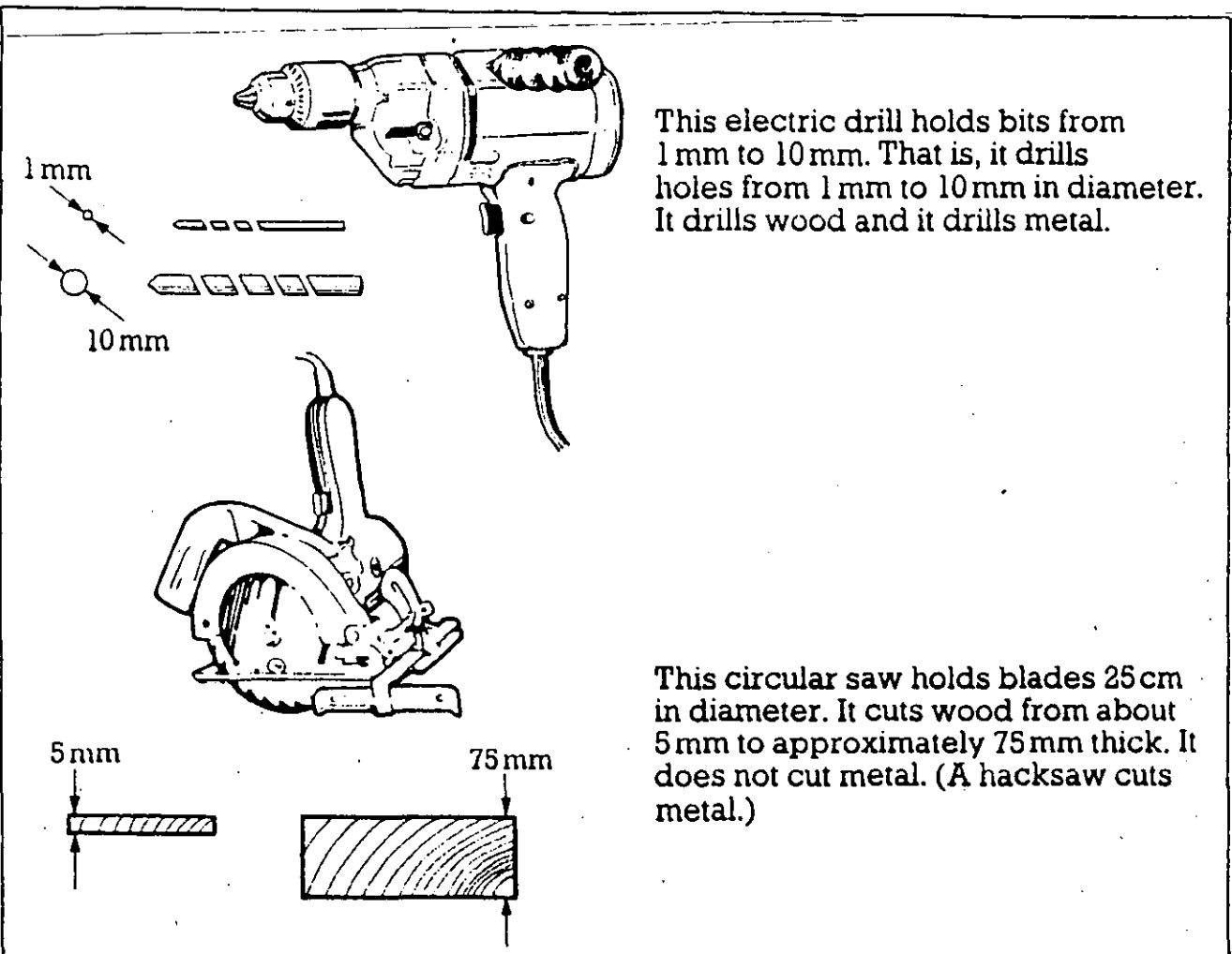
Practice 1

Describe how these things work:



This is a It has a power cord,
a, a, a and a The power
cord electricity to the switch. The switch

Study Section 6.2



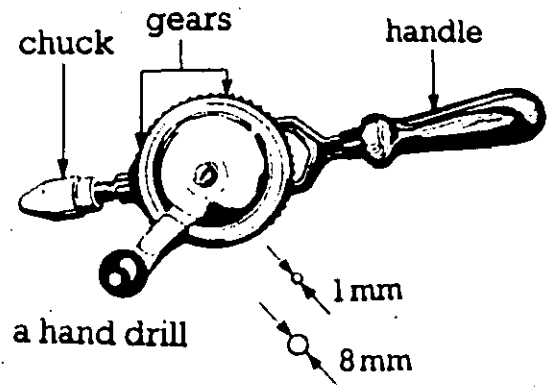
This electric drill holds bits from 1 mm to 10 mm. That is, it drills holes from 1 mm to 10 mm in diameter. It drills wood and it drills metal.

This circular saw holds blades 25 cm in diameter. It cuts wood from about 5 mm to approximately 75 mm thick. It does not cut metal. (A hacksaw cuts metal.)

Practice 5

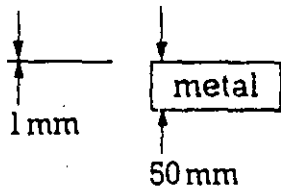
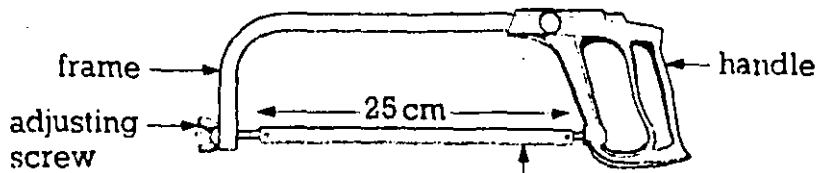
Describe these tools:

1



This is a It has two, a and a The chuck bits from to That is, it holes from to in diameter. It wood and metal.

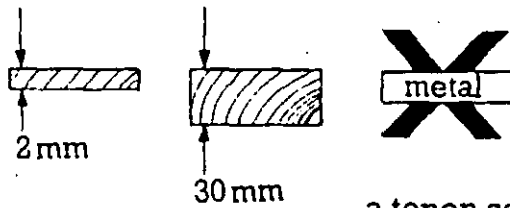
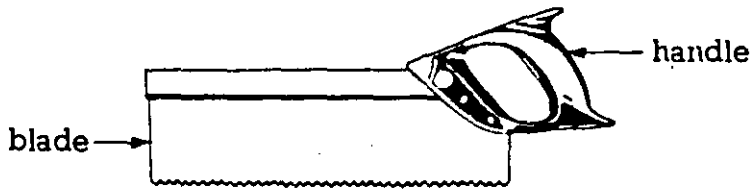
2



a hacksaw

This is It has The frame blades 25 cm long. It metal from to thick.

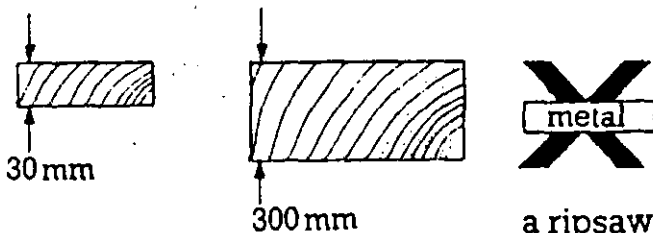
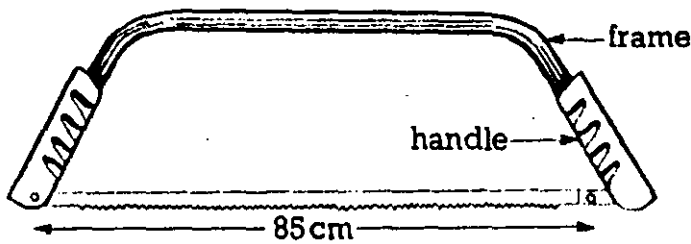
3



a tenon saw

This It It thick. It not metal.

4



a rip saw

.....

Language Point

A hacksaw cuts metal.
A tenon saw does not cut metal.

Practice 6

Make ten sentences from this table:

A circular saw			wood
A tenon saw			metal.
A ripsaw	(does not)	cut(s)	
A hacksaw			
A knife			

Practice 7

Draw diagrams from these descriptions:

- 1 This is a small hacksaw. It has a handle, a frame and a blade. It does not have an adjusting screw. The frame holds blades 120 cm long. It cuts metal from 1 mm to 25 mm thick.
- 2 This is a screwdriver. It has a handle and a blade. The handle is 5 cm long. The blade is 10 cm long. The diameter of the blade is 2.5 mm. The diameter of the handle is 12 mm.
- 3 This is a hand drill. It is 20 cm long. The handle is 8 cm long. The diameter of the large gear is 12 cm. The diameter of the handle is 3.5 cm. The chuck holds bits from 1 mm to 8 mm. That is, it drills holes from 1 mm to 8 mm in diameter. It drills wood and metal.

Language Point

A tenon saw does not cut metal.

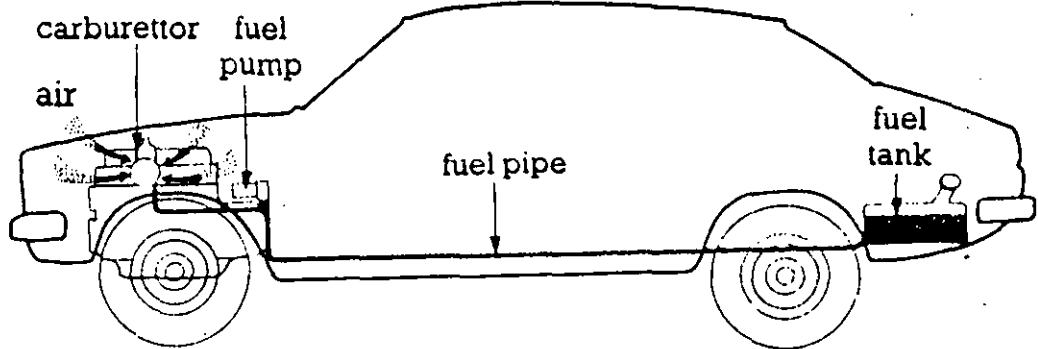
A tenon saw
doesn't cut
metal



Unit 8

Engines

Study Section 8.1



An engine produces power by burning air and fuel. The fuel is stored in a fuel tank. (This is usually at the back of the car.) The fuel tank is connected to a fuel pipe. The fuel pipe carries the fuel to a fuel pump. The fuel pump is connected to the carburettor. The fuel pump pumps the fuel into the carburettor. In the carburettor the fuel is mixed with air. The fuel and air are drawn into the engine. In the engine the fuel and air are burned to produce power.

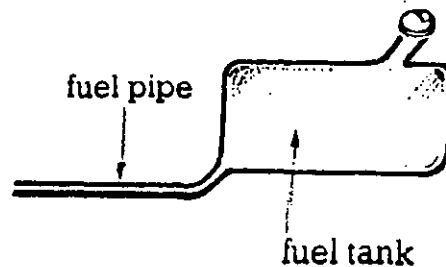
Practice 1

Are these statements true or false?

- 1 An engine produces fuel by burning air and power.
- 2 The fuel tank is usually at the back of a car.
- 3 Fuel is stored in a fuel tank.
- 4 The fuel pump pumps fuel to the fuel tank.
- 5 The carburettor is connected to the fuel pump.
- 6 The carburettor mixes fuel and air.

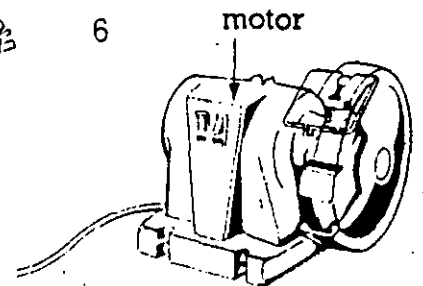
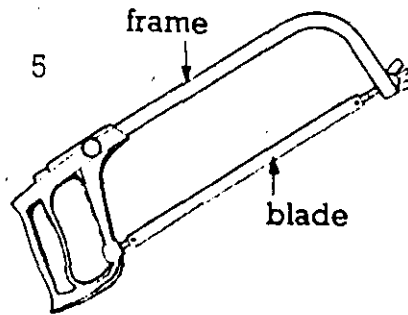
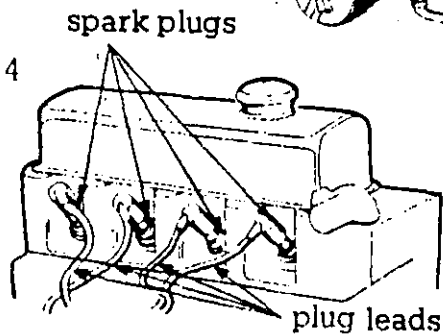
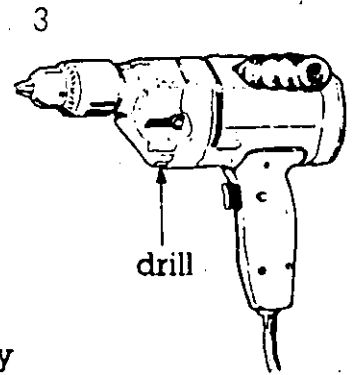
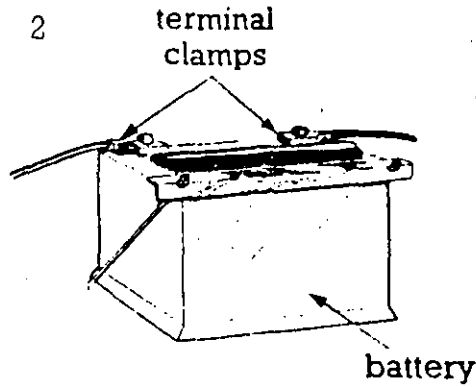
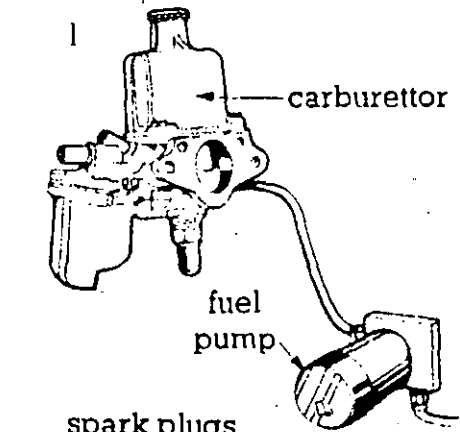
Practice 2

Look at this example:



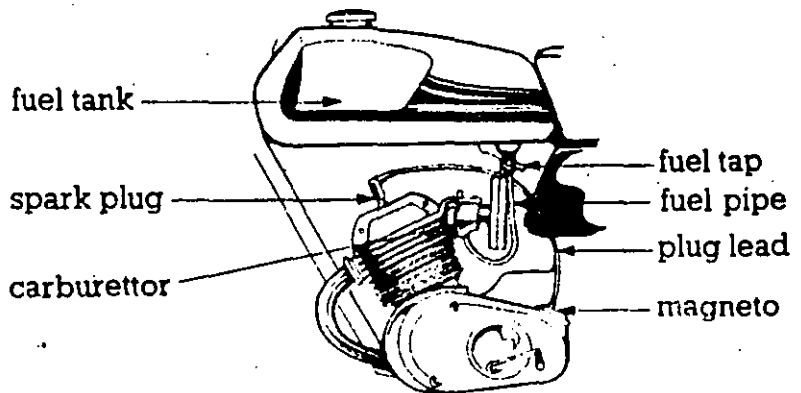
The fuel tank is connected to a fuel pipe.

Now describe these pictures in the same way.



Practice 3

1 Look at this diagram of a motorcycle engine:



Now complete this description:

The above shows a motorcycle engine. Fuel is in the fuel tank. A fuel pipe is to the fuel tank. The fuel pipe the fuel to the fuel tap. The fuel tap turns the fuel on off. The fuel tap is to the carburettor. In the carburettor, the fuel is with The fuel and air drawn into the engine. In the engine they to produce power. There is a spark plug in the engine. The spark plug to a plug lead. The plug lead to the magneto.

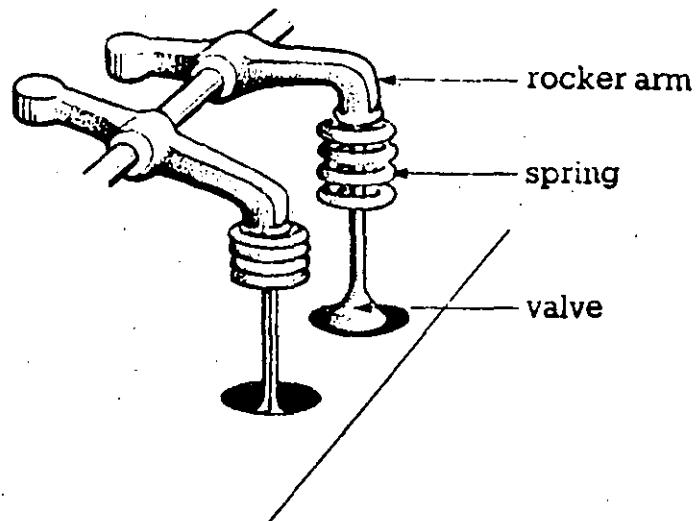
Practice 5

Are these statements true or false? If they are false, make true statements.

- 1 Fuel and air are drawn into the piston by the cylinder.
- 2 The inlet valve is opened by a spring.
- 3 The fuel and air are compressed by the piston.
- 4 The spark plug ignites the fuel and air.
- 5 The cylinder burns and expands very quickly.
- 6 The rocker arm is opened by an exhaust valve.
- 7 The piston expels the burned fuel and air from the cylinder.
- 8 An engine produces power by burning pistons.

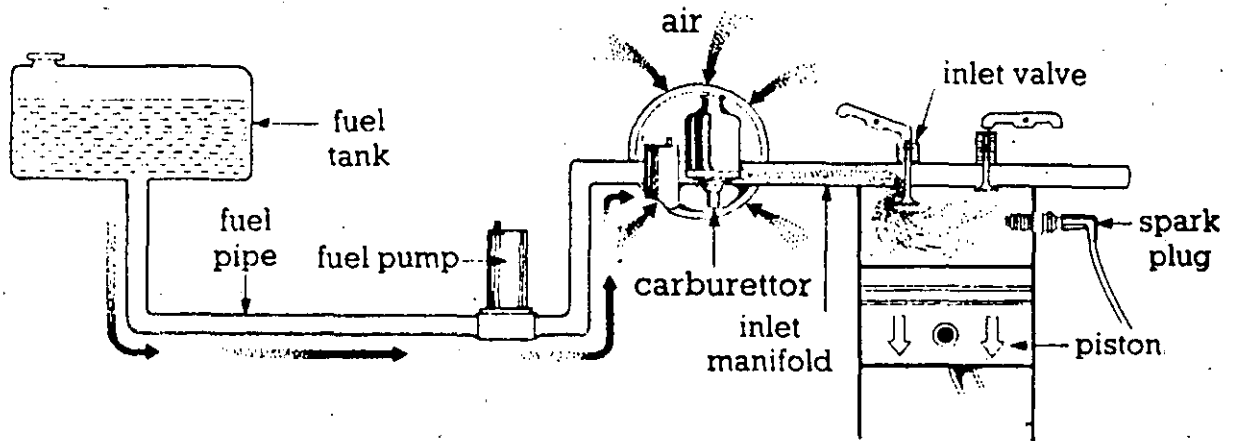
Practice 6

- 1 Look at this diagram of a valve and rocker arm and then complete the paragraph below:



The diagram above shows a valve a rocker arm. The valve is opened by the rocker arm and it is by a To open the valve, the rocker arm the valve down and compresses the The spring to close the valve. In an engine there are usually valves in a cylinder - the inlet valve and the exhaust valve. An engine with four cylinders usually has valves.

