Choosing a printer

1   Types of printer

A How many types of printer can you think of? Make a list.

B Read the article and then complete the table with the most relevant information.

Which type of printer should I buy?

Printing is the final stage in creating a document. Since the results you can obtain with different types of printer will vary substantially, here is a guide to help you decide which one is most suitable for your needs.

To begin with, you should take into account that printers vary in cost, speed, print quality, and other factors such as noise or printing method. Technology is evolving so quickly that there is always a printer for every application or need.

Dot-matrix printers use pins to print the dots required to shape a character. They can print text and graphics; however, they produce relatively low resolution output – 72 to 180 dots per inch (dpi). They are used to print multi-part forms, self-copying paper and continuous-form labels. They are slower than laser printers (see below) but much cheaper.

Inkjet printers operate by projecting small ink droplets onto paper to form the required image. Colour and hues are created by the precise mixing of cyan, magenta, yellow and black inks. Inkjets are fairly fast, quiet, and not as expensive as laser printers. Nevertheless, you can still expect high quality results because there are some inkjet printers on the market with a resolution of 2,400 dpi.

Laser printers produce output at great speed and with a very high resolution of 1,200 - 2,400 dpi. They scan the image with a laser beam and transfer it to paper with a special ink powder called toner. They are constantly being improved. In terms of speed and image quality, laser printers are preferred by experts for various reasons; for instance, they have a wider range of scalable fonts than inkjets, can emulate different language systems, and can produce high-quality graphics; however, they are still expensive for home users.

Thermal transfer printers are used to produce colour images by transferring a wax-based ink onto the paper. They are popular for printing bar codes, labels and medium-resolution graphics.

Imagesetters produce very high-resolution output (up to 3,540 dpi) on paper or on the actual film for making the printing plates. In addition, they are extremely fast. Imagesetters are most often used in desktop publishing (DTP). Although they produce the highest quality output, they have one important disadvantage: they are too expensive for homes or small offices.

In modern lithographic printing, images are created on a DTP computer and then output directly to the printing plates, without requiring film as an intermediate step. This technology is called **computer to plate**, or **CTP**, and the machine used is called a **platesetter**.

Finally, we have **plotters**. Plotters use ink and fine pens held in a carriage to draw very detailed designs on paper. They are used for construction plans, engineering drawings and other technical illustrations. Nowadays, traditional plotters are being replaced with wide-format inkjets.

Type of printer	Technical specification and other features
Dot matrix	....
Inkjet	....
Laser	....
Thermal	....
Imagesetter	....
Plotter	....

C Find words in the article with the following meanings.

1 designs and images used in magazines, books, etc.   ....

2 output quality, measured in dots per inch   ....

3 a particular colour within the colour spectrum   ....

4 an ink powder used in laser printers and copiers   ....

5 set of characters that can be resized (enlarged or reduced) without introducing distortion   ....

6 a rectangular pattern of black lines of magnetic ink printed on an object so that its details can be read by a computer system   ....

7 surface that carries a reproduction of the image, from which the pages are printed
....

8 in-between; middle   ....

2 *Choosing the right printer*

Choose the most suitable printer for each of these situations.

1 You want to print documents, web pages and occasional photographs at home.

2 Business people who need to print in large quantities at high quality in an office.

3 A professional team of architects and engineers need to create accurate representations of objects in technical drawings and CAD.

4 A graphic arts business needs a printer to produce catalogues, brochures and other publications.

5 A company that wants to print carbon copies of bills and receipts.

3 *Language work 1: Conjunctions*

A Put the conjunctions from the article into the correct column of the table.

Giving exapmles	Sequencing	Indicating addition	Contrasting	Giving reason/cause
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....

Help box : Conjunctions

Conjunctions are grammatical connectors that link words, phrases or clauses. A conjunction can indicate the relationship between the elements that it connects in the sentence. They are of three types:

1   Coordinating conjunctions such as **' for and, nor, but, or, yet, so'** are placed next to the words and ideas they connect.
E.g. This technology is called computer to plate, or CTP, **and** the machine is called plateseter.
E.g. They are slower than laser printers **but** much cheaper.

2   Subordinating conjunctions are used when one idea in a sentence is dependant upon another idea. The subordinate conjunction is used to connect the dependant clause with the main clause. They can be used for:

❖ Giving examples: **such as**, **for example**, **like**, **that is**, etc.
   E.g. …print quality and other factors **such as** noise or printing method.
   E.g. Laser printers are preferred by experts for various reasons; **for instance**, they have a wider range of scalable fonts than inkjets.

❖ Listing / sequencing: **first**, **then**, **next**, **later finally**, etc.
   E.g. **To begin with**, you should take into account that printers vary in cost…

❖ Indicating addition: **as well as**, **in addition**, **besides**, **moreover**, **furthermore**, etc.
   E.g. Imagesetters produce very high-resolution output…printing plates. **In addition**, they are extremely very fast.

