# Choosing a printer

## 1 Types of printer

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

**B** Read the article on page 38 and then label the types of printer (1–5). Which types of printer aren't pictured?
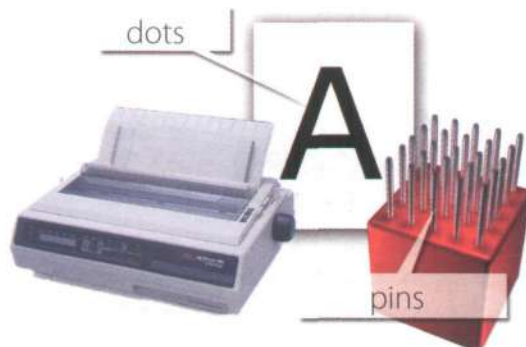
ink

BLACK
REPLACEMENT CARTRIDGE

print head

*The quality (resolution) of the images goes up to 2,400 dots per inch (dpi)*

1  inkjet

*Provides high quality output: a resolution of 1,200–2,400 dpi*

2  laser

dots

A

pins

*The resolution depends on the number of pins*

3  dot-matrix

*Provides high quality for linework (lines and curves)*

4  plotter

*Provides the highest resolution: more than 3,000 dpi*

5  imagesetters

# 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.

C **Find words in the article with the following meanings.**

1 designs and images used in magazines, books, etc. (lines 10–15) ___label___

2 output quality, measured in dots per inch (lines 10–15) ___resolution___

3 a particular colour within the colour spectrum (lines 15–20) ___hue___

4 an ink powder used in laser printers and copiers (lines 25–30) ___toner___

5 set of characters that can be resized (enlarged or reduced) without introducing distortion (lines 30–35) ___scalable___ fonts

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 (lines 35–40) ___imagesetters___

7 surface that carries a reproduction of the image, from which the pages are printed (lines 45–50) ___printing plates___

8 in-between; middle (lines 50–55) ___intermidiate___

# 2 *Language work: connectors 1*

**A** Look at the HELP box and then put the words in italics from the article on page 38 into the correct column of the table.

| Giving examples | Listing/Sequencing | Giving reason/cause |
|---|---|---|
|  |  |  |

**B** Try to add some more connectors to each column. How do you say these connectors in your language?

> ## HELP box
>
> **Connectors 1**
>
> Connectors are linking words and phrases which join ideas and help us organize our writing. Connectors can be used for giving examples, listing or sequencing, and giving reason or cause.
>
> … *for instance*, *they have a wider range of* …
>
> *To begin with*, *you should take into account that printers vary in cost* …
>
> Some common connectors appear in *italics* in the article on page 38. For more on other uses of connectors, see Unit 11.

**C** Write a paragraph describing the printer(s) you use at home or at work. Try to use some connectors. Think about these aspects: type, speed, resolution, print quality, memory, cost, print consumables (ink cartridges etc.).

# 3 *Choosing the right printer*

**A** In pairs, choose the most suitable printer for each of these situations. Give reasons for your choices.

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

2 A small company needs a printer which will be shared by various users on a local area network (LAN).

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.

**B** In pairs, describe the features of your ideal printer.

## 4 Multi-function printers

**A** 💿 Listen to an extract from a consumer technology podcast about multi-function printers. What two disadvantages of multi-function printers are mentioned?

**B** 💿 Listen again and answer these questions.

1 What is a multi-function printer?
2 Why are multi-function printers so popular?
3 What is the main advantage of PictBridge technology?
4 Apart from sheets of paper, what other things can multi-function printers print?
5 What software do you usually get when you buy a multi-function printer?
6 What advice does Mr Kelly give on ink cartridges?
7 What type of device does he recommend for home users?
8 What type of device does he recommend for businesses?

## 5 Language work: comparatives

Look at the HELP box and then complete these sentences using the comparative form of the adjective in brackets.