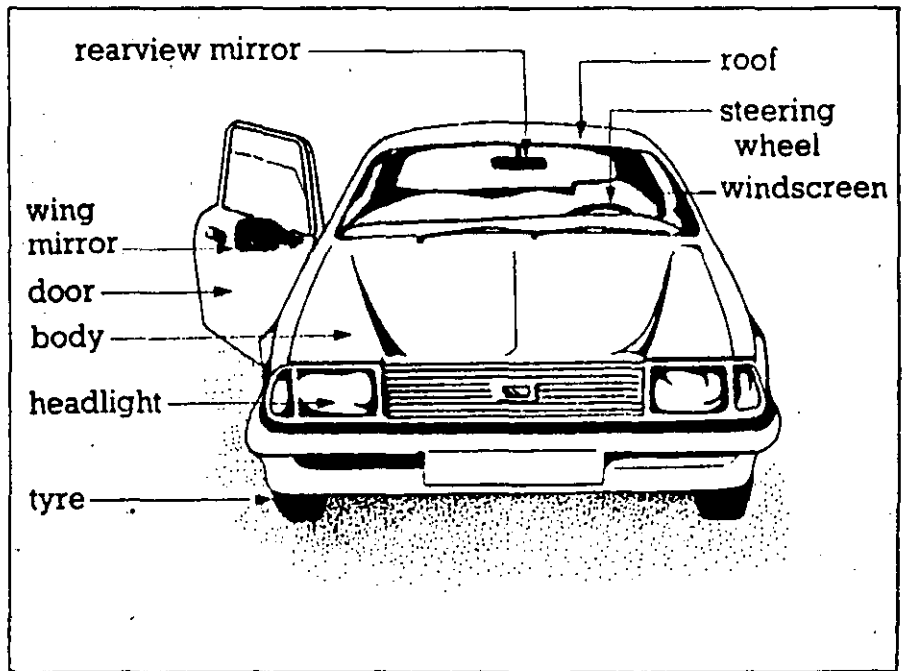
2— Now look at this diagram of an engine and complete the paragraph below it:



The fuel in the fuel tank. A fuel pipe the fuel to the fuel pump. The fuel pump is the carburettor. It the fuel into the carburettor. In the carburettor the fuel with air. The inlet manifold carries the fuel and air to the inlet valve. The fuel and air into the cylinder by the piston. The inlet valve by a rocker arm and it by a spring. The fuel and air are compressed Then they by the spark plug. They very quickly and the piston down.

Study Section 8.3

A car is made of different materials. The windscreen, for example, is made of glass. The headlights are also made of glass. The tyres are made of rubber. They are filled with air. The air in the tyres is compressed (to approximately 1.5 gm/cm^3). The body is made of metal. The metal

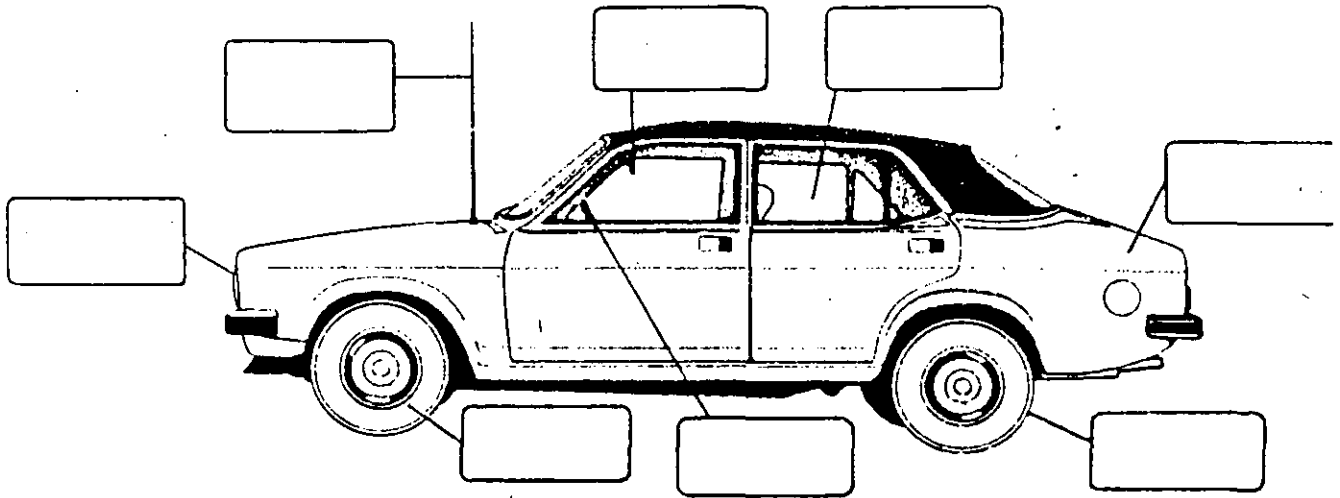


is painted. The steering wheel is made of plastic. The mirrors are made of plastic and glass. This car has two mirrors. The rear-view mirror is fixed to the roof. The wing mirror is fixed to the door.

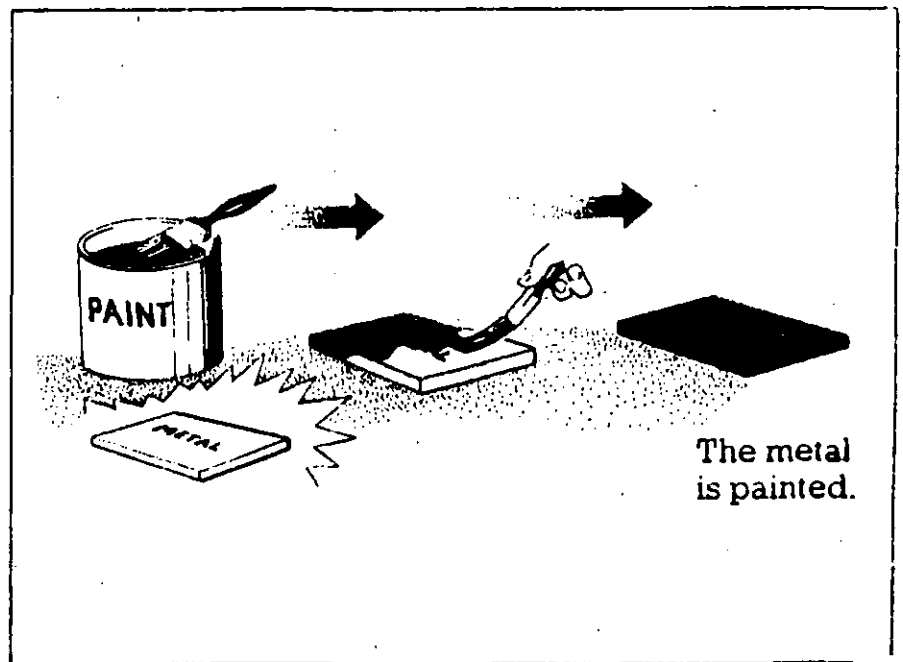
The engine is made of different metals. The pistons are made of aluminium and the valves are made of steel. The springs are also made of steel.

Practice 7

What is a car made of? Write the names of the materials in this picture:



Language Point



MODEL LETTER: Applying for a Job

► Annette Lee is applying for the job.
Read her letter.

► Circle the correct answer.

1. Who wrote the letter?

- A. Mrs. Bok
- B. Annette Lee

2. Who is the letter to?

- A. Mrs. Bok
- B. Annette Lee

3. Where does Annette live?

- A. 1900 Grant Avenue
- B. 16 North Road

4. What did Annette enclose?

- A. The San Francisco Chronicle
- B. Her resumé

5. What is Mrs. Bok's title?

- A. Human Resources Director
- B. Secretary

6. When was the letter written?

- A. June 28
- B. June 29

16 North Road
Berkeley, California 95436
June 29, 1993

Mrs. R. E. Bok
Human Resources Director
Perle Employment Agency
1900 Grant Avenue
San Francisco, California 92654

Dear Mrs. Bok:

I am applying for the position of secretary which was advertised in the San Francisco Chronicle of June 28.

I have enclosed my resumé, and I would like to schedule an interview. I will call you early next week.

I look forward to discussing this position with you.

Sincerely yours,

Annette Lee
Annette Lee

Enclosure

GOOD BUSINESS NOTE

"Follow-up" is very important. After you send the letter, you should call the employer. In your letter, give either general or specific times to call.

General: I will call you early next week.
Specific: I will call you Monday or Tuesday.

This keeps your name in front of an employer.

Acknowledging an Order

MODEL LETTER: Acknowledging an Order

EXECUTIVE OFFICE SUPPLIES

15 Watergate Plaza
New Orleans, Louisiana 70116
504-736-5223
Fax: 504-736-3123

April 22, 1994

Yuki Shibata
Marketing Department
A&E Construction
35 Hazel Wood Terrace
Logan, Utah 84321

Dear Ms. Shibata:

We received your Purchase Order 02-3450-6 on April 22, 1994. Unfortunately, the item below is not in stock:

Item No. P4344 Pens, black

We will backorder this item and ship it within three (3) weeks.

The rest of your order is being processed and will be shipped by Monday, April 25.

We appreciate your business and look forward to serving you in the future.

Sincerely yours,



John Peters
Shipping Clerk

► Circle the correct answer.

1. Where does John Peters work?
A. A&E Construction
B. Executive Office Supplies
2. Who ordered the supplies?
A. John Peters
B. Yuki Shibata
3. Who is the addressee?
A. Executive Office Supplies
B. Yuki Shibata
4. When was the letter sent?
A. April 22 B. April 21
5. When was the P.O. received?
A. April 22 B. April 25
6. Are the paper clips in stock?
A. Yes B. No
7. What is out of stock?
A. Pens, Black, Item No. P4344
B. Pens, Red, Item No. P5633
8. Are they on back order?
A. Yes B. No
9. When will they be sent?
A. In 3 weeks
B. In 2 weeks
10. When will the rest of the order be shipped?
A. By Monday, April 25
B. By April 23

MODEL LETTER: Requesting Information

► Jane writes a letter to the Click Camera Company.

► Circle the correct answer.

BSM

Bay State Magazine
300 Commonwealth Avenue
Boston, Massachusetts 02188
617-798-5556
FAX 617-798-0565

April 5, 1994

Public Information Department
Click Camera Company
1000 Riverview Boulevard
New York, New York 10010

Dear Sir or Madam:

In the April 4, 1994 Boston Daily News I read about your new camera, the XL-Lite. Since I am a photographer with Bay State Magazine, it is important that I know about new cameras.

Would you please send me information on the camera? I would like to know when the camera will be available and how much it will cost.

Thank you for your attention. I look forward to your reply.

Sincerely yours,


Jane Wilson
Photo Department

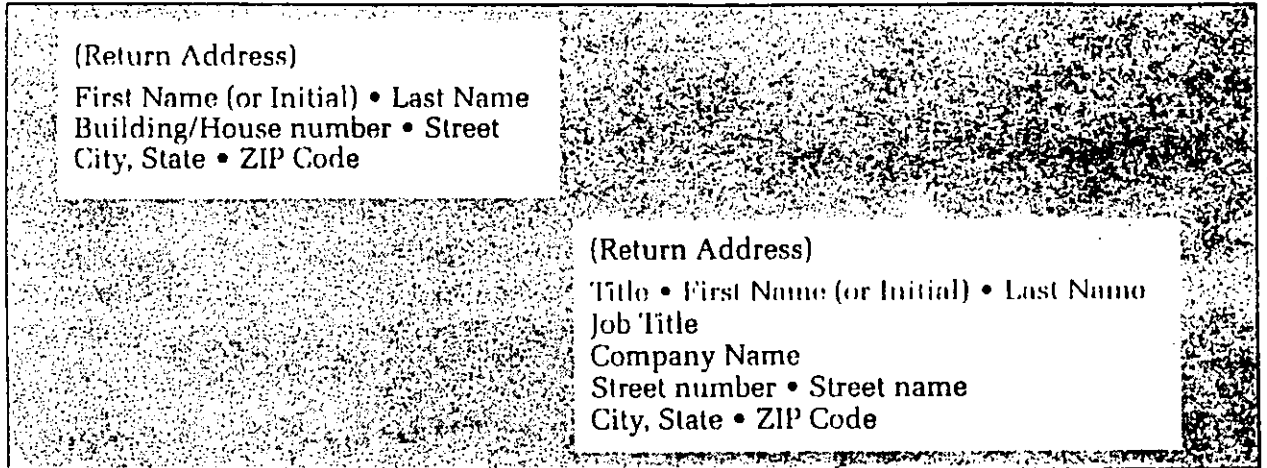
1. Jane wrote her letter on
A. April 4. B April 5.
2. Jane's job is with the
A. Bay State Magazine.
B. Click Camera Company.
3. The Click Camera Company is located in
A. Massachusetts.
B. New York.
4. The number 10010 is the zip code of the
A. sender. B. addressee.
5. Jane wants Click Camera Company to send
A. information.
B. a camera.
6. The paragraphs of this letter are
A. indented.
B. not indented.

Envelopes

FORMAT

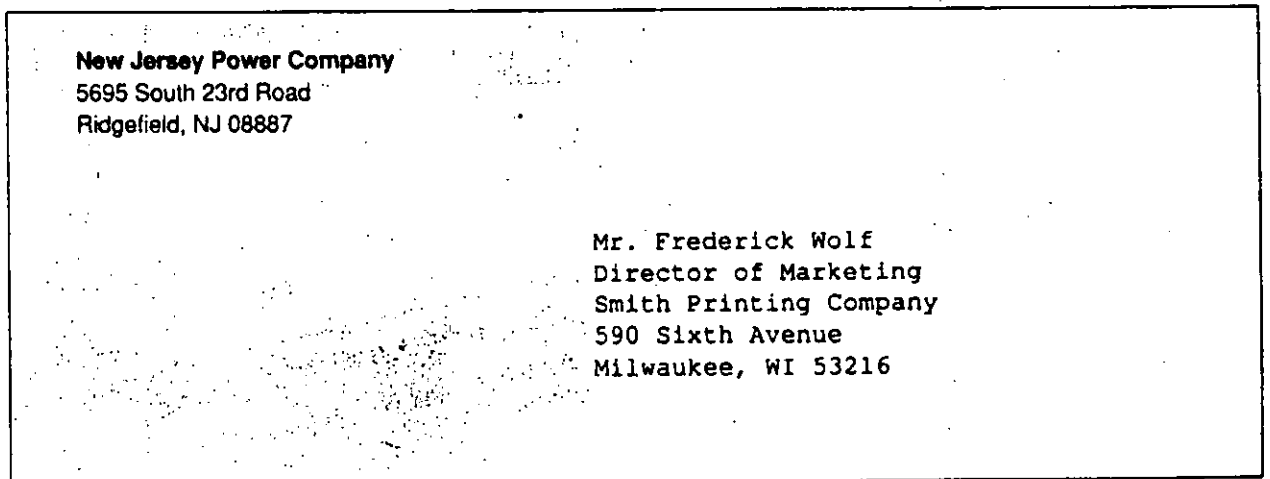
Most companies have envelopes with their companies' name printed on them. A secretary will only type the mailing address and stamp the letter.

PARTS OF AN ENVELOPE



EXERCISE 11: PARTS OF AN ENVELOPE

► *Look at this envelope.*



► *Circle the correct answer.*

1. What is the ZIP Code in the return address?
A. 08887 B. 53216
2. What is the ZIP Code in the mailing address?
A. 08887 B. 53216
3. What is WI?
A. Wisconsin B. West Indies
4. What state does the letter come from?
A. WI B. NJ
5. What state will the letter go to?
A. WI B. NJ

Electronic Mail

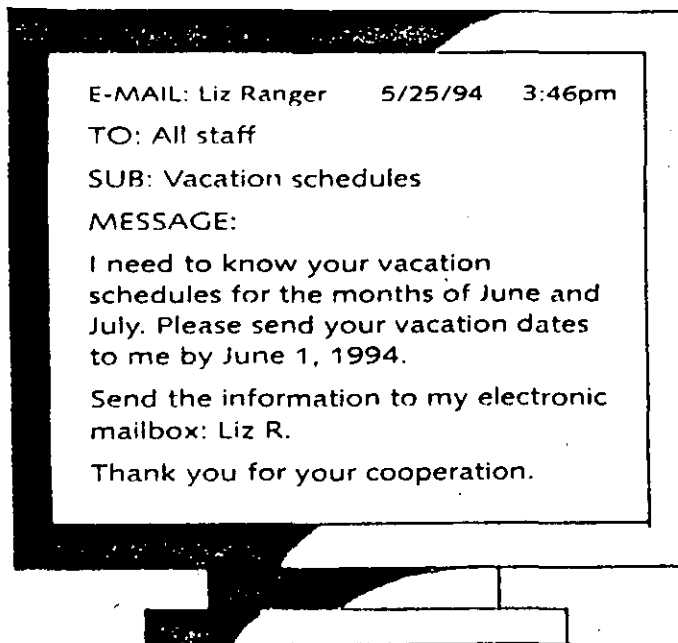
FORMAT

Many companies send interoffice messages through the computer. Messages sent by computer are called Electronic Mail or E-Mail.

A company can link all of its employees in one office by a computer or it can link its employees in offices around the country by a computer.

PARTS OF ELECTRONIC MAIL

There are usually six parts to an E-mail transmission. Look at this example.



The sender's name, date and the time are usually supplied by the computer. You only type in the name of the person receiving the message, the subject and the message.

EXERCISE 13: PARTS OF ELECTRONIC MAIL

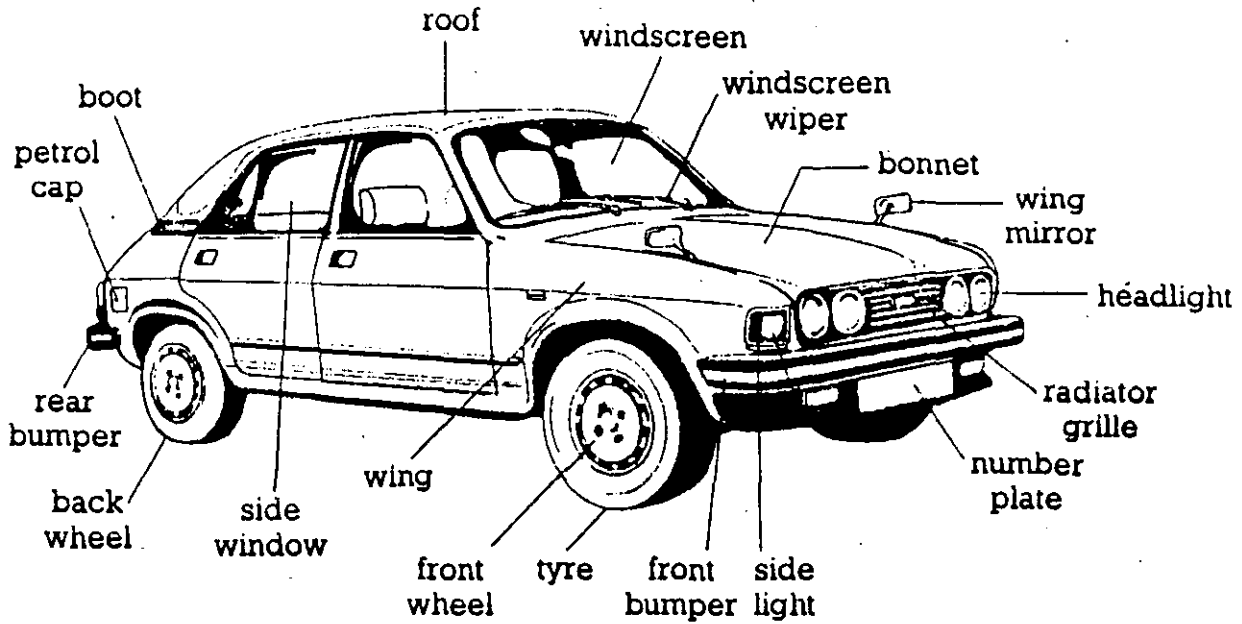
► Circle the correct answer. Use the E-mail transmission above.

