

Name _____

Class _____

Date _____

By the end of this worksheet I can...

- ☐ name input and output devices and their uses
- ☐ explain the advantages and limitations of CAD
- ☐ explain the benefits of 3D printing without using "cheap" or "quick"
- ☐ compare raster and vector graphics and their file types
- ☐ explain cloud computing and storage, file management and digital rights management

I DO

Worked example Read how a full-mark answer is built

A web page uses JPG photographs and an SVG logo.

1 Explain one advantage of a raster format for the photographs and one advantage of a vector format for the logo. (2 marks)

Full-mark answer each ✓ is one mark

Raster images are made of pixels that can each be a different colour, so the photographs show realistic detail and subtle colour changes ✓. The vector logo is made of paths, so it can be enlarged to any size without pixelating ✓.

Why marks are not awarded

"JPGs are good for photos and SVGs are good for logos."

0 marks: no reason is given for either.

WE DO

Guided practice Use the starters and word bank to help you

2 State two input devices a graphic designer could use. (2 marks)

Sentence starters

1. ...
2. ...

Word bank

Graphics tablet · camera · digital ·
touchscreen · scanner

Tip: 2 marks = 2 separate, developed points.

YOU DO

On your own No notes. Check your answers afterwards.

3 Quick check: tick one box for each.

a) Which answer would score for a benefit of 3D printing?

- ☐ It is always cheaper than other methods ☐ It is much quicker than injection moulding ☐ It is easy for anyone to use ☐ No moulds or tooling are needed

b) Which is a raster format?

- ☐ SVG ☐ TIFF ☐ DXF ☐ STEP

c) Which is an INPUT device?

- ☐ Plotter ☐ 3D printer ☐ Scanner ☐ Projector

d) Version history in cloud storage helps by...

- ☐ Making files bigger and better quality ☐ Printing documents more quickly ☐ Restoring earlier versions if work is lost ☐ Adding a watermark to every file

4 Key terms: write the letter of the matching description next to each term.

- | | | |
|----------------------------------|-------|--|
| 1. Graphics tablet | _____ | A No tooling needed; complex shapes in one print; easy to change and reprint. |
| 2. Plotter | _____ | B Made of paths; scales without losing quality, small files. |
| 3. Benefit of 3D printing | _____ | C Output device for large-format technical drawings. |
| 4. Limitation of CAD | _____ | D Input device: draw with a stylus on a pad. |
| 5. Raster image | _____ | E Cost of software, hardware and training. |
| 6. Vector image | _____ | F Made of pixels; photo-real but pixelates when enlarged. |

An engineering team stores its CAD files in the cloud.

5 Explain two benefits of cloud storage for the team. (2 marks)

A photographer adds a watermark to images on their website.

6 Explain two reasons for using a watermark. (2 marks)

A magazine is published online as well as in print.

7 Describe three features that could be added to the online version, in context. (3 marks)

Check and reflect

Mark your answers with the answer sheet. Go back to the checklist on the site and re-rate each “I can” statement above. Which one still needs work?