1 A laser printer is generally (quiet) __quiter__ than a low-cost inkjet printer.

2 Multi-function printers are now only slightly (expensive) __more expensive__ than conventional printers, and offer much (great) __greater__ versatility.

3 The print quality of this network printer is noticeably (good) __better__ than any inkjet, and as (good) __good__ as similar laser printers.

4 The Agfa platesetter is (reliable) __more reliable__ and (easy) __easier__ to use than most printers of its type.

5 Your printer is only as (good) __good__ as the paper you use.

6 The final result is always (accurate) __more accurate__ than the original image.

7 An imagesetter is (heavy) __heavier__ than a laser printer.

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### HELP box

**Comparatives**

- We form the comparative of one-syllable adjectives by adding **-er**.

  *slow → slower*

  *Inkjet printers are **slower** than laser printers, but much **cheaper**.*

- Two-syllable adjectives usually take **more/less**.

  *modern → **more** modern*

  *They're designing a **more modern** version at the moment.*

- Adjectives ending in **-y** (for example, **noisy**) take **-er** and the **y** changes to **i**.

  *Dot-matrix printers are **noisier** than inkjets.*

- We form the comparative of adjectives with three or more syllables by adding **more/less**.

  *versatile → **more** versatile*

  *… they're cheaper and **more versatile** than standalone products.*

- Note the irregular forms:

  *good → **better***
  *bad → **worse***
  *little → **less***

  *If you want **better** results, you'll need specialized software.*

- Equality is expressed by using **as … as**. Difference can be shown by using **not as … as**.

  *This is **as fast as** many other printers in its class.*

  *Inkjets are **not as expensive as** laser printers.*

# 6 Reading quiz – printer adverts

**A In pairs, read the adverts and then answer these questions. See who in your class can finish first.**

1 How many inkjet printers are advertised?

2 Which printer would you recommend to someone who wants to print advertising graphics?

3 If you have the wide-format printer from Vutek, what kinds of material can you print on?

4 Which technology lets you print directly from your digital camera without needing a computer in between?

5 A page description language, or PDL, describes how to print the text and pictures on the page. Can you find two laser printer languages?

6 What is the resolution of the Brother HL Network Colour Laser Printer?

7 How fast is the Brother HL Network Colour Laser Printer?

## Canon Compact Photo Printer SELPHY CP750 Photo Printer

An inkjet photo printer with a 2.4" colour LCD for easy viewing, editing and printing of perfect borderless photos. With PictBridge, you can print directly from digital cameras, memory cards or camera phones (via IrDA or optional Bluetooth unit) without connecting to a PC.

Resolution: 300x300 dpi

Software: Easy-PhotoPrint

Dimensions: 179x127.1x63 mm

Weight: 960g

**The Vutek UltraVu II 5330 provides the ultimate combination of highest print speed and best print quality in a five-metre printer.**

- Wide-format professional inkjet printer
- Prints on a wide variety of substrates, including vinyl, and pressure-sensitive paper, mesh and textiles
- VUTEK Low Friction Kit allows for difficult materials to be run more easily
- Prints up to 16.4 feet (5 metres) wide
- Up to 330 dpi resolution produces images that are sharp, crisp and consistent
- Prints up to 2,230 square feet (207 square metres) per hour
- Applications: banners, exhibition graphics, bus shelters, etc.

## Brother HL Network Colour Laser Printer

The HL-4040CN delivers the perfect balance of quality, workgroup, colour A4 laser printing.

It boasts outstanding colour output: 2,400 dpi class colour printing with exceptionally crisp, high-resolution text and graphics driven by Brother's exclusive printing enhancement technologies.

Print Speed: up to 31 ppm (pages per minute) mono, 8 ppm colour (A4)

Compatibility: PCL and PostScript languages

Paper tray capacity: 250 sheets

Memory size: 64MB

High-speed USB

**B** A friend has emailed you asking for advice about which printer to buy, the Canon SELPHY CP750 or the Brother HL Network Colour Laser Printer. Write an email to your friend comparing the two printers. Use the HELP box on page 40 to help you.