1. Who wrote the memo?
A. The staff B. Liz Ranger
2. Who got the memo?
A. The staff B. Liz Ranger
3. What is the memo about?
A. Liz's vacation B. The staff's vacation dates
4. When should the staff send the information?
A. In June and July B. Before June 1
5. How should the staff reply?
A. By electronic mail B. In person

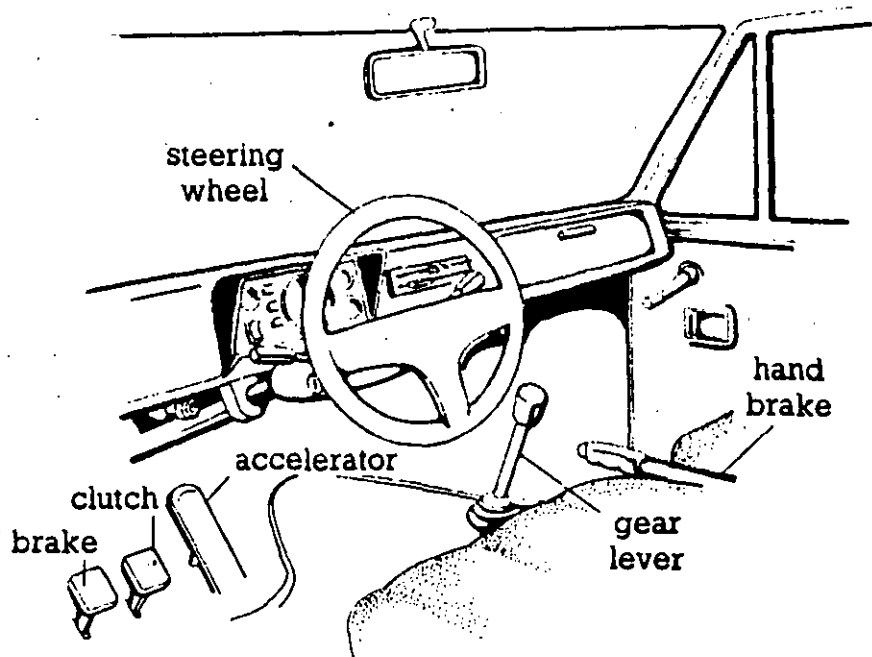
Appendices

Appendix 1

The External Parts of a Car

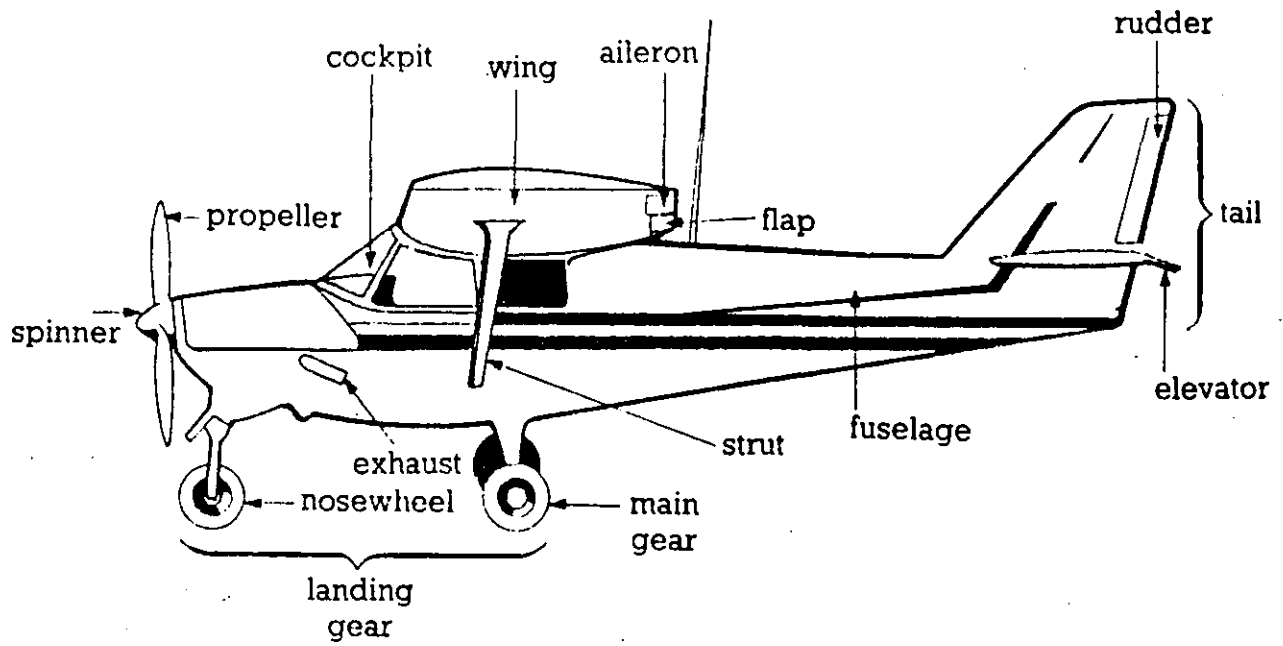


The Controls of a Car



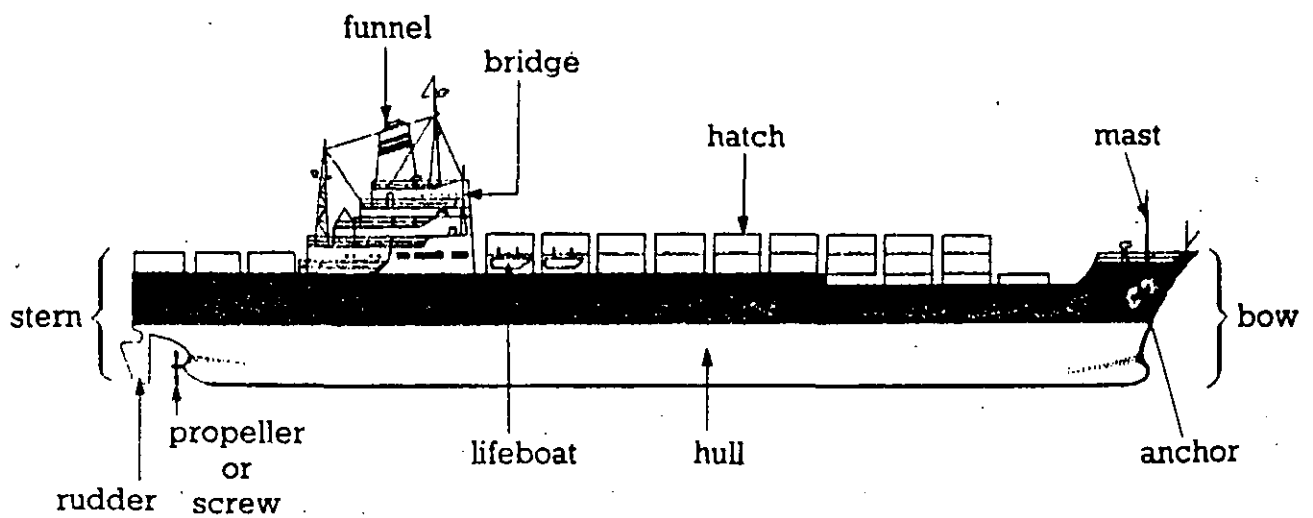
Appendix 2

The External Parts of an Aeroplane



Appendix 3

The External Parts of a Ship





**FACULTAD DE INGENIERIA U.N.A.M.
DIVISION DE EDUCACION CONTINUA**

**CURSOS ABIERTOS
INGLES TECNICO BASICO**

TRADUCCIONES

M.C. JOSE A. TENA COLUNGA

1

Good morning. Are you in the room? Yes, we are in the room with the woman. Is the cat on the table? No, it is not on the table. Is the dog on the chair? Yes, the dog is on the chair. Are you with the dog and the cat? Yes, we are with the dogs and the cats. Are the chairs in the room? Yes, the chairs are in the room. Is the table on the chair? No. The chair is on the table. Is the table in the room? Yes, it is. No, it is not. Is the man on the chair? Yes, he is. No, he is not. Are the cats in the room? Yes, they are. No, they are not. Is she a girl? Yes, she is. No, she is not.

3

There are eight big rooms and two little rooms in the house. There is also a nice garden with two little trees. The table is in the room near the window. There is a dog in the house, it is a black dog. There is also a black cat, but there are not white cats. The man is with the woman near the window. There are seven or eight lamps in the house. The two trees are in the garden near the door of the house. Are you in the house or in the garden? I am in the garden near the door of the house. Is the boy near the window? No, the boy is not near the window. The girl is near the window with the dog.

2

Yo soy un hombre. ¿Eres tú una mujer? Sí, yo soy una mujer. El es un chico y ella es una chica. ¿Qué es esto? Esto es una mesa. ¿Estáis vosotros en la habitación? Sí, estamos en la habitación. Vosotros sois chicos y nosotras somos chicas. ¿Están los animales en la habitación? Sí, el gato está en la mesa y el perro está en la silla. ¿Eres tú una chica? No. Soy un chico. ¿Está la mujer en la habitación? Sí, está en la habitación. ¿Está el perro en la mesa? No, el perro no está en la mesa, está en la silla. ¿Es ella una mujer? No, no es una mujer, es una chica. ¿Sois vosotros chicos? Sí, somos chicos.

7

Ayer fue el cumpleaños de Sonia. Frank, su novio, le regaló un ramo de flores y una caja de bombones. Sonia le dio las gracias. Estaba muy contenta. Abrió la caja y le dio un bombón. Frank le preguntó si quería ir al cine. Sonia le dijo que había una película muy bonita en el Astoria. Tenía dos Oscars. Una amiga le había dicho que era muy bonita. Había un autobús en la parada y lo cogieron. En cinco minutos estaban en el Astoria. Había varias personas cerca de la taquilla. Frank le preguntó si estaban en la cola. Le dijeron que no. Frank sacó dos entradas y las puso en el bolsillo. Sonia le estaba esperando cerca de la puerta. El acomodador les pidió las entradas y les mostró los asientos. Frank le dio una propina.

10

Esta chica es muy guapa, se llama Linda. Esa es bastante fea, se llama Gertrudis. Este sombrero tan bonito es de Linda, lo ha comprado en esa tienda. Aquel chico es Mikel uno de los amigos de Linda. Este es su coche. Hoy van a ir a cenar y luego al teatro. Van a cenar en aquel restaurante, en aquella esquina. Luego irán a ver "La Ratonera", de Agatha Christie, en ese teatro. Este chico tiene mucho dinero. Gertrudis, sin embargo, no tiene amigos ricos. Este es su novio, Rigoberto. Rigoberto no es rico, es pobre. Esta es su bicicleta, aquella es su casa. Estos son sus padres. Rigoberto va a llevar a Gertrudis a este cine. En el cine comerán estos cacahuetes. Después irán a pasear.

4

Is the dog with the cat or with the girl? The dog is not with the cat and it is not with the little girl. It is with Richard. Has the room two windows? No. It has one big window. Have they eight chairs? No. They have six little chairs. Is there a dog in the house? No, there is not a dog in the house. Are there two cats in the garden? No, there are not. Is there a chair in the garden? No, there is not. Is there a big tree in the garden? No, there is not a big tree. There are two little trees. Is there a man in the garden? Yes, there is also a woman. Is there a small wall in the garden? Yes, there is a small wall. Is there a boy in the room? Yes, there is a boy but there is not a girl.

5

Are there five glasses on the table? No, there are not five glasses. There are six. Are there five chairs in the garden? No, there are not any chairs in the garden. There is a white table. Is Peter in the house? No. He is in the garden. Has Peter the cats? No. He has the dogs. Is there a lamp on the floor? No, there is not a lamp on the floor. There is a small cat on the floor in the room. Are there dogs in the room? Yes, there is a black dog. Is there a lamp on the wall? Yes, there is a white lamp on the wall. Are there three chairs in the garden? There are two chairs and one table. Is there a window in the room? There are two windows. Are there four rooms in the house? There are five rooms.

6

'Mary, I saw your sister yesterday.' 'Where did you see her?' 'I saw her at the station.' 'Did you speak to her?' 'Yes, we were talking until the train left.' 'What did she tell you?' 'She told me that she was going to Reading to see a friend.' 'Yes, her friend Pauline. She goes to see her very often.' 'There comes my bus, I'm going to take it.' 'Where are you going?' 'I'm going to the Centre. Tomorrow is my mother's birthday and I'm going to buy her a present.' 'I saw her the other day and I found her very well.' 'Yes, on Sunday she gave us a surprise. She told us that she was going to start jogging.' 'How old is she?' 'She is seventy years old.' 'And what are you going to buy for her?' 'I'm going to buy her a tracksuit.' 'I think it is a good idea. I like it.'

8

'At what time will you be there?' 'At about 10.' 'When will you finish the book?' 'In two weeks' time. At present I'm working very hard.' 'When shall I see you?' 'At lunch time.' 'In which epoch does the story of the book take place?' 'In the Middle Ages. Life was very difficult at that time. People were very poor in the Middle Ages. They worked seven days a week, ten hours a day. This is the story of a young man. He was born in London, in spring. His mother died at his birth. His father was a carpenter. He worked 12 hours a day building ships. When the young boy was seven his father died. He still lived in the streets at the age of eight. He slept wherever he could and ate whenever people gave him something.'

9

'Good morning. Can you show me those skirts?' 'These?' 'No. Can I see that one, please?' 'This one?' 'No, not that one. That one next to the red one.' 'Here you are. It's very nice.' 'How much is it?' 'Seventy pounds.' 'It's a little expensive.' 'Show me that one, please.' 'This one?' 'No, not that one. The green one.' 'Here you are. This one is cheap. Forty pounds.' 'Yes, but I don't like these stripes. Can I see those?' 'Of course madam. These?' 'No, not those. Those over there.' 'Here you are. You have them of all prices. These with stripes. These without stripes. These are cheap. Those are expensive.' 'They are not bad. Can you show me those handkerchiefs, please?'

11

'Good morning, boys. I hope you have studied the geography lesson. I'm going to ask you a few questions. Kate, how long is the Thames?' 'I think it's about 400 kilometres long.' 'Well, a little less, but not bad. James, how high is Everest?' 'Everest is 8,848 metres high.' 'Very well, and how long is the Amazon River?' 'It's 6,280 kms long.' 'Very well. That is the exact answer. And how high is Big Ben, Bernard?' 'It's about 100 metres high.' 'Well, it's 98 metres high, to be exact. Let's see, Lucy. I see you a little sleepy today. Where are the Pyrenees?' 'I don't know Miss Jones. I assure you that I haven't taken them ...'

READING 1:1

One part, or aspect, of your lifestyle is how you organize your work. Read this passage about styles of organizing work.

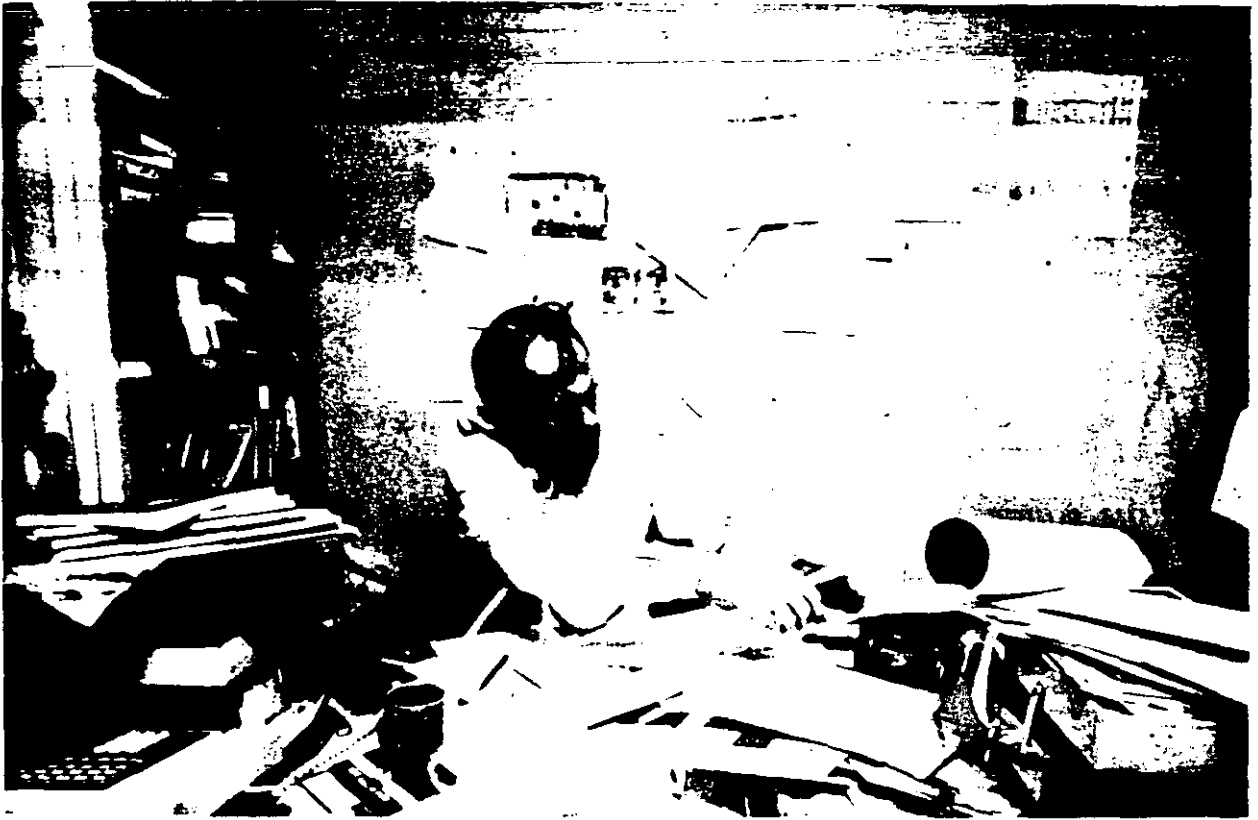
ORGANIZING WORK SPACE

Are you a neat person or a messy person? Is your desk neat ¹ or messy? Tom Malone is interested in studying people's desks, or "work spaces", as he calls them. A person's "work space" tells you about how he or she organizes work.

Malone says both neat and messy people have two main ⁵ considerations in organizing their work space: *finding* and *reminding*. Finding means being able to get messages and papers at the time you need them. Reminding means telling you to do things at a certain time. Malone has noticed that people place things in different places depending on how ¹⁰ important they are and when they will be needed.

Someone asked Malone if it is better to be neat or messy. He said, "Messy people have more problems finding things, but neat people have to spend a lot of time to keep their work space ¹⁵ neat."

Malone uses these ideas about work spaces to help him design computers. When people use computers, he says, they also have these same two concerns: finding and reminding.



•••• **Understanding**
•••• **main ideas**

*What do you think is the main idea of this reading?
Check (✓) your choice.*

- a. People should use computers to help them be neat.
- b. Both neat and messy people have similar concerns in their work.
- c. Messy people can never find what they need.
- d. Work spaces should always be neat.

 **Reading strategy**

Look for words which repeat. Words which repeat often show you the important ideas in a reading.