❖ Making contrast: **however**, **although**, **though while**, **whereas**, **nevertheless**, etc.
   E.g. Dot-matrix printers can print text and graphics; **however** they produce low resolution output.

E.g. Inkjets are fairly fast…as laser printers. **Nevertheless**, you can still expect high quality results…

❖ Explaining cause / reason: **since**, **due to**, **as**, **because(of)**, etc.
   E.g. **Since** the results you can obtain with different types of printers will vary substantially, here is a guide…
   E.g. …you can expect high quality results **because** there are some inkjet printers with a resolution of 2,400 dpi.

❖ Indicating purpose / aim: **in order to**, **so that**, **to**…
   E.g. Dot-matrix printers use pins **to** print the Dots required **to** shape a character.
   E.g. Many printers have a special socket **so that** you can print images directly from a memory card.

❖ Explaining effect/result: **thus**, **therefore**, **as a result**…
   E.g. A virus entered the computer; **as a result**, many files have been destroyed.

❖ Expressing condition: **If**, **unless**, **as long as**, **provided that**…
   E.g. **If** the refresh rate of the screen is low, you will notice a flicker.

❖ Fixing time: **after**, **since**, **until**, **when**, **as soon as**…
   E.g. She will buy a new computer **as soon as** she gets paid.

3   Correlative conjunctions are those used in pairs "**both…and**, **not only…but also**, **either…or**, **neither…nor**, ,". They should be placed next to the words they connect.

E.g. **Both** brand names **and** clone computers have similar features.
E.g. The output results can be displayed **either** on the screen **or** printed onto paper.

B Complete this customer review from a website with the correct conjunctions.

I bought this printer (1)……………….. reading some positive reviews here and on other sites.
(2) ………………. my budget was only £50, I was looking for something that would be fine for day-to-day jobs, (3) ……………… printing Word documents and maps from the Internet.
(4)…………………….. everything worked fine. (5) …………….. the problem started: paper jams, error messages, etc.
(6) ……………… I had to send it back. It might have just been a defective model, (7)……………
I don't think I'd risk buying one again.

C Match the sentence beginning with the sentence ending using the appropriate conjunction.

1	He can't buy a multimedia PC	**a**	DVD+RW disks can be rewritten many times
2	RAM memory is temporary	**b**	There is not a good telephone system.
3	Teachers use multimedia software	**c**	He has decided to format the hard disk.
4	DVD-R disks can record data once	**d**	The ROM section is permanent.
5	The Internet won't expand	**e**	He has no money.
6	His computer doesn't work properly	**f**	They teach subjects like music and languages.

4 Laser printers vs. Inkjet printers

When shopping for a printer, consumers may be unsure whether to buy a laser or inkjet model. Each printer type has its own advantages and drawbacks – where one kind of printer is strong, the other is often weak. Ultimately, the overall use of a printer determines whether a laser or inkjet model is best.

✿ Cost: Generally, inkjet printers are cheaper than their laser counterparts. A good, all-purpose colour inkjet can be bought for about $100, whereas even a basic black-white laser may be more expensive. Laser cartridges print far more sheets relative to their cost than inkjet cartridges. They are also less wasteful, as inkjet cartridges that aren't used often need to be cleaned, which consumes extra ink.

✿ Convenience and space: Inkjet printers can also be much smaller and lighter than lasers.

✿ Print speed: Laser printers print faster than inkjet printers. Once the laser printer is warmed up, pages are printed as fast as they can pass through the machine, with no waiting for ink to dry.

✿ Print quality: Lasers are much better at printing fine details. Some high-quality inkjets are able to approach laser-quality text output, but not only are they more expensive, they must use more ink and take more time to produce those results.

◆ **Read the text and underline the comparative forms.**
◆ **What can you say about how comparatives are formed?**

5   *Language work 2: Comparatives* (formation)

A   Complete these sentences using the comparative form of the adjectives in the box.

good	small	heavy	expensive
	accurate		convenient

1   A laser printer is generally ………………….…

   than a low-cost inkjet printer.

2   Thermal transfer printers are ……………….

   for printing bar codes than dot-matrix printers.

3   An Imagesetter is …………… than an inkjet.

4   Imagesetters are ……………………… than

   plattesetters, as you still need to print to film

   before making the printing plates.

5   The final result is always ……………… than

   the original image.

6   A laser printer is ……………….. than an

   imagesetter.

B   Complete these sentences comparing a laptop and a PDA in terms of size, weight speed and space.

1   ………………………………………………...

   ………………………………………………

2   ………………………………………………

   ………………………………………………

3   ………………………………………………

   ……………………………………………….

4   ………………………………………………

   ………………………………………………