

Answer key

1 Computer graphics

A

- 1 a and d are three-dimensional; b and c are two-dimensional.
- 2 3-D images represent objects (like the car here) more accurately; in graphs, they can also illustrate different quantities more clearly.

3 Possible answers

- a Businesspeople
- b Architects
- c Cartographers (map makers)
- d Car engineers or designers

4 Possible answers

Designers in all kinds of industries to design and test products; engineers (e.g. telephone and electrical engineers) to plan circuits; weather forecasters to show changes in weather; economists to illustrate economic development; web designers to create pages for the Web; scientists in research; journalists in broadcasting; teachers; students.

B

SS check their answers to 3 and 4.

C

- 1 Raster graphics represent images as bitmaps. This means they are stored as pixels, which can become jagged or distorted when manipulated. Vector graphics, however, represent images as mathematical formulas, so they can be changed or scaled without losing quality.
- 2 JPEG, GIF, TIFF and EPS
- 3 Compositing is assembling multiple images to make a single final image
- 4 Computer Aided Design
- 5 Computer graphics can be used to develop, model and test car designs before the physical parts are made; this can save money and time.
- 6 GIS (Geographic Information Systems)
- 7 Computer animation is used by animators to create cartoons or to add effects in movies and video games.

D

1e 2d 3a 4f 5b 6c

E

Open task

2 Language work: the -ing form

A

- 1 g (after a preposition) 4 pp (present continuous)
- 2 a 5 g (complement of a verb)
- 3 g (after a preposition) 6 pp (reduced relative clause)

B

- 1 Computer animation is the process **of creating** objects which move across the screen.
- 2 *Texturing* involves **adding** paint, colour and filters to drawings and designs.
- 3 You can open the colour palette **by clicking** on the corresponding icon.
- 4 CAD programs are very fast **at performing** drawing functions.
- 5 A lot of time and money is saved **by testing** a car design **before making** the product.
- 6 **Rendering** refers to the techniques used to make realistic images.

3 The toolbox

A

- 1 A toolbox is a collection of drawing and painting tools that enable you to manipulate images in graphics software.
- 2 Primitives are the basic shapes used to make graphical objects. They are usually geometric, for example lines, circles, etc.
- 3 Attributes are the colour, line type, fill area, interior style etc. of each primitive.
- 4 Translation means moving an object to a different location.

B

- | | |
|------------|------------|
| 1 painting | 6 drawing |
| 2 select | 7 rotating |
| 3 make | 8 turning |
| 4 clicking | 9 Scaling |
| 5 draw | |

C

1b 2j 3a 4i 5g 6c 7h 8e 9f 10d