Task

Read the passage again quickly. Look for important words that are repeated. Circle these words. Write six of the words that you think are most important.

neat _____

FINDING SPECIFIC POINTS

Fill in the summary of the passage. Use words from the box to complete the sentences. Look back at the passage to check your choices.

considerations	messages	finding	do
telling	papers	certain	neat
need	organizing	reminding	messy

Both neat and _____ people have two main _____ in their work.

These two considerations are _____ and _____. Finding means being able to get _____ and _____ when you _____ them. Reminding means _____ you to _____ things at a _____ time.

RECALLING WORDS YOU HAVE READ

Match each word on the left with a short definition on the right.

- | | |
|-------------|--|
| 1. neat | a. help to remember or think about, recall |
| 2. messy | b. clean, orderly |
| 3. organize | c. put in order, arrange |
| 4. remind | d. not neat, disorganized |

TRAVEL

READING 2:1

Do you like to travel?

Do you enjoy talking about your "favorite places"? Read this account of one traveler's "favorite spots."

FAVORITE SPOTS

If I had to choose one region of the world as my number one favorite for traveling, it would have to be Southeast Asia. There is simply more variety here than in almost any other region of the world. In food, religion, culture, Southeast Asia has as much variety and interest as you could possibly ask for.

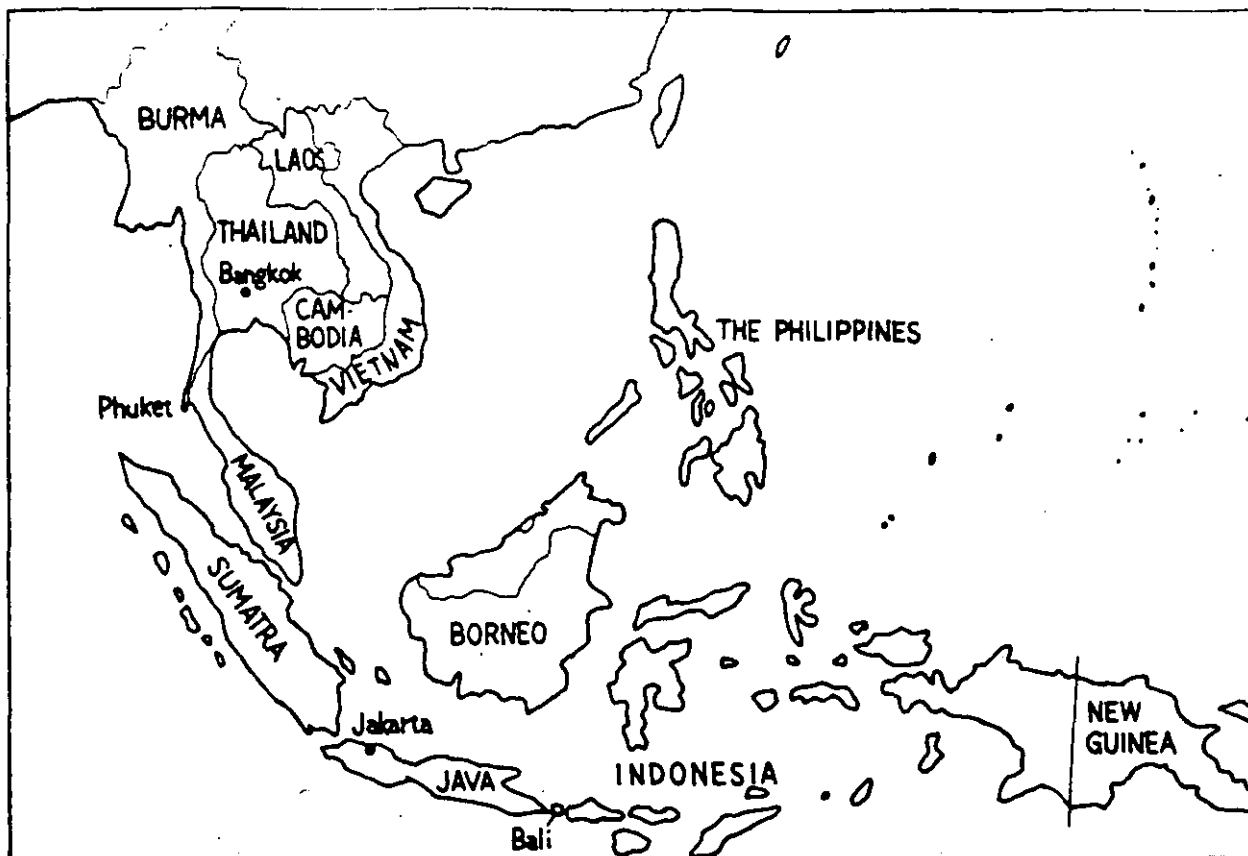
It is also a great area for travel simply for the challenge of traveling. Because Southeast Asia consists of so many islands and peninsulas, getting to places is often a challenge and a lot of fun. Standard road and rail and air travel isn't often possible. I'll always remember the time that five friends and I rented a boat to sail to the Indonesian island of Komodo to see the famous dragons. We spent four days pumping water out of the boat just to keep it afloat.

Food is another great pleasure in Southeast Asia. After my first trip through the region I became an addict for tropical fruits. And the local Chinese and Thai dishes--just thinking about them makes my mouth water. And prices? I've seldom spent more than a dollar or two for a meal.

Of course, traveling and eating are not all there is to exploring a region. When you are in Southeast Asia, you simply must find the "magical sights", places and scenes where time stands still. Places like the Great Pagoda in Rangoon or the Mayon volcano in the Philippines or scenes like sunrise in Bali or sunset at Phuket, Thailand.

The greatest pleasure in traveling in Southeast Asia is the excitement of meeting new people. It's people that make travel worthwhile. More than anything I remember from my travels in Southeast Asia are the many different individuals I met and got to know along the way--people who have opened their countries, their homes, and their hearts to me.

--adapted from Tony Wheeler's, *South-East Asia on a Shoestring* (Lonely Planet Publications), used with permission



:::: **Understanding**
 ::● **main ideas**

1. *What do you think is the writer's main purpose in this passage?*
 Check (✓) your choice.

- a. to warn people about the traveling conditions in Southeast Asia
 b. to criticize the food and sights in Southeast Asia
 c. to encourage people to travel to Southeast Asia
 d. to describe how to travel cheaply in Southeast Asia

2. *Which word do you think describes the writer best?*

- a. extravagant (enjoys luxuries and high-class living)
 b. conservative (doesn't like sudden changes)
 c. private (likes to be alone)
 d. adventuresome (likes to explore and enjoys challenges)



Reading strategy

When reading a recommendation like this one, look for **reasons** that support the recommendation.

Task

Why does the writer like traveling in Southeast Asia? Circle the writer's four main reasons for recommending travel to this area.



FINDING SPECIFIC POINTS

Match each specific point on the left with the topic on the right.

SPECIFIC POINT	TOPIC
1. five friends taking a boat trip	a. meeting new people
2. visiting the Mayon Volcano	b. challenge of travel
3. loving tropical fruits	c. pleasures of food
4. getting to know different individuals	d. magical sights



RECALLING WORDS YOU HAVE READ

Complete the following sentences with words or expressions from the reading. Look back at the reading to check your answers.

- T_____ fruits include bananas, papayas, mangos, and coconuts.
(from very hot climates)
- Southeast Asia is full of beautiful i_____s and p_____s.
(land surrounded by water) (land nearly surrounded by water)
- Different r_____s in Southeast Asia have different r_____s.
(areas) (beliefs)
- The author thinks that ex_____ing new places is exciting.
(discovering, learning about)
- One way to travel is by r_____.
(train)
- L_____ customs are found in particular areas; national customs are found throughout the country.

TRAVEL

READING 2:2

Have you ever had any problems when you have traveled? Most people have had some problems or inconveniences while traveling. Here is some advice about how to avoid certain problems.

PRACTICAL TRAVELING

The keyword in traveling is practicality. Practical travelers have to be able to pack and unpack quickly, move around easily with their baggage, and be sure that their belongings are safe at all times.

Here are some tips from *Businesswoman* magazine on taking care of your luggage.

1. Buy a sturdy bag and lock it. If you're traveling by plane, be sure your carry-on bag is sturdy and has a good lock on it too.
2. Avoid packing too many things. Be sure that breakable articles are packed in the center of the bag, protected by clothing.
3. Carry your valuables with you--jewelry, money, passports, cameras, important papers, fragile items, and any medicines you may need.
4. Be sure each bag has an outside tag showing at least your name. If you don't want to display your home address, use an office address. A label displaying both your name and address should be on the inside of each bag as well.
5. Always remove destination tags left from previous trips.
6. Stay with your bags at check-in counters at airports. Be sure that your claim receipt and the tag attached to the bag show the correct destination. Be sure to keep the claim receipt.
7. For easier identification when claiming a bag, you might want to put decorative tape or a decal or a distinctive luggage strap on your bag.



⋮⋮⋮ **Understanding**
⋮⋮⋮ **main ideas**

What would be another good title for this passage?

- ___ 1. How to Avoid Problems with Your Luggage When Traveling
- ___ 2. How to Save Money While Traveling
- ___ 3. How to Travel Safely in Foreign Countries
- ___ 4. How to Find Your Luggage at Airports



Reading strategy

When reading instructions or "hints", identify short verb phrases that summarize each step or suggestion.

Task

Match the verbs on the left with the phrase that makes a sentence.

- | | |
|-------------|--|
| 1. Buy | a. your valuables with you. |
| 2. Avoid | b. previous destination tags. |
| 3. Carry | c. your bag easily by using a special design or decal. |
| 4. Put | d. a sturdy bag with a lock. |
| 5. Remove | e. that the claim receipt shows the correct destination. |
| 6. Stay | f. your claim receipt. |
| 7. Be sure | g. packing too many things. |
| 8. Keep | h. with your bags at check-in counters. |
| 9. Identify | i. a tag on the outside of your bag. |



FINDING SPECIFIC POINTS

Read each problem below. Then look back at the reading.
Which tip (1-7) should the person have followed?

1. Lisa has a headache while she is on an airplane. She packed her aspirin in her suitcase.

She should have followed suggestion # 3.

2. Leon enjoyed his 2-week holiday in Europe, but he wishes he hadn't brought two big suitcases. He found that he didn't need most of the clothes he brought.

He should have followed suggestion # _____.

3. Christine packed a bottle of perfume at the top of her suitcase. During the flight, the bottle broke and perfume spilled all over her clothes.

She should have followed suggestion # _____.

4. Peter's suitcase, made of thin cloth, was torn during his flight. His clothes were scattered all over the baggage claim area.

He should have followed suggestion # _____.

5. Maria's suitcase was lost at the airport. It was put on the wrong airplane. Her name is not on the suitcase anywhere, so the bag will be sent to the airline's main office.

She should have followed suggestion # _____.



RECALLING WORDS YOU HAVE READ

Match the words or expressions on the left with a similar word or expression on the right.

1. sturdy
2. breakable
3. valuable
4. practical

- a. worth a lot of money, important
- b. easy to crack or be destroyed
- c. useful, easy to use
- d. strong, not easy to damage

5. luggage
6. destination
7. identification
8. belongings

- e. things that are yours
- f. something that shows who the owner is
- g. the place you are going
- h. suitcase or suitcases

COMMUNICATION

READING 3:1

One interesting idea about communication is this: people use different levels when they communicate. "Levels" are like the floors in a tall building. Communication takes place in different ways on each of these "floors".

LEVELS OF FORMALITY

Do you talk to everyone in the same way? Probably not. For instance, if you want to borrow something from your boss at work, what will you say? Would you say the same thing to a young child, or to a clerk at the post office, or to a stranger?

Most people will make the request differently, depending on many factors. One of these factors is the relationship between the speakers--how formal or informal the relationship is. To get some information about levels of formality, a research group¹ asked many native speakers of English how they would ask to borrow something (a pen) from different people.

Here is the procedure for their research. One hundred people were selected to participate. Each participant was given the following list of people:

- | | | |
|-----------------------------|------------------------------------|----|
| -your professor | -a clerk at a fast-food restaurant | |
| -a 50 year-old stranger | -a classmate or co-worker | 15 |
| -your doctor | -your father | |
| -your boss at work | -your mother | |
| -a clerk at the post office | -your boyfriend or girlfriend | |
| -a 15 year-old stranger | -your older brother or sister | |
| -your landlady or landlord | -your younger brother or sister | 20 |
| -a waiter or waitress | | |

Each person was told to write down how they would ask to borrow a pen--in a typical situation-- from each person on the list. No other information was given.

The same people were then asked to put the people on the list in order of "politeness" used. In other words, each participant had to rank the people in terms of how politely they usually address them-- on a scale from 1 to 5. (5 is most polite; 1 is least polite.)

Based on this survey, the researchers made a ranking of people and expressions typically used in order of formality. Here are the results:

Expression	Degree of Politeness	
May I borrow a pen?	5	a professor
Would you mind if I borrowed a pen?		a boss
Would it be all right if I borrowed a pen?		a physician
I wonder if I could borrow a pen?		a middle-aged stranger
Do you mind if I borrow a pen?	4	a landlady or landlord
I was wondering if I might borrow a pen?		
Do you think I might borrow a pen?		
Is it all right if I borrow a pen?		a clerk in the post office
Do you have a pen I can use?	3.5	
Can I bother you for a pen?		an acquaintance in class
Could you lend me a pen?		a waiter or waitress
Would you lend me a pen?		a co-worker
Can you lend me a pen?	3	a mother or father
Can I borrow a pen?		a boyfriend or girlfriend
Can I use your pen?		
Let me borrow a pen?		an older brother or sister
Got a pen I can use?	2	
Can I steal a pen?		
Lend me a pen.		a younger brother or sister
Give me a pen.		
A pen.	1	
Pen.		

From this information, the researchers can estimate different levels of formality for a type of expression, such as *borrowing*.

¹The Japan-U.S. Sociolinguistics Research Group



•••• Understanding
•••• main ideas

Fill in the following summary of the passage. Choose one word from each pair.

We do not talk to everyone in the same way. The way that we talk to people
(talk, do not talk)

depends on several _____ . One of these is level of _____
(factors, people) (information, formality)

how formal the relationship between the speakers is. We can rank _____ in
(expressions, levels)

terms of their levels of formality.



Reading strategy

When you read a report, it is often important to understand the actions or steps in their correct order.

Task 1

Look at the passage and put these steps in the correct order.

Place the numbers 1,2,3,4,5 next to the correct steps.

What the researchers did:

- a. Each participant had to write down how they would ask to borrow a pen from each person on the list.
- b. Each participant had to rank the people by "politeness".
- c. Each participant was given a list of people.
- d. The researchers estimated the level of formality for the expressions.
- e. A hundred people were selected to participate.

When you see a long list of information, you usually do not need to read the entire list word-for-word. Look quickly at the top, middle, and bottom of the list to get a general idea of the list. When you need a special item on the list (for example, a name in a telephone book), move your eyes quickly down the list until you find the item and then stop reading. This is scanning for specific information.

Task 2

Some of these items are on the lists in the reading and some are not.

Scan the lists and make a check (✓) next to the items that are on the lists.

Make an X next to the items that are not on the lists.

Try to do this in less than two minutes!

- 1. waiter or waitress
- 2. your neighbor
- 3. a classmate or co-worker
- 4. your older sister
- 5. your child
- 6. Pen, please.
- 7. Could I borrow a pen?
- 8. Would you mind if I borrowed a pen?
- 9. Can I steal a pen?
- 10. Lend me a pen.



FINDING SPECIFIC POINTS

Read each statement below. Is it true or false according to the reading? Look back at the passage to help you. Write "T" or "F" in front of each sentence.

- _____ 1. *"Would it be all right if I borrowed a pen?"* is more formal than *"Do you mind if I borrow a pen?"*
- _____ 2. Talking to your mother is considered to be more formal than talking to your professor.
- _____ 3. *"Boss"* and *"middle-age stranger"* are considered to be about the same level of formality.
- _____ 4. *"Can you lend me a pen?"* and *"Can I borrow a pen?"* are about the same level of formality.
- _____ 5. *"Professor"* is considered to be the person who requires the most formal language.



RECALLING WORDS YOU HAVE READ

Match each word on the left with a similar word or expression on the right.

- | | |
|--------------------------|-----------------------------------|
| 1. request | a. speak to, talk to |
| 2. informal | b. the feeling between two people |
| 3. polite; formal | c. following social rules |
| 4. address | d. friendly or relaxed |
| 5. relationship | e. ask for |
| | f. borrow or steal |

EDUCATION

READING 4:2

It seems that an important part of education is giving grades--comparing students with other students. Read this report about an international comparison of students.

WHO PASSES THE TEST?

How do students from different countries compare in mastering high school subjects such as mathematics and sciences? An international association called the IEA (International Association for Evaluation of Educational Achievement) gives tests every year to junior high and high school students from twenty-one different countries, including England, the United States, Japan, and the Soviet Union.

When we look at the results of the tests, we can rank the students in each country. We can find the average scores on each test for British students, American students, Japanese students, Russian students, etc.

For example, in 1986, the top performers in mathematics, by a wide margin, were the Japanese. American eighth to twelfth graders, on the other hand, scored average or below average on these achievement tests. American eighth graders did slightly better than the international average at solving simple arithmetic problems, but well below average at more complex word problems. America's twelfth graders were below average in every area, typically by about six percentage points.

How do American educators explain these results? "Japanese twelfth graders don't spend more class time than Americans do on math," says Dr. John Dossey, an educator from California. "They do get outside tutoring for their college placement exams, which could help. But it just seems that they learn and retain things better. Maybe it's because their expectations in the classroom and in the home are much higher for this kind of learning."

Understanding
main ideas

Which sentence tells you the main idea of the reading?
Check (✓) your choice.

- 1. Students from all countries perform about the same on math tests.
- 2. The test results do not show how well students in different countries perform.
- 3. Japanese students were the best on the math tests.
- 4. Japanese standards of education are much higher than the standards in all other countries.



Reading strategy

Some writers use statistics (numbers that tell specific facts) to explain a general idea or a conclusion. When you see numbers, find the general idea or the conclusion.

Here are two questions on the IEA tests taken by students in 22 countries.

1. (From the eighth-grade exam.) Matchsticks are arranged as follows:



If the pattern is continued, how many matchsticks are used in the 10th figure?

- a) 30 b) 33 c) 36 d) 39 e) 42

Percentage of students who answered correctly:

All countries—50% U.S.—41% Japan—62%

2. (From the 12th-grade exam.) The same test was given to two classes. The first class, with 20 pupils, obtained an average score of 12.3 points. The second class, which had 30 pupils, obtained an average score of 14.8 points.

What was the average score for the whole group of 50 pupils?

- a) 12.55 b) 13.3 c) 13.55 d) 13.8 e) 14.3

Percentage of students who answered correctly:

All countries—51% U.S.—38% Japan—87%

Correct answers: 1) b. 2) d.

Task 1

Scan (read quickly) for numbers. Circle phrases with numbers.

Task 2

Look for one sentence that tells the main results of the math tests.
Draw a straight line under the sentence.

Task 3

Draw a wavy line under the four sentences in which the writer tries to explain the results.


FINDING SPECIFIC POINTS

- The writer seems to be most interested in the performance of which group of students?
 - Japanese
 - American
 - Russian
 - British
- In which paragraph can you tell that the writer is interested in that group of students?
 - first
 - second
 - third


**RECALLING WORDS
YOU HAVE READ**

Complete the following sentences with words or expressions from the reading. Look back at the reading to check your answers.

- Students from most countries study the same s_____ such as
(areas of study)
m_____ and s_____.
(study of numbers) (study of life and the world)
- American eighth to t_____ g_____s did not do as well as the Japanese
(students in the last year of high school)
students on the tests.
- Japanese students often receive extra t_____ing for their
(private lessons)
c_____ p_____ e_____s.
(university entrance tests)
- American students scored a_____ on these a_____ tests.
(higher than half, lower than half) (tests of what you have studied)
- Some students seem to learn faster and r_____ things longer.
(remember)
- American eighth-graders are above average in s_____ing simple
(finding answers)
mathematics problems.

PRODUCTS

READING 6:3

When you decide to buy something, do you think about its quality? How do you determine the quality? This reading gives you some information about how quality is determined.

QUALITY

The people who know the most about this subject are the working engineers who design and test products in the manufacturers' own laboratories. These individuals are amazingly well-informed not only about their own products, but about competitors' products as well. The reason is that engineers not only design products, but test, modify, and retest them continuously. They also compare their products with those of competitors.

Through their tests, engineers come up with a list of quality markers for a product. For example, in the case of video tape recorders (VTR's) the quality markers are durability, picture-clarity, sound-quality, and special features.

Durability refers to how often repairs are needed and how much repairs cost. Obviously, consumers want reliable and well-made machines--ones that will need few repairs.

To compare picture-clarity, 4-head VTR's usually produce clearer pictures than 2-head VTR units. They usually cost more, but the gain in clarity is worth the price difference to consumers who intend to make a lot of recordings from TV.

To determine sound-quality, a machine with a stereo-sound feature will produce a better quality of sound than a machine with mono-sound. Of course, the price of a stereo-equipped VTR is higher, but the price is worth it to stereo buffs.

For special features, many things are considered. Special features are the additional components (at an additional cost!) which make the machine suitable for individual viewers' needs. New models have features such as advanced programmability, which is important for people who like to record a variety of programs from television automatically. Also important are a wireless remote control feature (which enables the viewer to control the tape functions from a distance without touching the machine), a clean freeze-frame (which enables the viewer to hold a clear image on the monitor), and an edit function (which enables the viewer to make clear copies from one VTR to another).

•••• Understanding
•••• main ideas

Video tape/cassette recorders (VTR's or VCR's) are an example of :

- _____ 1. a modern product that many people buy without testing.
- _____ 2. a product that all engineers will recommend.
- _____ 3. a product that engineers have designed but know little about.
- _____ 4. a product for which engineers have set up quality markers.



Reading strategy

When a writer uses technical terms, look for key phrases directly before or after these terms to help you understand what these terms mean.

Task 1

Scan - look quickly through the reading. Circle these terms: Durability, Picture Clarity, Sound Quality, Special Features.

Task 2.

Underline the statements or phrases that give you hints about the meaning of the terms.



FINDING SPECIFIC POINTS



*Read each situation. Use the ideas from the reading.
Check one quality marker that each person should look for.*

1. Lionel Thomas is a traveling salesman who is home only one or two nights a week. He likes to watch television movies, but he is seldom home to record them on his VTR.

- | | | | |
|---------------|-------|------------------|-------|
| durability | _____ | picture-clarity | _____ |
| sound-quality | _____ | special features | _____ |

2. Brett Jackson is a football coach. He likes to show his players the mistakes they make during games. To do this, he needs to "freeze" frames on the video tape.

- | | | | |
|---------------|-------|------------------|-------|
| durability | _____ | picture-clarity | _____ |
| sound-quality | _____ | special features | _____ |

3. Tommy Park is an automobile salesman who uses video tapes to show customers how his cars perform. He wants his customers to be impressed by the beauty of the cars.

- | | | | |
|---------------|-------|------------------|-------|
| durability | _____ | picture-clarity | _____ |
| sound-quality | _____ | special features | _____ |

4. Lucy Martin is in a wheelchair. It is difficult for her to go back and forth to her VTR to turn it on and off, rewind, etc.

- | | | | |
|---------------|-------|------------------|-------|
| durability | _____ | picture-clarity | _____ |
| sound-quality | _____ | special features | _____ |

5. Alice Marquez is a collector of music videos. While she enjoys the visual part of the programs, she really wants to have the best sound possible.

- | | | | |
|---------------|-------|------------------|-------|
| durability | _____ | picture-clarity | _____ |
| sound-quality | _____ | special features | _____ |



**RECALLING WORDS
YOU HAVE READ**

Match each word on the left with a similar word or expression on the right.

- | | |
|------------------|---|
| 1. engineers | a. makers |
| 2. manufacturers | b. designers |
| 3. competitors | c. salespeople |
| 4. consumers | d. users, buyers |
| | e. rivals, people who sell the same items |
| 5. modify | f. test |
| 6. gain | g. cost |
| 7. price | h. increase |
| 8. durable | i. long-lasting |
| | j. change |

PEOPLE AT WORK

READING 7:1

Work styles of many people have changed because of computers. Do you think computers usually make work easier or more difficult?

COMPUTERS AND SECRETARIES

A survey of American secretaries has found that an ability to use a computer has increased their responsibilities in offices but not their paychecks.

Professional Secretaries International, which publishes *The Secretary* magazine, surveyed over 1,250 secretaries. It said it found that half of the secretaries had received no salary increase from learning to use computers, word processors, and electronic typewriters.

Nearly three-fourths of them (72%) said learning computer skills had increased their office responsibilities. Over a third (35%) said they were now doing work formerly done by managers or other departments in their companies.

More than 80 percent said working with computers required more analytical and problem-solving abilities than their routine in a non-computerized office.

The secretaries who have acquired computer skills report that they now do more budget-related work, prepare more reports, compose more letters, do more research, and work more on special projects.

The secretaries said their use of traditional secretarial skills, except for shorthand and transcription, had stayed the same or increased as a result of computerized transcription.



•••• **Understanding**
•••• **main ideas**

The main idea of this reading is:

Because of computers,


- 1. the responsibilities of most secretaries have increased, but their pay has not increased.
- 2. the responsibilities of most secretaries have increased, and their pay has increased also.
- 3. the responsibilities of most secretaries have not increased, and their pay has not increased either.
- 4. the responsibilities of most secretaries have not increased, but their pay has increased.



Reading strategy

Statistics (facts in numbers) are often used to explain a writer's idea. For example, the writer may say that "Secretaries don't earn as much money as other office workers." The writer may use statistics to support this idea. When you see a specific example using statistics (*half of them think that....., one-third of them said that ... , etc.*), look for the idea that the writer is supporting.

Task
Underline each example that uses statistics to support the writer's ideas.



FINDING SPECIFIC POINTS

Some statements in a reading are facts, and some are opinions. Facts can usually be proved, but opinions cannot be proved.

Mark each sentence below as "fact" (F) or "opinion" (O).

- F 1. Professional Secretaries International uses surveys to collect information.
 O 2. Secretaries work harder than ever before.
 3. Secretaries now do more research than managers do.
 4. Most secretaries do not like to have more responsibility.
 5. Secretaries who use computers need to use analytical ability.
 6. Using computers requires some problem-solving skills.
 7. Most secretaries say that using computers increases their job responsibilities.
 8. Managers become lazy when their secretaries use computers.



RECALLING WORDS YOU HAVE READ

Complete the following sentences with words from the reading. Look back at the reading to check your answers.

- Every month Pat Johnson receives \$1,200 for her work. Her s_____ is \$14,400 a year.
- Most large companies have different sections or d_____s, such as personnel, accounting, and marketing.
- Since she learned how to use a computer, Carol's r_____s have increased. She now has to write many more reports and letters.
- Many secretaries say that they now have to use more a_____ abilities in their work. For example, they have to solve management and budget problems.

Ejercicios de Redacción

3 Prepositions and articles

Look at these examples:

Sicily is **an** island **in** the Mediterranean Sea.

Palermo is **the** capital.

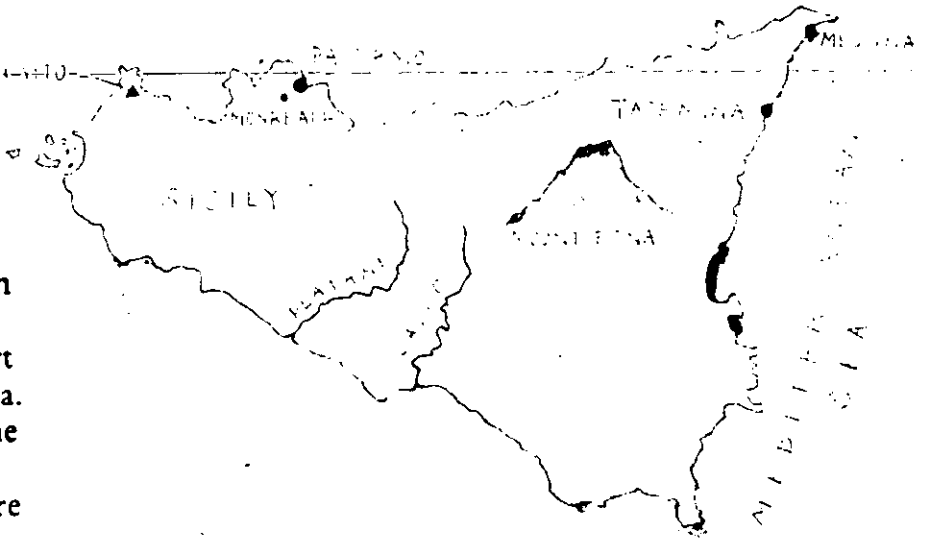
Monreale is a small town **near** the capital.

San Vito is a sandy beach **on** the north coast.

Taormina is a holiday resort **north east** of Mount Etna.

Messina is a large port **in** the north east of the island.

The Platani and the Salso are rivers **in** the south of the island.



Now circle the correct words in these sentences.

The first one is done for you.

Edinburgh is

-	a	-
-	an	-
-	the	-

 capital of Scotland. The Highlands are

-	a	-
-	an	-
-	the	-

mountains

-	from	-
-	at	-
-	in	-
-	by	-

 the north of Scotland.

Liverpool is

-	a	-
-	an	-
-	the	-

 famous port

-	in	-
-	at	-
-	on	-
-	to	-

 the west coast of England

and Hoylake is

-	a	-
-	an	-
-	the	-

 seaside town south

-	on	-
-	of	-
-	from	-
-	at	-

 Liverpool.

Leeds is

-	a	-
-	an	-
-	the	-

 industrial city

-	on	-
-	in	-
-	near	-
-	at	-

 the north of England.

London is

-	a	-
-	an	-
-	the	-

 capital of England and Croydon is a town

-	on	-
-	from	-
-	near	-
-	at	-

 London. The Isle of Wight is

-	a	-
-	an	-
-	the	-

 island in the English Channel.

D Informal letters

1 Read the letter and answer these questions:

- Who is the letter from?
- Where does the writer live?
- Who is it to?
- Why is she writing?

23 Oak Street
LEEDS
LS3 6BW.

9th April 19--

Dear Gary,

I got your address from the Balmy Holiday Club Penfriend Association. I was in Bahamia on holiday last summer and I like the island very much - especially your town, Pandora.

I live in Leeds, a large town in the north of England. People from the south don't like it because it's industrial, but the people are friendly and I'm happy here.

I'm 23 years old and I'm single. I work as a bicycle mechanic for Northern Bikes, a small company near my house. I'd like to write to you and perhaps exchange visits. Please write if you are interested.

With best wishes,

Anne (Marshall)

2 Look at the letter above. Complete the text below:

Anne Marshall is from _____, a _____ town _____ the _____ of England. She likes _____ very much. She was there on holiday last _____.

She is _____ years old and she is _____. She works as a _____ for _____, a small company near her _____.

She is writing to _____, who lives in _____, a seaside town on the north-east coast of _____.

3 Informal letter layout

Look at how we usually set out an informal letter:

	23 Oak Street LEEDS LS3 6BW W. Yorks.	Note No name here
	9th April 19--	Sender's address
		Today's date
Informal beginning	Dear Gary, I got your address from the Balmy Holiday	
	With best wishes;	Ending (see note)
	Anne	Name

NOTE The most common ways of ending an informal letter are:

With best wishes,
Anne

OR

Love from
Anne

OR

With love
from Anne

'Love' and 'With love' are usually used when writing to members of your family or good friends. For less familiar endings people prefer 'Regards' or 'Yours'.

UNIT 3

A Formal letters

1 Read the advertisement and answer this question:

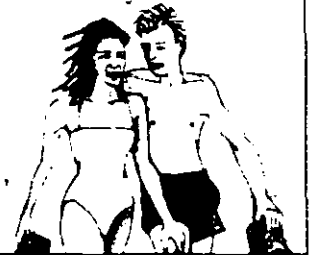
What can you do with Balmy Holidays?

ESCAPE WITH BALMY HOLIDAYS!

Tired of the rain and cold? Then come with us to a Tropical Paradise. Swimming, scuba diving, luxury accommodation.

Or ride a camel across the Sahara, safari in Kenya or go skiing in summer in Argentina. The impossible is possible with Balmy Holidays, and at a very reasonable price.

Contact:
James Hines,
Balmy Holidays,
24 Eastwood Street,
London NW4



2 Addresses

In English we start a formal letter like this:

DESTINATION	SENDER'S ADDRESS
Mr J. Hines Balmy Holidays 24 Eastwood Street London NW4	3 King Street Wakefield West Yorkshire WF8 9NW
Dear Sir,	29th January 19--

3 Punctuation

Look at the capital letters and punctuation:

Mr J. Hines	Mrs S. Lucas	Miss B. Smith	Ms T. Townsend
5 Sidney Rd	3 King Street	Balmy Holidays	24 Eastwood St
Wakefield	DN8 4QZ	London	NW4

4 Punctuate these addresses and write them in address form:

- miss f wood 3 brown street exworth essex e24 5sw
- mr 1 thompson 53 ashcroft rd edinburgh e5
- mr l price 8 saville street london w14
- mrs b stanton 23 heartshead st birmingham b15
- ms m grey denwood holidays 8 chester st glasgow g3

5 Formal letter layout

Read the letter and answer these questions:

		3 King Street Wakefield West Yorkshire WF8 9NW	Sender's address
Destination address	Mr J. Hines Balmy Holidays 24 Eastwood St. London NW4	29th January 19--	Today's date
Formal beginning	Dear Sir, I am very interested in your holidays, especially in the "Tropical Paradise". I like swimming and sun-bathing very much and I would like to escape from the cold and the rain. So could you please send me some more details and an application form. I look forward to hearing from you		Ending
	Yours faithfully, <i>Ben Smith</i> Mr B. Smith		Signature (and your name)

- a Who is the letter from?
- b Who is it to?
- c What does Ben Smith want?

- d i Beginning –
if you do not know the name of the
person you are writing to:
Dear Sir,
or Dear Sir or Madam,
or Dear Sirs,
or Dear Madam, (if you think the person
you are writing to is a
woman).

Ending: Yours faithfully,

- ii Beginning –
if you know the name of the person
you are writing to:
Dear Mrs Jones, or Dear Ms Trip,
or Dear Mr Hines, or Dear Miss Jacobs,
Ending: Yours sincerely,

- e Signature –
It can be difficult to read, so write your name
clearly underneath it.

NOTES

Study the layout above and read these notes a to e:

- a Your address:
At the top, on the right. Do not write your
name.
- b Destination address:
Below your address, on the left.
- c The date:
29th January 19-- or 29 January 19--
or January 29th 19-- or 29/1/19--
(In the U.S.A. the month goes before the
day: 1/29/19--)

B Conjunctions

1 Look at these examples:

- a I love films, *so* I often go to the cinema.
- b I often go to the cinema *because* I love films.
- c Liz enjoys cooking, painting *and* travelling.
- d Sophie enjoys travelling and painting, *but* she doesn't like cooking.
- e Rob likes outdoor sports, *especially* athletics and tennis.

2 Now fill in the spaces with 'so', 'because', 'and', 'but' or 'especially'.
One word is used twice.

I love buying clothes, _____ in the sales, _____ last week I went into town to look at the shops. I haven't got much money _____ I'm only a student. I wanted to buy some leather trousers _____ a jacket, _____ I didn't have enough money _____ I bought a pair of jeans instead.

3 Look at this letter. Where you see _____ add a conjunction *and*, *but*, *especially*, *so* or *because*.

Via della Scava 15
37100 Verona

12th May 19--

Dear Mr and Mrs Wilcox,

I am very happy that you can come to visit us in August _____. I would like to tell you something about my town.

The weather here in August is usually very good, _____ bring a warm jumper or jacket with you _____ it is sometimes cool in the evenings.

I know that you like going to the theatre _____ to the opera, _____ I have booked tickets for the performance of 'Aida' on 4th August. The opera starts at 9.00 in the evening. _____ there are a lot of people _____ the seats do not have numbers we must arrive very early.

I know that you will like the monuments in Verona, _____ the Arena and the Roman theatre.

There are a lot of good restaurants _____ cafés in Verona _____ we can try some of the local dishes. I am sure you will like our food, _____ the pasta dishes _____ the fruit ice-cream.

Please write to me soon _____ tell me what time you are arriving in Verona.

With best wishes,

Antonia Gelli

C Writing a formal letter

- 1 Work in pairs. Write out one letter each, change books and then check your partner's work.

I am looking forward to hearing from you.

3 Brown Street
Exworth
Essex E24 54W

so could you please send me an application form for the season ticket that you provide.

I love classical music, especially Mozart and Haydn, and I am very interested in your programme this year. I would like to see as many productions as possible,

16th April 19--

Yours faithfully,

so could you please send me a catalogue with more details and an order form.

I am very interested in your fashions, especially the winter dresses section,

10 Birch Grove
Retford
Notts.
DN33 WB1

October 8th 19--

I look forward to hearing from you.

Yours sincerely,

The Box Office
The Royal Opera House
Coventry Street
Liverpool
Merseyside L28

Dear Sir or Madam,

Dear Mr Price,

Mr L. Price
Elegant Fashions
53 Ashcroft St.
London W14

2 Here are the beginnings of three formal letters. They each ask for something:

16 The Avenue
Staines
Middlesex

Scottish Tourist Board
1 Waverley Street
Edinburgh

16th March 19—

Dear Sir or Madam,

247 Station Road
St Albans
Herts.
AL3 5DG

Hotel Dolomiten
Samnaun
Switzerland

22nd December 19—

Dear Sir or Madam,

42A Sydney St.
London N8

Box Office
Palace Theatre
Strand Street
London WC1

19th January 19—

Dear Sirs,

Here are the three letters, but they have been mixed up. Write out the letters in full.

I am writing to	ask about the tours
I would like to	confirm my telephone booking
I am writing to	confirm my reservation for

for two single rooms with bathroom
three tickets for the performance of 'Othello'
of the Scottish lochs and Highlands

in August 19--,
from 9th to 15th March 19--,
on Saturday 8th March.

Would you please
We hope to arrive
My husband and I will be

at the hotel on Sunday afternoon
in Edinburgh for the first
also send me two £7 tickets for 'Cats'

three weeks in August.
on 17th March.
at about 5.00.

I enclose a postal order for £35 (5 × £7)
I enclose a cheque for the deposit of £50.
I enclose a s.a.e.* for your reply.

Would you please send me
Would you please also send me
Would you please send me

some information
a receipt
the tickets

to the above address.
about the Edinburgh festival.
for the £50.00.

I look forward to hearing from you.
I look forward to hearing from you.
I look forward to hearing from you.

Yours faithfully,
Yours faithfully,
Yours faithfully,

* s.a.e. = stamped addressed envelope

3 Write your own letter.

Write a letter in reply to this advertisement asking for more information and an application form.

ENGLISH IN THE SUN

Do you like English?

Come to our summer holiday courses. Stay with an English family and have lessons every day with experienced teachers. Lots of excursions are organised to London, Oxford and Cambridge.

The school is in sunny Brighton on the south coast. For details and an application form, contact Ms R. Steele, Beachwater School, Waterside Crescent, Brighton, BN4 3LY, England.

C Paragraphs

1 Read the letter and answer the questions:

LETTER A

3 St Peter's Street
White Sands
Bahamia SW4 3V5
26th July 19--

Dear Anne,

How are you? I have a bad cold and the doctor says I must stay at home for two days, so I'm staying in bed and taking aspirin every four hours. How was the barbecue? I'm sorry I couldn't come. Was the food ok? The weather wasn't very good, was it? Anyway, I went to the cinema with John. We saw 'Time for Tea' with Tina Turner. The story was awful but the photography was lovely - lots of scenes of the English countryside in spring. After the film we went for a walk in the rain, and that's why I've got this cold. Would you like to come for dinner next Friday? I'm going to invite Helen and Tim as well, and I want to try out a new Italian recipe. Hope to see you then - about 8.00?

Love,

Sue

- Why is Sue taking aspirins?
- Did she go to the barbecue?
- What film did she see?
- Did she like the film?
- What kind of food is Sue going to cook on Friday?

2 Now look at Letter B. What is the difference between Letters A and B? Discuss with your teacher.

LETTER B

3 St Peter's Street
White Sands
Bahamia SW4 3VS
29th July 19--

Dear Anne,

How are you? I have a bad cold and the doctor says I must stay at home for two days, so I'm staying in bed and taking aspirin every four hours

Writer's health

How was the barbecue? I'm sorry I couldn't come. Was the food ok? The weather wasn't very good, was it?

Barbecue

Anyway, I went to the cinema with John. We saw 'Time for Tea' with Tina Turner. The story was awful but the photography was lovely - lots of scenes of the English countryside in spring. After the film we went for a walk in the rain, and that's why I've got this cold.

Cinema and John

Would you like to come for dinner next Friday? I'm going to invite Helen and Tim as well, and I want to try out a new Italian recipe. Hope to see you then - about 8.00?

Invitation to dinner

Love,

Sue

- 3 Look at the 'titles' at the side of each paragraph in Letter B. Now look at this text and invent titles for each paragraph. Write your titles in the spaces next to the paragraphs.

Balmy Holiday Club
White Sands
3W4 3WS
Bahamia
27th July 19

Dear Sue,

Thanks for your letter. It was lovely to hear from you and I'm sorry about your cold.

The barbecue of course was a disaster. It started very well but then it began to rain (as you know) and we moved into the disco - but it wasn't the same.

The real problem of the evening was Tony. He's a good friend, but when he starts talking about football, he can be really boring.

Anyway I think I'll phone my penfriend Gary. I wanted to meet him when we were in Pandora, but we didn't have time to meet.

Thanks for your invitation. I'd love to come for dinner. You can phone me tomorrow.

Love,
Anne

1 _____

2 _____

3 _____

4 _____

5 _____

- 4 Work with a partner. Imagine that you want to write a description (not a letter) of White Sands, or a town you know. You want to write five paragraphs. Write down the 'titles' for the five paragraphs in the order you think is best. Do not show them to your partner.

Now take a new piece of paper and write the description, using the paragraph titles. Set it out like Letter B, page 42, leaving spaces next to the different paragraphs. When you have finished, change papers with your partner and write titles for his/her paragraphs. Now compare them to the original titles.

D Giving more information

1 Look at this sentence:

Water is a transparent liquid.

Let us imagine that we want to add more information:

It boils at 100°C and freezes at 0°C.

We can join these two sentences using 'which':

Water is a transparent liquid which boils at 100°C and freezes at 0°C.

If we want to give more information about a person, we use 'who':

A postman is a man who delivers letters.

When we write English we use:

WHO –

to give more information about *people*.

WHICH –

to give more information about *things, subjects, and places*.

WHERE –

a to give more information about a place:

e.g. This is the part of Paris where I live.

b instead of a preposition (at, in, on etc.) + WHICH:

e.g. This is the part of the film where he meets the girl.

2 Write out these sentences and put 'who', 'which', or 'where' in the space.

a It is a little market _____ you can buy fruit.

b My girl-friend, _____ works in advertising, has changed her job.

c There is a new hairdresser's in the High Street _____ you can have your hair cut for only £5.50.

d Growles's last book, _____ was published in 1956, was a big success.

e Nobody noticed the Russian agents _____ were watching Baxter carefully.

f Suddenly he saw the car _____ he had parked in the High Street.

g They walked down to the village _____ was in a small valley.

h We went to the village pub _____ we met George Riley and his friends.

i He was a man _____ wanted too much.

j St Alfred's Station, _____ was designed by Sir Gladstone Walsh, was completed in 1864.

3 The following piece has a number of phrases missing. Fill in the spaces from the list below using the relevant letter. Some of the answers are interchangeable.

My cousin Walter, (1) _____, is a very strange character. First, his left eye, (2) _____, is different from his right eye, (3) _____.

Second, he never eats: he only drinks, and he drinks a kind of beer, a thick black beer, (4) _____. Third, he has a large piano in his kitchen, (5) _____. Finally, in the garden, (6) _____, Walter has a sofa and three armchairs. And the TV? Walter keeps the TV in the garage, (7) _____.

- a which he plays during the night
- b where he can watch it while sitting in his car
- c which is blue
- d where most people have flowers and plants
- e who is ten years older than me
- f which is green
- g which he keeps in his sitting room

E Sending a telex

1 Look at these abbreviations, often used in telexes:

ATTN – Attention – this telex is for the attention of ...
EEEEEE – Error – the last word or words are not correct
TLX or TX – Telex
PLS – Please
ASAP – As soon as possible
TKS – Thanks
RGDS – Regards
RCVD YR TLX – Received your telex
STG/LSTG – £ sterling (pounds sterling)
TRNSFR – Transfer
INCL – Including
ACCM – Accommodation
NO – Number

NOTE: If you receive or write telexes regularly, you will learn the abbreviations which are used in your business. Do not invent these – wait until you have seen them in a telex you have received before using them.

2 Now look at these descriptions of telexes which were received or sent by a language school in Pandora. Match them with the telexes on the next pages:

- a A travel agent would like to book a language course for a student.
- b The language school accepts the travel agent's booking.
- c A man would like information about a course for his son.
- d An urgent request for a reply to another telex.
- e A telex giving the boy's father information about a course.
- f A telex confirming that some money will be sent to the school.

1

298574 STARLET 2
5839477PANDORA P
5 APRIL 1986
05/04 09 34

ATTN MOHAMED

CONFIRM ACCEPTANCE OF ALI AKHBAR FOR 17B FROM 20 EEEE
02 JULY. ACCOMMODATION DETAILS TO FOLLOW.

BEST REGARDS

MARY

2

30/04.18 20
5839477PANDORA P
298574 STARLET 2

GOOD MORNING FROM STARLET - ASWAN

ATTN. MARY

I HAVE A BOOKING FOR COURSE 17B FROM 02/07 FOR 4 WEEKS
THE STUDENT IS

MR ALI AKHBAR - AGED 27
H/B ACCM NEAR SCHOOL PLS
PLS CONFIRM
MANY TKS AND RGDS
MOHAMED/STARLET - ASWAN

5839477 PANDORA P
298574 STARLET 2

3

5839477PANDORA P

DEAR SIR,

I WOULD LIKE SOME INFORMATION ABOUT YOUR SUMMER COURSES
IN ENGLISH FOR ONE OF MY SONS FOR ONE MONTH, STARTING
AUGUST 2ND OR 3RD:

- COST OF COURSE
- POSSIBILITY OF ACCOMMODATION AND ITS COST
- ASSISTANCE IN OBTAINING A TEMPORARY RESIDENCE PERMIT
FOR THE PERIOD OF HIS STAY IN PANDORA, IF NECESSARY
(BRAZILIAN NATIONALITY)

THANK YOU VERY MUCH FOR YOUR PROMPT REPLY TO TELEX NO. 49867
BKHO

BEST REGARDS
PAULO RUGGERO

5839477PANDORA P

4

BCO92 09 45
5839477PANDORA P
KEY + 33074545 + KZY
49867BKHO
5839477PANDORA P
PANDORA SCHOOL OF LANGUAGES
10/7/86

ATTN. PAULO RUGGERO

THANK YOU FOR YOUR TELEX.

WE HAVE A 4 WEEK COURSE BEGINNING 2 AUGUST, AND WE TAKE ADULTS
OVER THE AGE OF 18. COST OF 4 WEEKS IS 525 STG. ACCOMMODATION
IS EXTRA: APPROX. 50 PER WEEK FOR BED AND BREAKFAST IN FAMILY,
AND APPROX. 75 FOR BED, BREAKFAST AND DINNER.

IF WE RECEIVE DEFINITE CONFIRMATION OF BOOKING WE CAN SEND
CERTIFICATE OF ACCEPTANCE WHICH WILL ALLOW YOUR SON TO
ENTER THE COUNTRY AS A STUDENT FOR THE LENGTH OF HIS STAY
WITH US.

WE LOOK FORWARD TO HEARING FROM YOU.

BEST REGARDS
MARY PETERSEN/STUDENT OFFICER

5839477PANDORA P
49867BKHO

5

5839477PANDORA P
202677PATAK A

ATTN MARY PETERSEN
THINKS N RCVD YR TLX OF 24MAY
MAKING TRNSFR 800STG INCL/ACCM/FEE IN FEW DAYS
WL WRITE MRS R.SMITH

B RGDS
P PATAK

YYYY
5839477PANDORA P

6

49867BKHO
5839477PANDORA P
TO PANDORA SCHOOL OF LANGUAGES

ATTN THE PRINCIPAL
09/07/88

FURTHER TO MY TLX OF TODAY PLS REPLY BY RETURN TLX ASAP
TO SAO PAULO (SAO PAULO) TLX NO 49867BKHO

RGDS
PAULO RUGGERO
5839477PANDORA P
49867BKHO

3 The Balmy Holiday Club Head Office is in Paris. Read the telex they sent to the Holiday Club in Bahamia.

459760 BALMY J
5839321 PARIS P
28.07 17.45

ATTN: ELSWORTHY

GLAD TO HEAR CAMP IS FULL. YES, DO TAKE ON ANOTHER
ASSISTANT FROM 1 TO 31 AUGUST IF NECESSARY. SALARY
150 STG PER WEEK. ACCOMMODATION AND ALL FOOD FREE OF
CHARGE. WORK HOURS MAXIMUM 8 PER DAY, ONE DAY PER
WEEK HOLIDAY.

HOW ARE ANNE MARSHALL AND TONY FIELD GETTING ON?
KEEP UP THE GOOD WORK.

MAX JOURDAIN/DIRECTOR BALMY HOLIDAYS

5839321 PARIS P
459760 BALMY J

Now answer these questions:

- Max Jourdain's telex is a reply to a telex sent by Jim Elsworthy. Who do you think Jim is?
- What does Jim want to do?
- Look at the work conditions. Do you think it is a good job? Discuss it with the other students.
- What do you think Jim said in the telex he sent to Max before this?

4 Now write the telex you think Jim wrote in reply to this telex.

Include this information:

- He thanks Max for his telex.
- He tells Max that one of Anne and Tony's friends is coming for an interview for the job.
- He tells Max how Anne and Tony are getting on.
- He asks Max if he can open a new bar because the old one is too small.



**FACULTAD DE INGENIERIA U.N.A.M.
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ARTICULOS PARA TRADUCCION

EXPOSITOR: M.C.I. JOSE A. TENA COLUNGA

How To Organize Your Hard Disk, Or, Secrets For The Hard Disk Librarian

It's no secret that your computer's hard disk is a valuable library of software applications and documents. And the more you use your PC, the bigger your collection becomes. But to prevent your library from becoming a hodgepodge of information, you need to know the secrets of being an efficient hard disk librarian.

To be an adept disk librarian, you need practice with the art of filing on a computer. This tutorial-style article will familiarize you with the hierarchical file structure of DOS (disk operating system) and show you some organizational strategies. (DOS is the most common operating system on IBM and compatible PCs.) Of course the better you organize your files, the faster you can find them, but did you know that a well-organized hard disk will let DOS run faster? You'll also learn the commands you need for creating and removing directories, as well as for copying and deleting files.

Terms To Know

First of all, it always helps to know the lingo associated with the task at hand. Computer filing revolves around your **hard disk**, the permanent storage device for your computer where all your programs and documents are stored.

On your hard disk, a **file** is a collection of information stored as a unit and headed by a single name. A document, for example, is a file. In DOS, a **file name** consists of two parts: a **filename**, which can have up to eight characters, and an optional extension, with up to three characters. If you use the extension, you must separate the filename and extension with a period.

Directories are like electronic file folders; they can hold documents and programs, as well as other directories. And since they too contain a unit of information headed by a single name, directories are sometimes referred to as files.



At the top of DOS' hierarchical file system is the **root directory**, represented by the backslash symbol (\). The "root" contains all the files for a particular drive; for example, C:\ is a common designation for the root directory on the hard drive.

Below the root directory are more directories. When one directory is nested within another, it's called a **subdirectory**. (Remember, a directory can contain documents, programs, and more directories.) On a typical PC, many of these root-level subdirectories are software directories, like WP51, for *WordPerfect*, or 123, for *Lotus 1-2-3*.

A directory that contains another directory is called a **parent directory**; the root directory, for example, is the parent to the directories beneath it.

A **directory tree** diagram illustrates the hierarchical file system nicely. (See Figure 1.) It shows the relationships between the directories on your hard drive. The root directory is (oddly enough) at the top of the tree. The root-level subdirectories occupy the next level and determine how your hard disk is organized. Each of the root level subdirectories in turn has its own intuitive organizational structure. As you might guess, working out a directory tree beforehand will help you organize your hard disk.

The Root Directory

In order to follow along with this tutorial, you need to start at the top of the directory tree, in the root directory. To confirm that you're in the root, use the Change Directory command (CD). At the prompt, type `cd \`, and press ENTER.

To view the files in the root directory (or any other directory), use the Directory command (DIR). Type `dir` and press ENTER. The Directory command, by the way, only shows the files in the directory you're currently in.

Your prompt may display your current directory; for example, if your prompt reads `C:\>` you're in the root directory. Or if it reads `C:\DOS>`, you're in the DOS directory. (NOTE: To get your prompt to display the current directory, you can type this command: `prompt pg`, and press ENTER.)

In the root, the Directory command provides a list of all the files on your hard disk, both documents and directories. The entries with a `<DIR>` notation are your root-level subdirectories. Those without are document files.

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At the bottom of the list, DOS tells you how many files (including itself) the root contains and how many bytes of storage remain on your hard disk.

If you have lots of files on your disk, DOS may not be able to display the entire list on one screen. Instead DOS will scroll through the list and stop when it reaches the end. If this is the case with your PC, you can use a special switch with the DIR command to tell DOS you want it to *pause* before paging through the entire list. Type `dir/p`, and press ENTER. (In our discussion of application files a little later, you'll learn how the pause switch can help you whittle your root directory down to a manageable size.)

Software Directories. Most directories on your root are probably software directories. You might see, for example, WP51 for WordPerfect, or 123 for Lotus 1-2-3. When you install software on your PC, most programs automatically create a directory for themselves on the hard disk. Inside the software directory are the subdirectories and program files that the program needs to work.

Organizing Directories

Although the root directory on your hard disk can hold at least 512 directories (yikes!), unless you have a photographic memory, it's a good idea to keep just your main subdirectories here. Remember, your hard disk files are your own computerized library, and if the library has too many sections, it will be hard to find what you need.

Because these root-level directories are the organizing backbone of your hard disk, it's important to arrange them in a fashion that you, and anyone else using the computer, will find simple to use. See Figure 2 for some examples.

The conventional way of arranging root-level directories on a hard disk is by application. With this system your directories have easily recognizable names like DOS, Word, and EXCEL.

If you have lots of programs on your hard disk, you might want to arrange directories by program type. You could create a directory for word processors, for spreadsheets, and for paint programs. Then you could put your word processing programs, for instance *Microsoft Word* and *WordPerfect*, within the word processing directory.

Or, perhaps you'd be more comfortable arranging your directories by subject or by department, such as Finance, Administration, and Engineering.

Depending on how you use your computer, you may need a few special directories. You may want to have a directory for any utility programs you use, a hard disk back-up pro-

gram, for instance, or a hard disk diagnostic program. Also, if several people use the computer, you might want to create separate directories for them.

Directory Commands

Once you decide how you'll organize your root-level directories, you'll probably need to create, move, and remove some directories. Even if your hard disk is already organized to your satisfaction, the Make, Change, and Re-

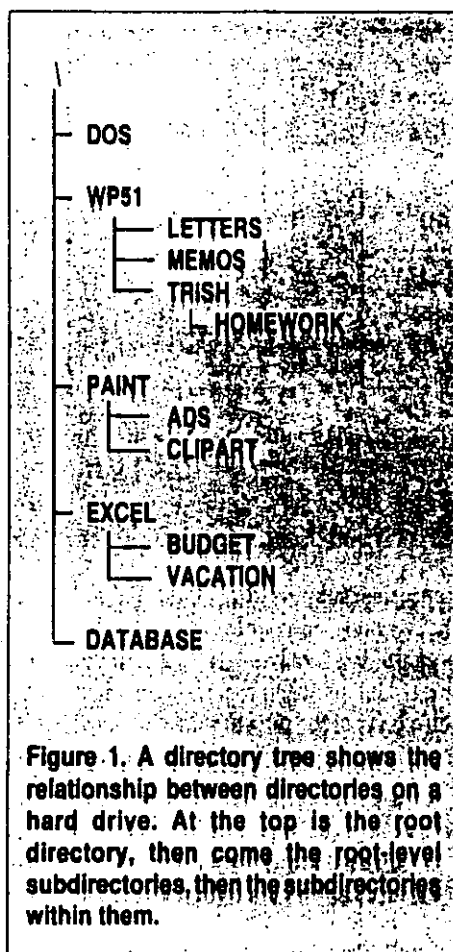


Figure 1. A directory tree shows the relationship between directories on a hard drive. At the top is the root directory, then come the root-level subdirectories, then the subdirectories within them.

move Directory commands are important to know.

Creating Directories. First you'll learn to make directories. You should still be in the root, so at the `C>` prompt, type `md history`, and press ENTER. (Directory names, as with file names, are limited to eight characters and a three-letter extension.)

Now you can use the Change Directory command to enter the new HISTORY directory and create a couple of subdirectories there. At the `C>` prompt type `cd \history`, and ENTER. Your prompt should read `C:\HISTORY`, reminding

you where you are. Now use the Make Dir command: type `md ancient` and ENTER. type `md modern` and ENTER.

Now type `dir` at the prompt and press ENTER. There you are! The HISTORY directory and its ANCIENT and MODERN subdirectories.

Removing Directories. Removing directories is simple. There are only two things to remember:

- You cannot remove a directory unless it's empty.
- You cannot remove a directory while you're in it.

Now try the Remove Directory command: at the prompt, type `rd ancient` and ENTER. Then type `rd modern` and ENTER. Type the DIR command at the prompt and press ENTER. Now the HISTORY directory is empty, but before you can remove the HISTORY directory you have to leave it.

Here's a trick for returning to the `C>` prompt, no matter which directory you're in. At the HISTORY prompt, type `cd\` and ENTER. (Remember the `\` stands for the root directory) There you are, back at the familiar `C>` prompt. Now that you're no longer in the HISTORY director can delete it: type `rd history` and ENTER.

Although that exercise seemed pretty simple, because your own directories contain files, reorganizing them will be a little trickier. Remember that a directory must be empty before DOS will allow you to remove it.

Moving Directories

Moving a directory in DOS involves creating a new directory, copying files from the old directory to the new one, and then deleting the original files and directory. It's a bit like shifting a stack of library books from one shelf to another.

Like other librarian tasks, there are a couple of ways of going about it. For example, if you use DOS version 4 or 5, the Shell provided can make the job a little easier. (The DOS Shell is a utility designed to make DOS more visually oriented and simpler to use.) This tutorial will use the COPY command for moving directories. Although we can't provide exact instructions for moving the directories on your PC, you can use our example and insert your own directory names.

Let's say you want to create a UTILS directory and move your diagnostic program, *Nortor*, into it.

• First, in the root directory, you'll use the Make Directory command to create a UTILS directory.

ORGANIZING HARD DRIVES

- Then you'll use the Change Directory command to enter the UTILS directory, and use the Make Directory command again to create another NORTON directory.

- Next, use the Change Directory command to return to the root, and use it again to get into the original NORTON directory.

If your prompt displays which directory you are in, your screen will look like this: C:\Norton>

- Use the COPY command to copy the files from the original NORTON directory to the one you just created inside the UTILS direc-

one, and finally deleting the original files and directory.

Note that the COPY command will not copy directories; if the directory you want to move contains subdirectories, you'll have to move them separately, following the steps above (or use the XCOPY command, but that's another story).

Organizing Subdirectories

Once you have your root-level directories squared away, don't forget to pay proper atten-

"sections" and "shelves" of your library, you can't forget the documents that comprise them.

If you're not already in your root directory, use the Change Directory command and go there now. Use the DIR command to display the list of your root directory files.

All files here not followed by the <DIR> notation are document files. It's best to keep these "loose" files to a minimum in the root; too many files in the root directory make it tough to find titles in your hard disk "library." Loose files make DOS run slower, too.

Necessary Files. Three document files always need be kept in the root directory. They are the *Autoexec.bat*, *Command.com*, and the *Config.sys* files. See if you can spot them. (Don't worry if you can't find an *Autoexec.bat* or *Config.sys* file; some systems don't have them.)

You may have other necessary files in your root directory. For example, DOS 5.0 automatically installs a file called *WINA20.386* in your root directory, which is vital to have if you want to run the Microsoft *Windows* program.

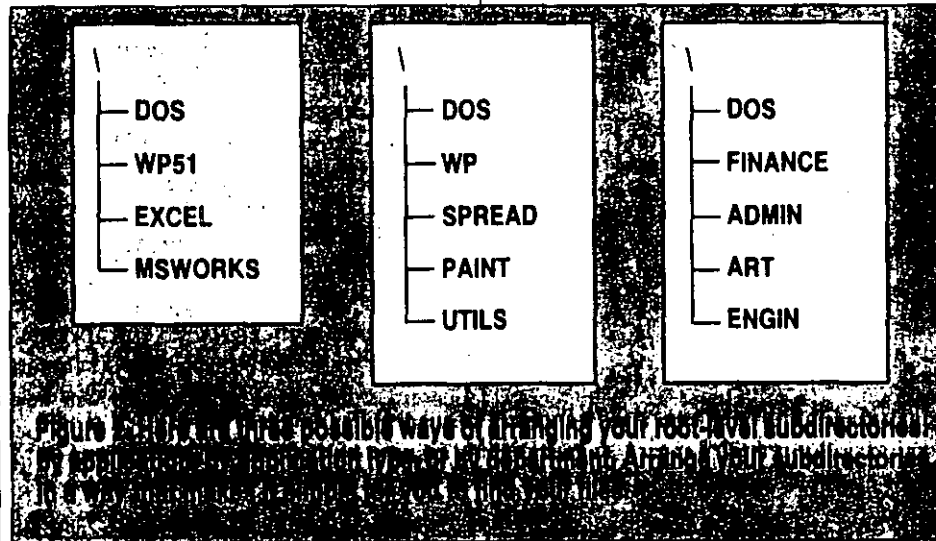
DOS Files. Other than the files mentioned above, DOS files belong in the DOS directory. If you are working with DOS 5.0, you can check a special "packing list" file to see if a file you don't recognize belongs to DOS. In the DOS directory, type *edit packing.lst* and press ENTER. Use the arrow key to page through the list; when you're finished looking, select Exit from the File menu.

Application Files. Are there any files in your root that you recognize as belonging to an application on your hard disk? Application files often have identifiable file names.

How do these files get into your root? Upon installation, some software applications will add files to your root directory. The database program *Paradox*, for example, adds a *Config.pdx* file to your root directory. The best way to handle an application file is to call the program's technical support line and ask how you should file it.

You may even be putting application files in the root directory yourself. If you save a document in your word processing application, for example, and forget to tell the program where to save it, the file may end up in the root.

Sometimes a file's extension provides clues to its identity. For example, a file with the extension *.XLS* will be a *Microsoft Excel* spreadsheet. (For a list of common extensions and what they signify, see the sidebar "What About Extensions?") Also, it's a good idea to give identifying extensions to the documents you create, for example, ".let" for letters and ".rpt" for reports.



tory. Type *copy *.* \utils\norton* and press ENTER.

The *.* ("star-dot-star," as it is affectionately called) characters tell DOS to copy *all* the files from the original (or source) directory to the new (or destination) directory. The *\utils\norton* syntax specifies the path DOS must travel to complete the task. Once you've copied the files, it's a good idea to go to the destination directory to verify the copy has taken place.

- Next, return to the original NORTON directory and use the Delete command to remove files. Type: *del *.** and press ENTER. Again, *.* tells DOS to delete *all* the files in that directory.

DOS will ask you "Are you sure (Y/N)?" To which you respond by typing *y* and pressing ENTER.

- The final step is to return to the root and then use the Remove Directory command to remove the empty NORTON directory. Type: *rd norton* and press ENTER.

Again, moving one directory into another involves creating a new directory, copying the contents of the original directory into the new

tion to their subdirectories. After you've defined the "sections" of your library, you still need to organize the "shelves." Here are some guidelines to follow when organizing the files in the third layer of the directory tree.

- Keep program files separate from the documents you create with them. Program files consist of the various documents and directories that a program needs to run, and it's best to keep them from getting mixed up with your letters and reports. (See Figure 3.)

One reason for this is that it's simpler to make back-up copies of your documents when they're not filed with program files. Also, maintaining the integrity of your program files makes it easier to upgrade them.

- If you do a lot of work with your word processor (or any other program), it's a good idea to keep different types of documents in separate directories. Figure 3 shows one way to organize a word processing directory.

Organizing Documents

Now that you have an idea how to organize directories, you're ready to tackle documents. After all, once you've arranged the directory

ORGANIZING HARD DRIVES

If you find files that you've created in your root, use the COPY command to file it in the proper directory, then delete it from your root.

A Common Problem. If you've never really organized your hard disk before, it may be so full of application files that your root directory extends into several screens. Using the Directory command with the pause switch, you can whittle your root down to a manageable size. Here's how:

Go to your root directory and type `dir/p`, and press ENTER. Next press the PRINT SCREEN

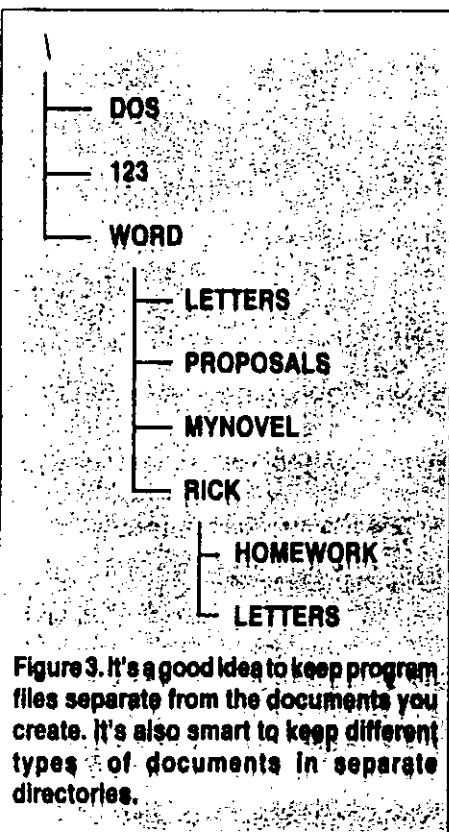


Figure 3. It's a good idea to keep program files separate from the documents you create. It's also smart to keep different types of documents in separate directories.

key, commonly found on the upper right section of the keyboard. This will give you a "hard copy" of the first page of your root directory. Then, as DOS directs, "Press any key to continue," and press the PRINTSCREEN key again. Continue until you've printed your entire root directory.

With an easy-to-read copy of your root directory in hand, you can use the COPY command to place those random Word Perfect or 1-2-3 files in their proper place. After you've copied these loose files into proper subdirectories, go back to the root and delete them.

One way to prevent these files from appearing in your root directory is to go to the proper

program directory before starting the program. Before opening WordPerfect, for example, use the Change Directory command to go to the WP directory, then to the proper subdirectory (your Letters subdirectory, for example). This way the new documents you create will be automatically saved in the right place.

There are other ways to go about saving documents in specific directories; consult your program manuals for shortcuts.

Mystery Files. After you've filed away all the documents you could identify, you may still have a few foreign-looking files left lurking in the root.

The problem with mystery files is twofold: First, some file names are so cryptic that it's hard to know what a file is, much less where it should be. Second, if you should delete—even move—certain document files, you can seriously cripple your PC.

Because you may not really know which files you and your system use, moving or deleting unknown files is asking for trouble. Rich Freedman, program manager with Microsoft Corp., advises, "You're at your own risk when you start deleting files."

The rule of thumb is this: *If you can figure out where it should go, file it. If you can't figure out where it should go, leave it alone.* This rule also applies to document files in application directories.

If having "mystery files" in your root directory really bothers you, you can become a system scholar. Examine a friend's or colleague's hard disk and see if you can find out what they've done. Ask a computer expert about your mystery files. Disk librarians are dedicated!

Where To Begin?

At the root, of course! Take stock of the directories there, then pull out a pencil and design a new directory tree for your hard disk, one that makes it easy to find things. Then use the directory and file commands you've learned to move your files into place.

Cool dudes may snicker, but organizing your hard disk can make for edifying entertainment. It's satisfying to know where everything is and how it got there. You'll know your hard disk better, too. You'll notice immediately, for example, if a new file pops into your root directory. Then you can take care of it right away.

Now that you're initiated: disk librarians, file away! □

by Marti Remington

What About Extensions?

DOS and other applications contain files with the three-letter suffixes called **extensions**. Extensions enable applications to distinguish the type of program or data the file contains.

Knowing some common extensions may give you a little better understanding of document files. The following is a list of commonly used extensions.

- **.BAK** Identifies a **back-up file**, an earlier version of a file. Some programs make automatic back-ups of files.
- **.BAT** Identifies a **batch file**, a kind of file that contains a set of DOS commands that run in sequence when you type the name of the "
- **.BMP** Identifies a **graphics file**.
- **.COM** Identifies a **command file**, a program file that DOS runs.
- **.CPI** Identifies a file with **code page information**, a file which describes the characters that a hardware device can use.
- **.DB** Identifies a **database file**.
- **.DOC** Identifies a **Microsoft Word word processing file**.
- **.EXE** Identifies an **executable file**, which contains, like .COM, a program DOS runs.
- **.FON** Identifies **font files**. (A font is a collection of letters with a specific **typeface**, or design, and size.)
- **.GIF** Identifies a **type of graphic file**.
- **.HLP** Identifies a **Help file**, a file some programs use to hold their online help information.
- **.INI** Identifies an **Initialization file** for a Microsoft Windows program, a file which describes how the program should start operating.
- **.PCX** Identifies a **graphics file**.
- **.SYS** Identifies a **DOS system file** which contains a device driver. (DOS uses device drivers to communicate with hardware devices such as printers and mice.)
- **.TXT** Identifies an **ASCII text file**. ASCII text files don't contain the special formatting processed documents.
- **.WKS** or **.WK1** Identifies **Lotus 1-2-3 spreadsheet files**.
- **.XLS** Identifies **Excel spreadsheet files**. □

GLOSSARY

OF TERMS

Autoexec.bat — A special DOS file that contains commands that are automatically executed whenever the computer is started or **rebooted** (restarted).

Binary — A numeric system based on the powers of 2 that is used by computers. It only uses the digits 1 and 0.

BIOS — Basic Input/Output System. A set of routines that controls the transfer of information in a computer system's components, such as hard disk, monitor and memory.

Boot — The process of starting a computer system.

Byte — A basic unit of computer data storage and manipulation. A byte is made up of eight **bits** (the smallest unit of storage a computer will recognize) and equals one character or number. The memory and storage space of computers is measured in large groups of bytes called **kilobytes** (1,024 bytes) and **megabytes** (1,048,576 bytes).

Conventional Memory — The amount of random-access memory (RAM), typically 640 kilobytes, accessible to an IBM or compatible PC operating under DOS.

Directory — A list of files available on a computer system. Sort of like a file folder in a filing cabinet holds related papers, a directory on a computer system holds related files.

Diskette — Sometimes called a floppy diskette, this is the removable magnetic storage medium that can be inserted into a computer similar to how a cassette tape is inserted into a tape player.

DOS — Disk Operating System. This is the most popular operating system on IBM and compatible computers. There are several "flavors" of DOS, including MS-DOS from Microsoft Corp., PC-DOS from IBM, and DR-DOS from Novell.

DOS Prompt — The display showing that the computer is awaiting user input.

By default, most prompts show the name of the disk drive currently in use, followed by a greater-than symbol, such as C>.

Executable File — A file that can be "run" or executed. To start the program, a user simply has to type the filename.

Expanded Memory — A kind of memory in computers that is not usually accessible to DOS and requires a special interface.

Extended Memory — A type of memory in excess of one megabyte in computers built on the Intel 286/386/486 microprocessors. Extended memory is not usually available to programs using DOS.

File — A collection of related information. A file is the basic unit of storage in a computer that lets a computer distinguish one set of information from another.

File Name — The set of allowable numbers and letters that distinguish a file from other files on a computer. A file name has two parts: a **filename**, which is up to eight characters long and comes before a period (.); and an **extension**, which is up to three letters that follow the period.

Formatting — The process of preparing a blank disk or diskette to store information. Users can also format a disk or diskette that has information stored on it, but the information will be lost.

Hard Drive — The nonremovable storage system found inside the computer case. Also called the hard disk.

Hardware — The physical equipment included in a computer system. Hardware can be physically touched and includes equipment such as printers, keyboards, and mice.

Icon — A picture that represents a command or a file. In a graphical user interface, computer users select icons to carry out commands and open files.

Microprocessor — Also called the **central processing unit (CPU)** or the **pro-**

cessor, this is the chip that acts as the "brain" of the computer. It controls fetching, decoding and execution of instructions. IBM and compatible computers use Intel or compatible microprocessors that are numbered from 8086 to 80486. The higher the number, the faster and more powerful the chip.

Modem — A communications device that enables a computer to transmit information over a standard telephone line.

Monitor — The video screen on which a computer's images are displayed. The monitor is connected to the video adapter, which generates the images.

Motherboard — A computer system's main circuit board, which contains the primary components of a computer system. It is also called the **system board**.

Multitasking — An operating system's ability to run more than one program at a time. When more than one program is running, the user is multitasking.

Operating System — The set of instructions that controls the basic operation of a computer. This is the foundation software on which all other software is built.

Path — The route that must be followed to find a file in a directory or a subdirectory.

Pixel — A dot in a grid of thousands of such dots that can be turned on and off and that helps to form an image on the computer screen.

Power Supply — A piece of electrical equipment located inside your computer's case that transforms electricity from standard wall outlets into the lower voltages required by computers.

RAM — Random-Access Memory. Memory that holds the instructions and data currently being worked with. Data in RAM is lost when the computer is turned off.

Resolution — A measurement of the sharpness of an image generated by an

output device like a monitor or a printer.

ROM — Read-Only Memory. Permanently stored memory that contains data that can be read but cannot be altered.

Root Directory — The main directory of a computer system, which contains all the other directories and files.

Serial Port — A plug on the back of a computer that can be used to connect the computer to devices, like modems and some printers, that provide two-way communication.

Shell — A user environment that operates between the user and the operating system and provides the user with a more meaningful way of giving the operating system commands.

Software — Programs that give instructions to computers to perform tasks ranging from basic operation of the computer system to word processing or data processing.

Subdirectory — A directory that branches off from another directory.

TSR — Terminate-And-Stay-Resident Program. A type of program that remains in memory even while not running so that it can be called up to perform a task while another program is running.

Tree — A hierarchical structure of data where individual elements or "nodes" are connected to each other through a series of links or "branches."

User Interface — The way in which the user communicates with the operating system. User interfaces can be command driven, menu driven or icon driven.

Video Adapter — A circuit board, a card that is plugged into an expansion slot inside the computer's case, that enables a computer to display text and images on a monitor.

Identifying Standards

How to find out if a standard exists

by Linda R. Musser



Linda R. Musser is the assistant engineering librarian at the Pennsylvania State Univ., University Park, PA. A civil engineer, she is currently involved in research on standards and other engineering information sources.

One of the first steps in a research or design project is a review of previous research and other activities relating to that project. As part of this review, a question that needs to be asked is: Are there standards that might apply? Answering that question, however, can be difficult. Unlike journal articles, technical reports, and patents for which there are established methods of identification and supply, standards remain a largely un-indexed and overlooked resource. This article will attempt to acquaint those new to the world of standards with the information sources and assistance available.

Sources of Assistance

There are a variety of organizations that offer assistance in identifying standards. These include such groups as government agencies, societies, commercial vendors, and libraries. The major differences between these groups are the amount of assistance and scope of expertise they offer. While most groups offer some basic assistance free of charge, many either charge a fee or do not offer assistance for more complicated queries. Basic assistance generally covers the identification of a standard's number, identification of the governing body, and so on.

The scope of expertise offered by a particular organization is a determining factor in how helpful that organization will be in a standards search. Very few organizations offer broad subject coverage of the world of standards. Most professional societies, for example, will offer assistance in identifying only those standards issued by that society. Government agencies, commercial vendors, and libraries generally cover a broader range of subjects, but the scope of expertise of each organization will vary. One group may only cover U.S. industry standards while another may offer assistance in identifying military and federal standards as well.

One of the best providers of assistance and expertise is the National Center for Standards and Certification Information (NCSCI). The center is part of the National Institute of Standards and Technology, formerly known as the National Bureau of Standards. NCSCI

offers free assistance in identifying standards and government regulations developed by the United States, other nations, and regional and international organizations. The center maintains a large library of United States, foreign, and international standards and related materials as well as a variety of catalogs and indexes. A typical request to the center would result in a list of standards and regulations as well as contact points for obtaining more information. Sources for obtaining copies of the standards will also be identified. NCSCI does not sell copies of standards, but the reference collection of standards is open to the public. Generally, requests for information are filled within five working days, although many requests for help are easily answered in minutes. The center is open to the public and services are free of charge. NCSCI can be contacted by writing to the National Center for Standards and Certification Information, National Institute of Standards and Technology, Administration Bldg., Rm. A629, Gaithersburg, MD, 20899 (301/975-4040).

Information Handling Services (IHS) is a commercial vendor of standards information services. The resources of IHS are quite large and similar to NCSCI in scope. Assistance is readily available from the IHS Extension 99 service, which assists in identifying and locating sources of standards around the world. Use of the Extension 99 service is generally free of charge except in cases of difficult or complicated standards searches. IHS offers collections of standards for purchase with individual standards available for purchase from their affiliate, Global Engineering Documents. IHS may be contacted at 15 Inverness Way East, Englewood, CO 80150 (800/241-7824).

The National Standards Association, Inc. (NSA) is a vendor of a broad range of U.S. government information, including standards and specifications developed or used by industry, the military, or the federal government. NSA's techinfo dept. offers assistance in identifying U.S. standards of interest. While basic assistance is generally provided free of charge, there may be a fee for more complex standards searches. NSA can be reached at 1200 Quince Orchard Blvd., Gaithersburg, MD 20878 (800/638-8094).

The American National Standards Institute (ANSI) is the coordinator of the U.S. voluntary standards system and provides representation for the U.S. to international standards organizations such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). ANSI makes available all approved American National Standards and international standards of ISO and IEC. For-

eign standards are available from ANSI as well. The main functions of the organization are in the areas of coordination of standards creation, representation, and sales of standards. The sales staff of ANSI will provide some assistance for purchasers, but help is limited. ANSI is located at 1430 Broadway, New York, NY 10018 (212/354-3300).

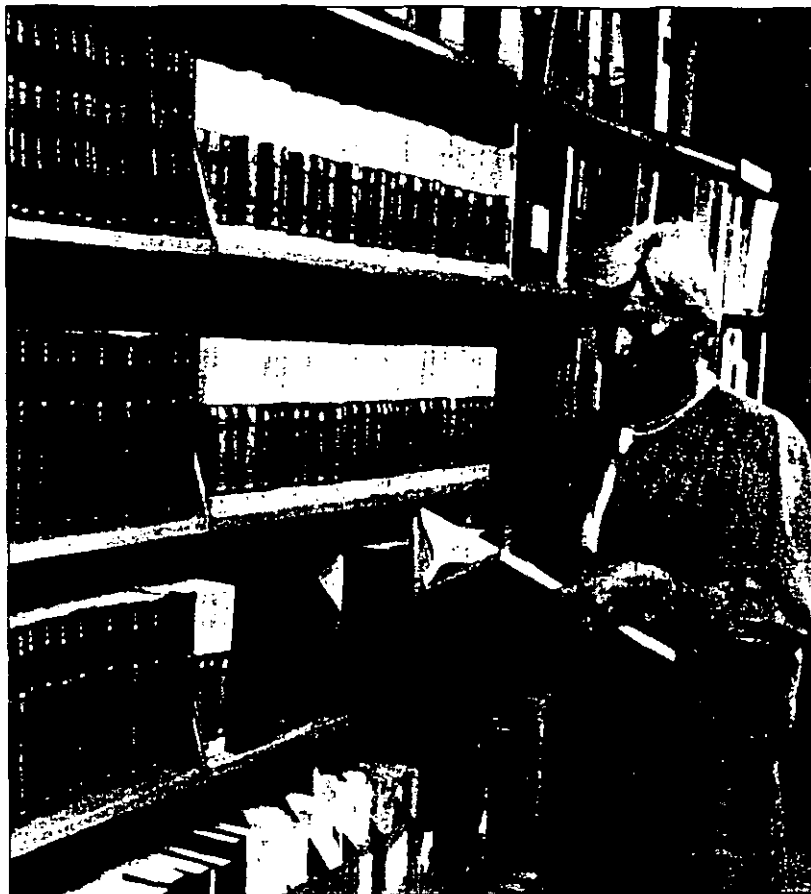
Most professional societies involved in standards development offer some assistance in identifying the standards they produce. Good examples of the kind of assistance available are illustrated by the following two societies, both heavily involved in the standards development process.

ASTM is a scientific and technical organization formed for the development of standards on characteristics and performance of materials, products, systems, and services; and the promotion of related knowledge. It is the world's largest source of voluntary consensus standards.² ASTM offers free assistance via its Information Center (215/299-5475). The center will attempt to identify appropriate standards produced by ASTM and will refer inquiries to committees or working groups if appropriate. ASTM standards are available for purchase directly from the Society. ASTM is located at 1916 Race St., Philadelphia, PA 19103 (215/299-5400).

The Institute of Electrical and Electronics Engineers, Inc. (IEEE) offers assistance to those needing information on standards in the field of electronics and electrical engineering. (Note: The IEEE does not cover all areas dealing with standards in the aforementioned fields. Areas such as electronic packaging, for example, are handled by other related societies. IEEE will assist with identifying standards they produce.) Personnel in the IEEE standards office will try to identify appropriate standards or to provide referrals to the chairman of a standards committee or working group. Assistance is free and standards may be purchased directly from the society. The IEEE Standards Office is located at 445 Hoes Ln., P.O. Box 1331, Piscataway, NJ 08855 (201/562-3800).

One other source of assistance is libraries. Libraries are traditional providers of free assistance in locating information in all fields of knowledge. Many large public and academic libraries maintain collections of standards and offer assistance in their use. Standards are generally available for loan or in-house use.

For those who must do repeated standards searches or are simply interested in having convenient access to lists of standards, there are a variety of sources available to assist in the identification process. Indexes to standards are available in both printed and electronic formats. In the realm



of printed tools, however, there are no truly comprehensive indexes to standards of all countries and organizations. Most indexes are limited to the standards of one nation or organization.

Printed Sources— U.S. Industry Standards

For U.S. industry standards there are several fairly comprehensive indexes available. One of these is the *Index and Directory of U.S. Industry Standards*. This index provides coverage of U.S. industry standards and is searchable by subject and standard number. The two volume set is updated annually and is available from Global Engineering Documents. Global Engineering Documents may be contacted at 3625 Hickory St., P.O. Box 2504, Santa Ana, CA 92707 (800/854-7179).

The National Center for Standards and Certification Information produces an annual *KWIC Index of U.S. Voluntary Engineering Standards*. The KWIC³ index provides coverage of U.S. industry standards and is searchable by keyword. The index is available in either paper or microfiche. Microfiche copies are available from the National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161 (703/487-4600). The microfiche reduction is 48X. Paper copies are available directly from NCSCI

Bound sets of standards are available from some organizations such as ASTM. Usually organized by subject, such sets provide an affordable opportunity to develop an in-house collection of standards in specialized subject areas.



There are currently 8,000 approved American National Standards in existence today and the number is growing.

in either $8\frac{1}{2} \times 11$ in. (216 \times 280 mm) or 11×14 in. (280 \times 356 mm) sizes.

The *Catalog of American National Standards* is an annual publication that provides access to all current, approved American National Standards by subject and standard number. This catalog, as well as catalogs of foreign and international standards organizations, is available from ANSI.

While comprehensive indexes to standards are relatively rare, there are many fairly specific indexes available. These indexes are generally produced by a particular society, organization, or agency, and cover only those standards produced by that organization. A description of some of the larger indexes follows.

The *Annual Book of ASTM Standards* includes an index that provides access by subject and standard number to formally approved ASTM standards, including practices, specifications, guides, test methods, and terminologies, and related materials such as proposals. The index is published annually and is available for purchase from ASTM. ASTM also produces an annual catalog that is available free of charge. The catalog describes the contents of volumes in the *Annual Book of ASTM Standards* series, compilations of standards on specific topics, and a service for custom designing a book of standards tailored to the customer's needs.

The IEEE produces an index entitled *Quick Reference to IEEE Standards (QRIS)*. The index provides access by keyword and standard number to IEEE and ANSI standards published by IEEE. An added feature of this index is that it includes the table of contents of each standard listed in the index. The QRIS is available for purchase from IEEE. IEEE also produces a biannual standards catalog, available free of charge. The catalog gives a subject listing of all IEEE standards and ANSI standards published by IEEE.

The Society of Automotive Engineers (SAE) is involved with standards in the areas of materials, safety, and fuels as well as automotive and aerospace engineering. SAE has a variety of indexes available including the *Aerospace Index*, the *Ground Vehicle Standards Index*, and the *AMS (Aerospace Materials Specifications) Index*. SAE produces an annual standards catalog, which is available free of charge. The catalog lists collections of standards, indexes, and other services available from SAE. It does not list individual standards. All these products are available from SAE at 400 Commonwealth Dr., Warrendale, PA 15096 (412/776-4970).

Underwriters Laboratories (UL) produces a catalog titled *UL Standards for Safety*. It contains a listing of published and proposed standards indexed by keyword and standard number. The catalog is available free of charge from UL at 333 Pfingsten Rd., Northbrook, IL 60062 (312/272-8800).

Printed Sources— U.S. Government Standards

There are a variety of indexes available for military and federal standards and specifications as well. The *Department of Defense Index of Specifications and Standards (DODISS)* indexes unclassified federal, military, and departmental specifications, standards, and related standardization documents and industry documents approved for use by the Department of Defense (DOD). Departmental documents include those used by the U.S. Army, Navy, and Air Force. The DODISS is indexed alphabetically by the title of the document and numerically within each document type. DODISS may be found in many depository libraries or can be purchased from the U.S. Government Printing Office, Washington, DC 20402 (202/783-3238).

The *Federal Supply Classification Listing of DOD Standardization Documents* is a companion publication to DODISS. It covers the same material as DODISS but is indexed alphabetically within each federal supply classification code. This publication is a depository item or is available from the U.S. Government Printing Office.

The *Index of Federal Specifications, Standards and Commercial Item Descriptions* contains a listing of federal specifications, standards, qualified products lists, commercial item descriptions, and U.S. Department of Agriculture institutional meat purchase specifications. It is indexed alphabetically, numerically, and by federal supply classification listing. A depository item, it can be located at depository libraries or is available from the U.S. Government Printing Office.

Printed Sources— Foreign and International

The types of printed tools available for identifying foreign or international standards are for the most part limited to catalogs of publications of each country or organization. ISO produces a catalog of its publications that indexes by subject and standard number ISO standardization documents in all fields except electrical and electronic engineering, which are the responsibility of IEC. IEC has its own catalog of publications. These catalogs, as well as catalogs of various national standards organizations, are available either from ANSI or directly from the standards organization in question. For a listing of foreign, regional, and international standards organizations the *Scientific and Technical Organizations and Agencies Directory* (Detroit, MI: Gale Research Co., 1987) is a good source.

Electronic Sources

Computer databases provide the most comprehensive coverage of standards of many nations and organizations. There are many databases that contain information concerning standards, however, only several of the larger and more comprehensive of those dealing specifically with standards will be mentioned here. These databases are accessible via commercial database vendors such as Dialog, BRS, and ORBIT. Online searching of these databases offers several advantages over the more traditional search using printed tools. The databases are more comprehensive and searches can be performed quickly and efficiently. Searching can be done by key word and/or subject term, organization, and standard number, to name just a few of the searching options. The main drawback is that a charge is assessed for each online search performed. With the proper equipment and training, online searching can be done from the home or office. For those lacking the training or equipment, however, an online search can be done on demand by many libraries or by a commercial standards vendor.

Dialog has two fairly comprehensive standards databases available for searching. The *Standards & Specifications* database (File 113) is produced by the National Standards Association, Inc. and contains titles and descriptive information for U.S. industry, military, and federal standards and specifications. The other database is *IHS International Standards and Specifications* (File 92). The database is produced by IHS and contains information on United States, foreign, and international standards and specifications. Contact: Dialog Information Services, Inc., 3460 Hillview Ave., Palo Alto, CA 94304 (800/334-2564).

BRS has the equivalent of Dialog's File 92 available under a different name. On BRS, this database is known as *Industry Standards and Military Specifications*. As an added feature on BRS, this database is also available as two separate files for the convenience of searchers who know for what kind of standards they are searching. One database contains the industry, international and foreign standards; the other contains the U.S. military and federal documents. The former is called *Industry & International Standards*; the latter is called *Military & Federal Specifications & Standards*. Contact: BRS Information Technologies, 1200 Rt. 7, Latham, NY 12110 (800/345-4277).

StandardsSearch® database is provided by Pergamon ORBIT Infoline. Descriptive information on all standards documents developed by ASTM, as well as those developed by SAE, is available. When using Standards Search, the file displays the document number and title printed sources date of issue, equivalent standards, DOD approval, cross references, index terms for additional searching, and information on how to obtain the full text. Contact: ORBIT Search Service, Pergamon ORBIT Infoline, Inc., 8000 Westpark Dr., McLean, VA 22102 (800/456-7248).

Given the wealth of information that standards contain and the vital role that they play in the design process, it is essential that their use be encouraged and facilitated. With over 200,000 standards in existence today and more constantly being developed, identification of standards will pose an increasing challenge in the years to come. There is help available, though, and the sources of information and assistance listed here are only a beginning. ●

References

¹Many voluntary U.S. standards are not ANSI approved. Only approved American National Standards are available from ANSI.

²1989 *Annual Book of ASTM Standards*, ASTM, Philadelphia, PA, 1989, p. iii.

³KWIC = Key Word In Context. This type of index is similar to a subject index but uses significant or key-words from the title for indexing rather than formal subject headings. 9

ASTM Long-Range Plan—1987

The ASTM Long-Range Plan, approved by the Board of Directors at their January 1987 meeting, is the 1987 version of a series of published plans that began in 1969. The plans called "ASTM in the Seventies" and "ASTM Looks to the Eighties" have evolved into a continuing long-range planning process. The plan is reviewed each year and revised as necessary by the Long-Range Planning Subcommittee of the Committee on Society Development, whose present members include Rebecca Cohen, Donald Preiss, and John Heslip, chairman. Strategic plans and budgets are prepared by the ASTM staff each year. Comments regarding this plan and suggestions for future plans are encouraged. Please send them to John Heslip, Long-Range Planning Subcommittee, CSD, ASTM, 1916 Race St., Philadelphia, PA 19103.

The Long-Range Plan, the Strategic Plan, and the Budget are three parts of a single plan, not three different plans. The Long-Range Plan sets objectives, major targets that serve as long-term goals. The Strategic Plan provides strategies and action items for achieving the objectives. The Budget describes how financial resources are to be earned and used. The Long-Range Plan answers the question, "What will ASTM become?" The Strategic Plan and the Budget answer the question, "How is ASTM to become what it must?" The Strategic Plan and the Budget implement the Long-Range Plan.

While the ASTM Long-Range Plan has been revised several times since 1981, the goals are quite stable. Six of the seven goals in this plan were also in the 1985 version. All seven goals have appeared at least twice in ASTM Long-Range Plans dating back to 1977. The words of this version change the emphasis while the fundamental goals remain the same. This version of the ASTM Long-Range Plan provides mid-voyage course adjustments, not changes in destination.

This version is organized as the answers to three questions. What has ASTM been? What is ASTM? What will ASTM become?

What has ASTM been?

ASTM was founded in 1898, and chartered in 1902, as a scientific and technical organization for the development of standards on characteristics and performance of materials. ASTM was the first organization established in the United States of America whose chief purpose was to develop technical standards.

Until 1961, ASTM was the American Society for Testing Materials and its main focus

was on standard test methods. Accurate and reproducible test methods were essential to the development of engineering technology that produced the wealth of the nation in the first half of the 20th century. Adding the single word "and" (to make the name American Society for Testing AND Materials) was a recognition of the changing nature of ASTM. The charter was broadened, in 1971, to include products, systems and services, as well as materials. The international nature of the ASTM membership and the international use of ASTM standards are making it less an American and more an international organization. The initials, ASTM, have come to be preferred over the full name to identify the organization.

What is ASTM?

ASTM is a management system for voluntary, full, consensus standards. Members participate in 140 main committees and more than 2,000 subcommittees, which are responsible for 8,000 technical standards.* These committees and subcommittees operate under regulations that ensure balanced representation and fair hearings for all interested parties in the standards process.

ASTM is a technical and scientific corporation, "formed for the development of standards on characteristics and performance of materials, products, systems, and services; and the promotion of related knowledge."** In ASTM, standards include classifications, guides, practices, specifications, terminologies, test methods, and other types of documents that are developed and established within a well-defined set of consensus principles. ASTM operates as a not-for-profit corporation chartered under the laws of the Commonwealth of Pennsylvania.

ASTM is publisher of the 66 volume *Annual Book of ASTM Standards* and of other books and periodicals relating to standards. In 1985, more than 80 percent of its \$16 million operating income came from sales of publications. About 13 percent came from membership fees.

ASTM is the largest nongovernment source of standards in the United States. It is one of more than 400 private sector organizations that develop and maintain standards. ASTM provides more than 20 percent of the total number of standards from the private sector, but the private sector provides less than half of the total standards used in the United States. In recent years, the U.S. Government has replaced some of its standards

*Numbers in this section change frequently and the values given are approximate. Latest versions of the ASTM Directory and the ASTM Annual Report should be consulted for current values.

**ASTM Charter, as amended March 17, 1971.

with voluntary consensus standards and adopted a policy of using voluntary consensus standards wherever possible.

Because of the large diversity of technical subject areas covered by ASTM, the markets for ASTM products and services present a variety of opportunities and challenges. For example, while ASTM may have large market shares with little expected growth in the older, more established areas, the opposite may be true in newer areas, such as advanced materials. So the need to consider market share in terms of potential size and growth for specific technologies will be an extremely important consideration in the years ahead.

About 12 percent of the 30,000 ASTM members are located outside the United States in 87 different countries. ASTM standards are used throughout the world, wherever their technical value is recognized. ASTM technical committees are assigned 12 ISO committee and subcommittee secretariats and they also have 51 assignments to serve as Technical Advisory Groups for developing U.S. positions on international standards.

What will ASTM become?

The following seven goals are established for ASTM. The order in which they are listed does not imply an order of importance.

Goal 1 Anticipate and respond to the changing needs of the technical committees.

The technical committees are the foundation of what ASTM can become. The technical committees operate autonomously within the ASTM regulations. The strength of ASTM is in the strength and diversity of technical committee activities. The committees have collective and individual needs for management, marketing, administrative, and other kinds of support.

Goal 2 Improve the timeliness of ASTM products.

There is wide variation in the time required to produce standards and related information. The timeliness and quality of ASTM products will be maintained and enhanced. The time needed to develop ASTM standards will be decreased without losing the essential features of the ASTM full consensus process or the quality of the products.

Goal 3 Provide mechanisms for improved technical support for ASTM committees.

Communities that would benefit from standards sometimes lack resources that are needed to develop them. A mechanism is needed to manage the funding of technical work in support of the development and dis-

tribution of high quality ASTM standards, knowledge, and related information. A mechanism for providing support will be established and organized and managed; funding sources will be identified; proposals will be developed, evaluated, and prioritized; and projects will be managed.

Goal 4 Increase understanding of ASTM in the external environment.

ASTM functions in an external environment involving academia, business, the general public, government, industry, and the standards community. Relations with academic communities, corporate executive management, government bodies, and other standards makers will receive special attention.

Goal 5 Expand the international role of ASTM.

ASTM develops many standards that are recognized, accepted, and used in the international marketplace. ASTM activities will expand internationally to meet the demand for more standards suitable for international trade. ASTM will also contribute its expertise to other bodies concerned with the development and use of standards suitable for international trade. Special needs and opportunities exist for ASTM's expertise in developing nations.

Goal 6 Identify and develop new opportunities to use the ASTM process, resources, skills, and facilities.

ASTM has an outstanding management system for the development and dissemination of voluntary consensus standards and related information. New areas of activity will be explored and developed; both new technical areas needing standards and areas outside traditional standards development that would benefit from the ASTM process.

Goal 7 Ensure that ASTM generates continuing and secure sources of income for its operations.

Future ASTM products and services will continue to meet the needs of customers so that the organization remains financially strong. New products, services, markets, delivery media, and uses for ASTM technical information will continue to be evaluated and developed.

Goal 8 Increase the number and diversity of members who will participate in ASTM activities.

The vitality of ASTM, a voluntary standards organization, is in maintaining adequate numbers of members at the technical committee level. The membership base must reflect the technical expertise as well as the balance of interests required to produce meaningful standards. ●

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